



KNOWLEDGE, ATTITUDE AND PRACTICES OF REFLECTIVE WRITING AMONG PHYSIOTHERAPY ACADEMICIANS: A CROSS-SECTIONAL STUDY

Physiotherapy

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ABSTRACT

Background: Reflection has been defined as an active process of reviewing, analysing and evaluating experiences to inform future actions. Enhancing reflective thinking in students is known to improve their critical thinking, problem solving ability, clinical reasoning, making them self-directed learners thereby leading to their overall professional development. Present study aimed to explore the knowledge, attitude and practices of Physiotherapy academicians about reflective writing. **Methods:** This cross-sectional study was conducted on 110 Physiotherapy academicians with minimum 1 year of teaching experience affiliated to a state health science university. A self-validated questionnaire consisting of knowledge, attitude, practice domain was developed and validated by a panel of eight experts. Final tool was circulated among participants using Google form and the data recorded was analysed using descriptive statistics. **Results:** Data collected for 110 participants revealed that almost 39.09% (n=43) were aware of the concept of reflection but only 11.8%(n=13) participants were familiar with the theories of reflections. Majority showed favourable attitude towards the use of reflection in improving student engagement (93.63%, n=103), problem-solving ability (85.45%, n=94) and making them self-directed learners (93.63%, n=103). Very few participants (11.63%, n=13) practiced implementing reflective writing. Majority of them (94.54%, n=104) had not taken any formal training in reflections. **Conclusion:** Though Physiotherapy academicians had favourable attitude regarding benefits of reflective writing, they didn't have adequate knowledge about reflections and they hardly practiced it.

KEYWORDS

reflective writing, Physiotherapy, academicians, reflections

INTRODUCTION

Reflection is a metacognitive process that occurs before, during and after a situation with the purpose of developing greater understanding of both the self and the situation so that future encounters with the situation are informed from previous ones.¹ Aronson has defined critical reflection as a process of analysing, questioning, and reframing an experience in order to make an assessment of it for the purposes of learning in order to improve practice.² Today's health-care students who will become tomorrow's doctors should be trained to confront the various dilemmas and challenges awaiting their professional lives so that they are better equipped to render effective patient care. In this regard, reflection serves as a model for life-long learning by engaging students in thinking what they learnt in a given context and how they will apply that learning in future.³ Various theories of reflection has been proposed in literature like that of Schon, Moon, Mezirow, Gibbs, Kolb's etc with the aim of improving future practice by reflecting on the current learning experience.^{4,5}

Enhancing reflective thinking is known to improve lifelong learning skills such as critical thinking, problem solving ability, clinical reasoning, decision making, communication, empathy and self-directed learning.⁶ Developing these skills may better prepare students for the challenges that may arise in future clinical practice. Reflective learning favours the overall personal and professional development of a learner.⁷ Empowering learners with the skill of reflective writing supports their transformation into becoming competent professionals thereby improving their skills in clinical situations.

It is important to foster development of reflective thinking in academic learning environment prior to clinical placement. Reflective writing should be encouraged by universities and trainers. Aronson's has proposed tips to inculcate reflective writing at all levels of medical education.⁸ Various disciplines can use it as reference to integrate the same in their speciality field. Incorporating these fundamental skills into Physiotherapy curriculum may prove to be a sound teaching methodology.

Over the past few decades, reflection and reflective practices have become a common theme in many health professions like in medical, dental, nursing among other fields.^{7,8} Physiotherapy like any other health-care domain requires the integration of knowledge of subject matter, effective assessment and developing evidence-based treatment goals for effective patient-care. Physiotherapist have to constantly refresh & update their knowledge, need to function in a dynamic

environment and solve complex problems which requires critical thinking and sound clinical decision making. They should be able to judge their own work against standards, know how & where to seek resources and strategize their own learning. Reflective thinking should be modelled by educators & students should be given opportunities to practice reflection. Surprisingly there is little to guide educators to understand & develop reflective ability in their learners. Before inculcating reflective skills in students, it's important to understand the views and perceptions of Physiotherapy academicians about reflective writing which is not extensively researched. Hence this study aimed to explore the knowledge, attitude and practices (KAP) of Physiotherapy academicians about reflective writing practices.

MATERIALS AND METHODS:

The study was conducted after seeking approval from the Institutional Ethical Research Committee. It was conducted in two phases; phase one consisted of questionnaire development and phase two was survey-based using the developed questionnaire to gather information related to knowledge, attitude and practices regarding reflective writing amongst Physiotherapy academicians.

Phase 1: Development Of The Questionnaire

A thorough review of literature provided basis to develop first draft of questionnaire exploring three domains namely: Knowledge, attitude and practices. We sought help of eight senior academicians from physiotherapy, medical and nursing stream with expertise in Health-science education to validate the questionnaire. Based on suggestions and feedback received from the experts, few items were modified and reframed for better understanding whereas few were deleted. Final validated questionnaire had five items under knowledge domain, twenty-one items under attitude domain and eight items under practice domain. Lawshe's Content Validity index (CVI) was calculated and showed a score of 0.99, which suggested good content validity. Pilot testing was done with the validated questionnaire on 10 participants for language, comprehension, and clarity in the interpretation of the questions. All questions were well understood and on an average the participants took 10 minutes to complete the questionnaire.

The test-retest reliability was assessed on 15 participants who were randomly selected from the institute, wherein the questionnaire was administered twice within two-week interval. The Intraclass Correlation coefficient (ICC) was measured to be 0.84 which showed a good reliability.

In the final validated version of the questionnaires, there were a total of 34 items (out of 40 items of the primary version) with 5 choices on the Likert scale. The questions of the components were based on self-reporting and trusting the honesty of the participants.

Scoring Of The Questionnaire:

Response to each item under the three domains were scored as follows-

- For knowledge, the questions started with "how much are you familiar/you agree with the following statement" and the answers were "about 0%" (-2), "about 25%" (-1), "about 50%" (0), "about 75%" (+1), and "about 100%" (+2).
- For attitude, the questions started with "in my opinion" and the answers were "strongly disagree" (-2), "disagree" (-1), "no opinion" (0), "agree" (+1), and "strongly agree" (+2).
- For practice, the questions started with "what percent of the occasions do you do following statement" and the answers were "about 0%" (-2), "about 25%" (-1), "about 50%" (0), "about 75%" (+1), and "about 100%" (+2).

Component score was the mean of Likert points for each component (from -2 to +2). The qualitative classification is as: -2 to -1.2 (very weak), -1.2 to -0.4 (weak), -0.4 to +0.4 (moderate), +0.4 to +1.2 (good), and +1.2 to +2 (very good).

Phase 2: Survey-based To Assess The Knowledge, Attitude And Practice Of Reflective Writing Among Academicians.

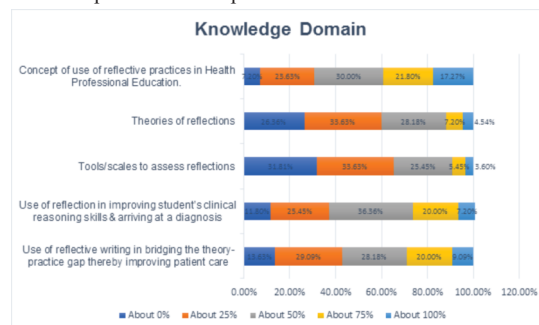
A cross-sectional study using non-probability convenience sampling was undertaken using the developed questionnaire. One-hundred and ten Physiotherapy academicians with minimum one year of teaching experience affiliated with the state health science university were included in the study. Participants were sampled from various institutes within the same geographical region. After identifying one or two contact points from an institute, snowball sampling technique was employed to reach out to other faculty members from their respective institute. The developed questionnaire was converted into a Google form and circulated to the participants. The purpose of the study, the time required to complete it and permission to withdraw if deemed unsuitable was mentioned in the google form before the start of the survey questionnaire. A successful return of completed survey was considered as consent by the participant. Two-three reminders were given in a span of fifteen days to submit the Google form. The collected data was tabulated using Microsoft Excel, and results were formulated based on descriptive statistics using SPSS software version 24.

RESULTS:

Out of the 110 participants, 23.63% (n=26) were males and 76.36% (n=84) were female having a mean age of 37.82±6.67 years. The mean

teaching experience was 8.6 years (Range 1 year 1 month-25 years) Majority participants belonged to colleges from Mumbai region followed by Pune, Latur, Nasik.

Knowledge Domain: Around 39.09 % (n= 43) of the participants were familiar with the concept of reflective practices but only 11.8%(n=13) were familiar with the theories and tools to assess reflections (9.09%, n=10). Responses of the participant regarding their knowledge of reflections is presented in Graph 1.



Graph 1 Showing Knowledge (understanding) of the participants about reflections. (expressed in %)

Attitude Domain:

Majority of the participants were of the opinion that writing reflections is an active learning strategy (93.63%, n= 103), increases student engagement (93.63%, n=103), improves problem-solving ability (85.45%, n=94), makes students self-directed learners (93.63%, n=103), deepens professional values (81.81%, n=90) and improves clinical competencies (81.81%, n=90)

Majority (81.81%, n=90) agreed it should be routine activity for students. However, there were mixed views about it being used in formative assessment as a part of internal assessment [56.36% (n=62)] and it being a compulsory competency [62.72% (n=69)]. More than half of them (58.18%, n=64) felt it was a challenging activity to make students write reflections. Almost 53.63% (n=59) strongly agreed inculcating reflective writing would be most useful during clinical postings, and that both under-graduate (UG) and post-graduate (PG) students will be most benefited by reflective writing (54.54%, n=60) and that it should be implemented atleast once a week (58.18%, n=64) or once in two weeks (44.54%, n=49). Commonly reported faculty-related and student-related facilitators and barriers towards implementing reflections is presented in Table 1 and 2.

Table 1 Showing Faculty And Student-related Facilitators Towards Implementing Reflections

Facilitators	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Faculty-related factors % (n)					
Faculty development programs and training in implementing reflective writing.	0.9 (n=1)	0.9 (n=1)	7.2(n=8)	34.54(n=38)	55.45(n=61)
Faculty development programs and training in assessing reflections	0.9(n=1)	0.9(n=1)	6.3(n=7)	32.72(n=36)	58.18(n=64)
Noticeable progress in students' problem-based skills academically.	0.9(n=1)	0.9(n=1)	8.18(n=9)	47.27(n=52)	41.81(n=46)
Reflective writing task should be part of weekly schedule (timetable)	2.72(n=3)	4.54(n=5)	20(n=22)	41.81(n=46)	31.81(n=35)
Student-related factors % (n)					
Students gain a better understanding of concept pertaining to the topic	0.9(n=1)	0.9(n=1)	7.2(n=8)	59.09(n=65)	31.81(n=35)
Students learn better application of concept in clinical practice.	0.9(n=1)	2.7(n=3)	5.45(n=6)	54.54(n=60)	36.36(n=40)
Noticeable improvement in problem-based skills of students	0.9(n=1)	...	9.09(n=10)	45.45(n=50)	40.9(n=45)
Student performance is enhanced during formative and summative assessment	0.9(n=1)	0.9(n=1)	23.63(n=26)	46.36(n=51)	25.45(n=28)
Reflective writing task should be part of weekly schedule (timetable)	2.7(n=3)	2.7(n=3)	23.63(n=26)	46.36(n=51)	25.45(n=28)

Table 2 Showing Faculty And Student-related Barriers Towards Implementing Reflections

Barriers	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Faculty-related factors % (n)					
Implementing reflective writing is time consuming	2.7(n=3)	10.9(n=12)	24.54(n=27)	50(n=55)	12.72(n=14)
Lack of awareness of 'reflections' as a topic	0.9(n=1)	0.9(n=1)	12.72(n=14)	65.45(n=72)	20(n=22)
Lack of formal training received in implementing and assessing reflective writing	0.9(n=1)	0.9(n=1)	3.6(n=4)	53.63(n=59)	40.9(n=45)
Lack of support from the institute	0.9(n=1)	13.63(n=15)	34.54(n=38)	31.81(n=35)	17.27(n=19)
Reflective Writing is not mandatory in curriculum	3.6(n=4)	2.7(n=3)	18.18(n=20)	45.45(n=50)	26.36(n=29)

Lack of awareness of 'reflections' for self-development.	0.9(n=1)	0.9(n=1)	4.54(n=5)	61.81(n=68)	31.81(n=35)
Lack of interest in students	0.9(n=1)	2.7(n=3)	17.27(n=19)	45.45(n=50)	30(n=33)
Lack of formal training received in writing reflections	0.9(n=1)		8.18(n=9)	53.63(n=59)	37.27(n=41)
Reflective writing is not a part of curriculum	2.7(n=3)	3.6(n=4)	13.63(n=15)	45.45(n=50)	34.54(n=38)

Practice Domain: Very few participants (11.63%, n=13) made students write reflections and assessed reflections submitted by students. Hardly few of them used reflective writing during their didactic class (6.97%, n=08), practical class (13.63%, n=15), during clinical postings (18.18%, n=20), while students attend camps/outreach activities (20.9%, n=23), during their research activity (17.27%, n=19) and during their mentorship (18.18%, n=20).

During clinical postings, 31.81 % (n=35) of them asked students to reflect on subjective examination, physical examination (33.72%, n=37), communication skills (31.81 %, n=35), on patient values and ethics (36.36%, n=40).

Reflective writing was practiced based on theories of Gibbs' Reflective Cycle by only 9.09% (n=10), on Schon's Theory by 6.3% (n=7), on Kolb's Experiential Learning Cycle by 7.2%(n=8) and on Driscoll model of reflection by 7.2% (n=8).

Amongst the various tools to assess reflections 24.54 % (n=27) preferred subjective evaluation followed by questionnaire (19.77%, n=22), grading rubric (10.9%, n=12) and thematic analysis (7.2%, n=8). Rest majority of them didn't practice reflections nor were aware of any theories or tools to assess reflections.

Willingness To Take Up Training: Almost 94.54% (n=104) had not taken any formal training in reflective writing and 92.72% (n=102) expressed willingness to undertake training in use of reflective practice in Health-Professions Education for improving their understanding.

Questionnaire Scores:

The mean scores for Knowledge domain were -0.3 (moderate), for attitude domain was -0.73 (good) and practice domain was -0.93 (weak).

DISCUSSION:

Present study aimed to investigate the knowledge, attitude and practices towards reflective writing amongst Physiotherapy academicians belonging to the same health-science university. The findings of the study indicate that academicians had moderate knowledge and displayed a good attitude towards reflective writing however practiced it poorly. To our best of understanding, this is the first study which explore the KAP of academicians about reflective practices knowing how important and relevant 'Reflections' is in today's age and world. Before we expect students to practice implementing reflections in their routine academic and clinical encounters, it's important to understand whether educators who are the building blocks are favourable towards its implementation.

Findings indicate that majority were familiar with the concept of reflections but had a poor understanding of its application and use in improvement of clinical decision-making in learners. This alarming response could be attributed to the fact that reflection as a concept is not widely used and encountered in faculty training modules or workshop. Even the basic medical education training which is mandatory for all faculty members when they join as a lecturer doesn't cover the implementation of reflection in details. Acquiring knowledge about a particular teaching-learning method is largely driven by interest and enthusiasm amongst the faculty along with mandatory training required from them. Some interested faculty in health-science education might go out of way to seek this information either through articles or voluntarily attending seminar or workshops however this number is very dismal. Annadurai has highlighted that lack of knowledge on reflective writing among faculties will have an impact on the student's reflective writing skills, and hence, faculty orientation becomes crucial for effective implementation.¹²

Present study also demonstrated favourable attitude by majority of faculty members towards implementation of reflective writing. This is a promising finding wherein even the right attitude and mindset among academicians will go a long way in encouraging them to update their knowledge and implement reflection provided they receive formal training and guidance by experts towards successful implementation. The Medical Council of India advocates that faculty development programs (FDPs) plays a crucial role in improving the quality of

medical education by exposing the teachers to novel concepts in teaching-learning and assessment.¹³ Morris et al; has acknowledged the role of FDPs in the making of a competent medical teacher.¹⁴

Most of them unanimously agreed to the fact that reflection increases student engagement in their learning, improves their problem-solving ability, develops their clinical competencies, makes them self-directed learner and deepens professional values. These are the core values of practicing reflections and in a health-science program wherein faculty are involved in shaping students to become a competent professional, the right attitude regarding reflections will prove to be an asset. Literature has time and again supported the role and potential of reflection in professional development of a health-science student.¹⁵⁻²⁰

Faculties also addressed that if they are trained in reflective writing, if reflections are made a part of weekly schedule of students and if the students' progress academically, it will facilitate regular implementation. On the other hand, they felt lack of interest in students, lack of understanding about reflective process and reflections not being a mandatory part in curriculum were the major student-related barriers. Similar findings were reiterated by Annadurai wherein apart from the factors listed above medical students faced time constraints, finding conducive physical environments suitable for reflective writing, lack of motivation and support, fear of peer's opinion about their reflection challenging to adopt reflective practices.¹² These finding could be taken into consideration by department heads and policy makers to ensure necessary steps are taken to promote the use of reflections in their institutions. Having said that the revised Physiotherapy curriculum is moving towards competency-based education which is more outcome-based and reflective writing being introduced right from the first year of program is a positive step that could help future batch of students. Faculty also reported to finding it challenging to make students write reflections. Aronson has proposed twelve tips which faculty can use to implement reflections.² Faculty would be more equipped to overcome the obstacles and devise strategies if they received training and practiced frequently. Lack of research and work in this area is a major hurdle which can be taken care if majority of faculty members engage in reflective practices.

This study reported that less than one tenth of the academicians made students write reflections in their academic tenure. The ones who practiced, implemented it during clinical postings or during student patient encounters. They probably didn't foresee the implementation of reflection during didactic class, during research activities, during mentorship etc which can provide excellent learning encounter for students. Shah et al; has given an overview of various opportunities wherein faculty members can train and assess students reflections.²¹ In clinical postings, participants reported to implementing reflective writing majorly during learning opportunities in patient values and ethics and few in communication skills. Learning encounters during subjective and objective patient assessment could also have been explored to implement reflective writing which could make students link the knowledge acquired to their assessments which in turn will help them devise patient specific goals.¹⁷ Implementing reflection in collaboration with every domain of International Classification of Function (ICF) will improve students' decision-making ability and critical thinking bringing about a positive change in patient care. There are many theories and models of reflections proposed in literature however faculty didn't practice it probably because they might not be aware of those theories as reported by participants in this study. Assessment drives learning²²; if reflections are assessed and feedback is provided to students it will help them master the skill and encourage them to write better the next time. Majority of faculty reported to only do a subjective evaluation without using a rubric or thematic analysis to analyse student reflections. Lack of teacher's practice in implementing reflective writing also highlights that faculty training is critical to the development of effective reflective writing in the educational system.²³

In conclusion, the result of this study highlighted the necessity of presenting more faculty development programs for Physiotherapy academicians, especially with a focus on knowing the application of reflection in training students and steps involved in making students write and assess reflections. Furthermore, due attention should be

devoted to preparation of teachers for upcoming competency-based curriculum which mandates reflective writing. It should be ensured that reflective writing is practiced keeping in mind its core values instead of just making it look like another assignment to submit. Only if faculty member shows the inclination and realize the importance of inculcating reflective practices, student will take the task seriously and build its practice over time. In the new global world of information and the explosion of knowledge, it is the responsibility of teachers to provide students with the skills to understand reflective writing and practice effectively, rather than just make it look like any other task completion.

Findings of this study needs to be addressed in view of certain limitations. First and foremost, authors will like to acknowledge the ongoing shift in Physiotherapy curriculum from traditional model to competency-based Physiotherapy curriculum which is in the process of implementation. There is a probability of few findings being influenced because of the ongoing training of teacher's workshop to sensitize faculty about competency-based curriculum. Though reflections are not extensively covered in the workshop but few participants would have got sensitized to the term 'reflection' which could have possibly influenced responses to few questions under knowledge domain. It was difficult to analyse data separately considering the number of respondents who were a part of study after participating in teacher's training workshop was very meagre. Secondly a small sample size could limit the generalizability of the findings. And lastly survey based study tends to introduce respondent bias.

CONCLUSION:

Though Physiotherapy academicians had favourable attitude regarding the importance of reflective writing, they lacked adequate knowledge about reflections and hence they dint practice it. This study clearly highlights the need for organizing faculty development programme to empower faculty with the right use of reflective training alongside encouraging academicians to implement the culture of reflective writing in their learners.

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