

RESEARCH ARTICLE

Teacher characteristics affecting clinical education in audiology

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Abstract

Background and Aim: Clinical education is a major component of the Audiology curriculum. Clinical teachers and instructors play an important role in achieving clinical education goals. This research was conducted to survey the view point of Audiology students, teachers, and graduates about clinical teachers' characteristics affecting clinical education.

Methods: Through purposeful sampling method, 14 senior undergraduate students, 4 BSc. Graduates, and 7 teachers participated in this qualitative study. The relevant data were collected via focus group discussions and semi-structured interviews. The obtained data were analyzed by conventional content analysis.

Results: After data analysis and classification of codes, two main themes and some sub-themes were emerged. Themes included professional characteristics of clinical experience, educational ability and rigor as well as personality characteristics of behavior, motivation and compassion, discipline and timeliness. They were recognized as influential attributes of a clinical teacher by the study participants.

Conclusion: It seems that clinical experience, educational ability, rigor, behavior, motivation, timeliness and discipline play an important role

in increasing the quality of clinical education. Therefore, the choice of qualified clinical teacher is important in conducting the best clinical education course in the field of Audiology.

Keywords: Audiology; clinical education; clinical teachers; qualitative research

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Introduction

Clinical education is a process by which students gradually gain experience and knowledge by visiting patients, dealing with their problems and finally solving them through experience and logical thinking [1].

The most important components of university education are teachers, students and educational setting. It is obvious that any deficit in one of these components lowers the quality of education [2]. Pundits maintained that educators are main elements for successful education as they can improve learning by controlling different variables [3]. Educators create an atmosphere that students can find insight, recognize and grow their potential talents and can advance towards their professional and personal capabilities. These changes will occur if an educator has appropriate characteristics [4].

According to some studies educators can facilitate learning through clear speech, appropriate and diverse teaching methods, mastery in the special topics, innovation and creativity,

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detecting individual differences, enjoying working with students, fair behaviors, and having good relationship with students [5].

D'Souza et al. stated that nurses, clinical educators, and students with appropriate relationships and interactions are important components of an appropriate clinical environment. This study showed that persistent presence of the educator and his or her support for students, can facilitate learning process [6]. One of the important findings of Cremonini et al. was that students' satisfaction of their educators was related to their supervision during clinical training [7]. Grad and Dagens found out that students think that educators' supervision and receiving valuable feedbacks from them are vital. They also believed that clinical educators must help students in learning and students should feel comfortable with them [8].

Because educators and their interaction with students are important, recognizing appropriate characteristics of an educator from students' and educators' point of view and applying them will improve education quality [9]. Given the importance of clinical educators and the lack of any relevant study in the Audiology major, the present qualitative study was conducted with the aim of surveying Audiology students, graduates, and professors' point of view about professors' effective characteristics in clinical training.

Methods

This is a qualitative study conducted through content analysis in School of Rehabilitation Sciences in Iran University of Medical Sciences, Tehran, Iran. Conventional content analysis is an appropriate method for obtaining valid and reliable information from contextual data, especially when there are few theories and resources about the study topic [10]. In this method, categories are extracted from contextual data so the researcher(s) can obtain deeper understanding of the study topic [11].

In this study, three groups were invited: professors with at least one year of experience in Audiology clinical training, students in the last semester of BSc course and graduates with at least two years experience in clinical area and at

least five years of graduation because the older graduates may have experienced different clinical training methods and models.

Sampling was purposeful with maximum variation [12]. The subjects were selected because of their sufficient experience and special point of view about the study topic. When the data were saturated, the sampling was completed and stopped. Data saturation is determined when the researcher does not achieve any new data with new sampling [13].

For obtaining students' experiences and perceptions, focus group discussion was used. In addition, interview with professors and graduates was conducted in a semi-structured interview.

At first the study objectives and voice recording procedure were explained to the participants who were being assured of their data confidentiality. Then the written consent was obtained from the participants. The ethical approval of this study was gained (No. 95 9311301003).

In the interview, few open questions about participants' experiences were asked. Koch maintained that open questions provide a good situation for complete description of experiences [14]. According to the questions and answers, the interview was continued. Finally, with the participation of 14 students, 7 professors, and 4 graduates, the obtained data reached saturation when no more important and new code was emerged. For data analysis, content analysis was used. After recording the interview, it was transcribed word by word. Data analysis was conducted based on Graneheim and Ludman method [15].

Written answers were reviewed several times by the researcher to achieve more comprehensive and correct perception. All written texts were considered as a unit of analysis to be coded. Words, sentences, and or paragraphs were considered as meaning units. The meaning unit included words and sentences that were related in content. These units were put together based on their content. Then meaning units based on their latent content were abstracted, conceptualized, and labeled by a code. The obtained codes were compared based on similarities and differences with each other and categorized.

Finally by comparing categories, the hidden content of data were introduced as themes [15]. For improving scientific validity of the results, Lincoln and Goba method was used [10]. For achieving valid data, the researcher had continuous long-term presence in the data collection field. Interviews lasted for 10 months and they were studied and analyzed several times. In addition, for enhancing the results validity, the maximum variation of participants (education semester, sex, academic education, academic rank) and with data triangulation of several places (Rehabilitation School of Iran University of Medical Sciences, Tehran University of Medical Sciences and Shahid Beheshti University of Medical Sciences) and people (students, professors, graduates). Furthermore peer reviews by other colleagues helped improving validity. Comments of the professors who were familiar with qualitative research, concepts, categories and extracted codes were applied.

Results

In this study, 25 Audiology professors, students, and graduates from Rehabilitation Schools of Iran University of Medical Sciences, Tehran University of Medical Sciences and Shahid Beheshti University of Medical Sciences participated. Most of them (64%) were females. Table 1 presents the general information of the participants.

After analyzing data, the original codes were extracted. After reviewing codes for several times, abstracting and categorizing based on similarities were performed. The hidden meanings were labeled conceptually and abstractly as follows: two main themes (professional and personality characteristics) and six subthemes (clinical experience, training capabilities, commitment and rigor, behavior, motivation and compassion, discipline and timeliness). Like other qualitative studies, description of all codes is not possible and summary of the findings is presented in Table 2.

Professional characteristics

In conducted interviews, participants made several statements about professional skills.

Clinical experience

One thing that came up in the interview process about professional characteristics of educators was their clinical experience. Experience can correct the mistakes. An experienced educator can share his or her knowledge with students. In the interviews, an educator with a great experience was mentioned as a requirement for a clinical educator.

Training capabilities

As educator is responsible for transferring knowledge and correcting students' errors; he or she has to have required special capabilities to do this process correctly. One of the codes that was mentioned during interview about personal and professional characteristics of educators was training capabilities. This code was mentioned several times during interview so it is an effective factor. Another factor was knowledge transferring and speech delivering abilities.

Commitment and rigor

Another category was teacher's commitment and rigor. In the interview, some students mentioned commitment and rigor a negative factor. Most of the times, study participants reported both negative and positive points about a characteristic. Furthermore, some participants suggested that balanced strictness in the educators is appropriate and a requirement for clinical training.

Personal characteristics

Behavior

The first category and a very important characteristic of an educator is behavior. Most participants emphasized that behavior of an educator is very important. How an educator treats the patients and its effect on students were discussed in the interviews.

Discipline and timeliness

Discipline and timeliness in all fields is very important. Clinical educators are not exceptions. In some interviews, discipline and timeliness was emphasized. In addition, some students complained about indifference of some

Table 1. General interview information

Professors group				
Interviews	Time (min)	Academic rank	Education level	University
First	80	Assistant Professor	PhD	Iran University Of Medical Sciences
Second	88	Assistant Professor	PhD	Iran University Of Medical Sciences
Third	79	Assistant Professor	PhD	Iran University Of Medical Sciences
Fourth	74	Assistant Professor	PhD	Tehran University Of Medical Sciences
Fifth	62	Instructor	MSc	Shahid Beheshti University of Medical Sciences
Sixth	115	Instructor	BSc	Shahid Beheshti University of Medical Sciences
Seventh	69	Instructor	MSc	Iran University Of Medical Sciences
Students group	80	Assistant Professor	PhD	Iran University Of Medical Sciences
Students group				
Group discussion	Time (min)	Semester	Number and sexuality of members	University
First	52	8	2 F, 1 M	Iran University Of Medical Sciences
Second	70	8	3 F	Iran University Of Medical Sciences
Third	61	8	4 F, 1 M	Tehran University Of Medical Sciences
Fourth	48	8	3 M	Shahid Beheshti University of Medical Sciences
Graduates group				
Interviews	Time (min)	Sexuality	Work experience (years)	University
First	38	Female	4	Tehran University Of Medical Sciences
Second	42	Female	3	Tehran University Of Medical Sciences
Third	45	Female	2	Iran University Of Medical Sciences
Fourth	58	Female	3	Iran University Of Medical Sciences

F; female, M; male

professors with regard to discipline and time-liness.

Motivation and compassion

It was another code for personal and professional characteristics of educators. Educators' motivation and compassion and their commitment for students' learning were important factors and some participants mentioned them.

Discussion

Education practitioners who consider educators and students' point of view can enrich clinical experience by recognizing clinical training components. In fact, in education, teaching and learning depend on each other. Although, teaching is a teacher's activity, and the result of teaching is learning is the learners' activity [16]. Therefore, knowing the key factors in clinical training based on experience, can help education managers in the Audiology. Personal and professional characteristics of clinical educator such

Table 2. The characteristics extracted from the review of professors, students, and graduates (n=25)

Theme	Sub theme	Codes
Professional	Clinical experience	The presence of experienced teacher in the role of student guide The importance of clinical experience of teacher in quality of clinical training The importance of employing experienced teachers in providing an optimal learning environment
	Training capability	The need for clinical teacher's expertise in learning fields How to transfer knowledge to students The need for employing competent and expert teachers The importance of teacher's expression Provide up-to-date and effective content Appropriate methodology
	Commitment and rigor	The positive effects of teacher's balanced rigor Create a stress-free environment for clinical training No extreme supervision on student performance during practice Flexibility of teacher to interact with the student Providing collaborative learning interaction between the teacher and the student
Personality characteristics	Behavior	Respect for student and patient Logical encounter with student clinical mistakes Impact of the teacher's proper behavior on the student The teacher's proper behavior in attracting student learning
	Discipline and timeliness	The need for timely presence Impact of the teacher's punctuality on the student The importance of teacher discipline in the process of work
	Motivation and compassion	Generosity in learning science The importance of educators' interest in teaching The importance of work ethic Responsibility and compassion towards the student

as clinical experience, training capability, commitment and rigor, behavior, discipline and timeliness were among the factors mentioned by the students. This finding was in agreement with Cole and Wessel with respect to positive and negative aspects [17].

The results of a qualitative study conducted by Hekmatpour et al. showed the following secondary codes; knowledge, educational skills, personal characteristics, emotional characteristics, professional ethics, supportive characteristics, and managing characteristics [18].

In a study by Rafeey and Javadzadeh on effective factors in clinical training based on opinion of residents, it was shown that clinical training, teaching, knowledge and skill (professional characteristics) and personal characteristics (personality) are important and this finding is in agreement with the present study [19].

Teachers' expertise in training and diagnosis was mentioned as necessary factors for clinical training by students, professors, and graduates. Lack of proficiency can lower educators' self-confidence [20].

Participants emphasized that teachers' preparedness and clinical skills can affect training quality. Currens and Bithell found similar results and showed that clinical educators' expertise was a valuable characteristic from students and graduates' point of view [21]. In addition, our findings were in agreement with Rade et al. results in which 55% of students defined best professor as people with good knowledge and expert in transferring that knowledge [22]. In the field of educational ability, transferring information was one the most important characteristics of clinical educators. This finding is in agreement with Ghorbani et al. findings [23]. It

is obvious that teaching background is not very important in the teaching-learning process but the way of presenting scientific information, including scientific proficiency and presentation fluency are key factors. Other characteristics that were mentioned as important factors in the professional field was clinical experience. This experience makes them familiar with different and diverse cases and helps students more properly. In some interviews, lack of experience of some newly recruited professors was mentioned. The students reported that this may result in their confusion in clinical field and lowers education quality. In one study on 59 senior students of midwifery and nursery, 35.6% of students complained of lacking enough experienced educators in the field [24].

In our study, some students and graduates mentioned that too much commitment and rigor was a negative factor for learning that concurs with Amini and Honardar study results [25]. Inappropriate commitment can distance students from teachers and reduce their interest and motivation. On the other hand, some students and graduates found commitment and rigor very influential and prerequisite for education. Supervision and respectful feedback were mentioned by some students, too. This feedback should not interfere with learners' identity.

The importance of ethical behaviors and relationships with professors were important in teaching process. One important thing was professors and clinical educators' role modeling for the students with regard to their behaviors in clinical field and interaction with others. Khaghanizadeh et al. studied teachers' behavior, including communication skills and ethical qualifications [26]. Abedini et al. suggested that good behaviors of professors are the most important characteristics of them [27].

The study participants mentioned that discipline and timeliness in clinical practice was important and influential on students because students look to their professors. Sarchami and Salman Zadeh study showed that discipline and timeliness were the most important factors in education [28]. Adhami et al. determined valid criteria for evaluation of professors in theory

and practical educations such as on time and active presence of professors with higher scores in evaluation that is in agreement with the present study [29].

Motivation and compassion were other important characteristics. Professors' motivation for practical area and their commitment towards their proper teaching is very influential. This finding is not widely studied. Only Kamali et al. suggested that lack of motivation and inattention is one of the negative points in Physiotherapy education [30].

Conclusion

Participants in this study mentioned that educational experience and ability, appropriate commitment and rigor, timeliness and good behavior are effective factors for educational quality. It seems that effective educators can help students in clinical skills. Thus, professors with good experience, high scientific ability, and good interaction with students are the most important components in educational success. This study was a guide for clinical professors to consider their positive and negative points and help them improve their scientific and practical abilities. We can use the study findings in choosing better clinical educators or holding workshops to teach the important factors. For gaining more insight and information, the study can be replicated as a quantitative or qualitative research, or both.

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Conflict of interest

The authors declare that they have no conflict of interest.

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