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Review of Literature for the Learning Needs of Effective Clinical Teachers In the light of Particular Teaching Context, Saudi Arabia

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Abstract: ***Background: The most effective learning needs' assessment of clinical teachers should involve the perspectives of all stakeholders: teachers, students, patients and professional bodies. Snell, et al., (2000) suggested that a holistic, valid learning needs' measurement requires the inclusion of multiple perspectives, including those of the teachers, the patients and the institutions. Objectives: The current research study aimed at Review of Literature for the Learning Needs of Effective Clinical Teachers In the light of Particular Teaching Context, Saudi Arabia. Method: Descriptive research design utilized in the current research. It aims to provide a background to the learning needs of clinical teachers. The current research study based on division of the review into two sections, which are further broken down into specific topics under subheadings. The paper consequently carried out to the investigate the learning needs in general including definition, classification, who can define learning needs, why these are important for both learning and teaching, methods for measuring learning needs and the critical incidents technique as a tool for determining learning needs. While , the second part covers the learning needs of clinical teachers considering the learning needs of teaching staff in the health profession generally, and subsequently more specifically, the learning needs of the teachers of clinical dentistry. Results: The findings showed that in relation to the assessment of the Level of Stress among Adolescent Females at Selected Centers of Primary Health Care, Saudi Arabia. There was a high level of stress among the majority of the female adolescents' in relation to comparison of the stress level among the studied sample (61%) . While, the findings shows a moderate level of stress among the female adolescents' (58%). On the other hand, there was a low level of stress among the minority of the studied sample (10%). Conclusions: Ultimately, the most effective clinical teachers' support or development programme should meet their needs according to their particular context. Thus, it is important that the views of clinical teachers be considered regarding the skills and qualities they require in clinical teaching.***

Keywords: learning Needs; Clinical teachers, Assessment methodology & Critical Incident Technique (CIT)

1. Introduction

The cognitive, humanistic and adult education theorists, concerning the individual learner's own perception of what he or she wants to become, what he or she wants to be able to achieve, and at what level he or she wants to perform is the starting point in building a model of competencies; to the behaviorist such subjective data are irrelevant. (Knowles et al., 2012).

According to Knowles et al., (2012), A learning need can be defined as the discrepancy or gap between the competencies specified in the model and their present level of development by learners. In reviewing the literature concerning learning needs, it becomes evident that there is more than one approach to learning needs. There is debate about the definition of learning needs, and although Knowles' definition may appear simple, many questions arise. This can help the clinical teacher to measure that gap or state what set of competencies is required . It therefore becomes necessary to consider the discussion of learning needs in the literature and to provide a classification for learning needs as indicated by the literature:

Furthermore , perceived needs comprise those needs that learners identify as being necessary to their learning process This definition is consistent with that of Leagans et al. (1971), who stated that learning is initiated when a learner experiences a felt need; this feeling motivates the learner to address that need, and he or she will be satisfied after meeting it. However, it would be naïve to rely only on what learners determine as their needs, as they may not be expressing all their needs. (Ratnapalan & Hilliard, 2002).

Brookfield, (2001) , mentioned that stressed that educators should not be completely reliant on learners' expression of their needs because they may not be aware of all their needs; furthermore, the learners may find it difficult to assess their own learning needs, or they may be unmotivated to engage in learning something even though it is needed. Hence, if educators respond only to learners' expressed interests, their students will be prevented from exploring new areas of practice or from encountering new ways of thinking.

Moreover , Lawton , (1999) , defined the Normative needs as the measured gap between the current knowledge of the individual or group and the set standard In medical education, normative needs include the knowledge, skills, attitudes and performance of the learners. It is worth pointing out that the set standards are determined by experts, by professional bodies such as the Saudi Commission for Health Specialties' in Saudi Arabia, or by the Royal Colleges in the United Kingdom. Unlike perceived needs, the learners' opinions are not considered in determining normative needs.

According to Grant, (2002), Comparative needs are learning needs that are identified through comparisons with other learners. The teaching skills of the clinical teachers in one dental college may be compared with those of the teachers in another dental college. This type of comparison can be conducted by the programme directors or health educators. Unperceived needs are those that the learners are unaware of these needs can be determined by the health colleges, the

teachers, the patients or by health organizations. A review of healthcare problems or of the epidemiology within society could lead to a discovery of these needs.

The identification of learning needs is a crucial tool in the learning process, and this will ultimately lead to changes in the learners' practice these changes in practice could play a major role in improving health education by determining some of barriers and challenges that health educators face in both their teaching and learning. In this way, it becomes possible to provide them with the support, skills and knowledge that they need in their teaching. (Grant 2002).

Recognition of the importance of the faculty being skilled in their teaching and learning leads to issues of staff support and development, as these directly contribute to their ability to attain such skills. Steiner (2005), mentioned that, staff support and development is the key to achieving effective teaching, as its aim is to increase the efficacy of teaching in all settings, including hospitals, colleges and locations in the general community.

Furthermore, period of adolescence is exemplified by physical maturation, giving rise to strong psychological and physical changes. It was concluded that, one primary class of psychological change representative of adolescents is a reduction of emotional incident these sharp emotional experiences have been dispute to be the starting point of psychopathology and suicidal behavior. The stage of adolescence is the most common time of life for psychiatric illness to emerge with reported anxiety reaching its lifetime peak and suicide being the fourth leading cause of death. These findings, in combination with adult data showing anxiety disorders to be the most widespread class of psychiatric illness .Underscores the importance of understanding the developmental and neurobiological substrates that provide rise to worried states and associated with pathological changes. (Kessler et al., 2005),

Yurgelun, (2007), a number of cognitive and neurobiological hypotheses have been postulated for why adolescence may be a period of heightened turmoil and stress. In a review of the literature on human adolescent brain development, suggests that development through the adolescent years is associated with progressively greater efficiency of cognitive control capacities. This efficiency is described as dependent on maturation of the prefrontal cortex as evidenced by increased activity within focal prefrontal regions and diminished activity in irrelevant brain regions

Eaton et al., (2008), stated that, the universal blueprint, of improved cognitive be in charge of with maturation of the prefrontal cortex, recommended a linear increase in progress from childhood to the stage of adulthood. Nevertheless, the behaviors observed during adolescence represent a nonlinear change that can be illustrious from childhood and adulthood, as evidenced by the National Center for Health Statistics on adolescent behavior and mortality.

According to Crone et al., (2007) , stipulation immature prefrontal cortex were the basis for teen behavior then children should look remarkably similar or even of inferior quality than adolescents, specified their less residential prefrontal cortex and cognitive abilities. Consequently, immature prefrontal function alone, cannot consider as a justification for adolescent manners.

Somerville, Jones, & Casey, (2010), concluded that, to understand this developmental period, transitions into and out of adolescence are essential for distinguishing individual characteristics' of this phase of development. The theoretical model of adolescence must account for nonlinear changes for instance deflections or inflections during adolescence relative to both childhood and adulthood. A model of brain development that accounts for the distinctive emotional and behavioral changes that take place throughout adolescence.

2. Methodology

Descriptive research design utilized in the current research. The aim of the study was to provide a background to the learning needs of clinical teachers. The current research study based on division of the review into two sections, which are further broken down into specific topics under subheadings. The paper consequently carried out to the investigate the learning needs in general including definition, classification, who can define learning needs, why these are important for both learning and teaching, methods for measuring learning needs and the critical incidents technique as a tool for determining learning needs. While , the second part covers the learning needs of clinical teachers considering the learning needs of teaching staff in the health profession generally, and subsequently more specifically, the learning needs of the teachers of clinical dentistry.

Ultimately, when doing needs assessment, it is important to determine its purpose and who should define the method used to generate the findings. In addition, it would appear that agreement between the learner and the other stakeholders involved in identifying their learning needs, such as educators, professional bodies and college administrators, is important. For example, it would be inappropriate for a dental college to support novice clinical teachers in their perceived need to have training in staff development if this is in conflict with the normative needs of the college, which state that staff development training should be provided for a small number of teachers who already have the skills and experience to benefit from it.

3. Results

In the literature concerning the learning needs of clinical teachers and how to develop them, many strategies are recommended by the experts. According to Bland (1990), the development of clinical teachers includes activities and programmes designed to prepare these staff members for their roles and duties and to sustain their productivity. Thus, staff support and development is increasingly recognized as having a critical role to play in changing professional health education and in maximizing its effectiveness. However, any method selected for the development of clinical teachers' skills and knowledge should include some specific criteria. Daloz (1986) , described these criteria as follows ; support, which focuses on activities that reduce the anxiety and uncertainty of educators and strengthen their value; challenge, which refers to challenging the clinical teachers

by encouraging them to reflect on their experiences and to check their assumptions; and role modeling and guided discussion. A balancing of these three elements is essential for the development and growth of clinical teachers.

In investigating the importance of learning needs, Maslow (1999) developed his hierarchy of human needs, which drive the desire to learn. Maslow stated that these human needs influence the motivation of learners to achieve their goals. Maslow suggested that all learners are driven by the first four needs (physiological, safety, social and esteem needs). Once a lower level is achieved, the learner will move on to the next level. Knowles (1980) , stated that life changes represent a driving force for adult learners. This means that learners are ready and motivated to learn when the learning meets their experienced life needs. However, Rogers & Horrocks , (2002) argued that this is not always true. For example, some learners may be forced to learn with little sense of the need to do so; they are just obeying their employers' instructions. When these learners are forced to complete a programme, they may arrive at it with intentions other than those of learning. Some may come to socialize or for other reasons; if a learner's intention is not clear, that learner will eventually stop coming. Although Knowles did not claim to have evidence for his assumptions about adult learners, namely that they need to feel that the learning is important, this can be seen in reality. For example, clinical teachers' motivations to learn would derive from needs they identified during their experience of teaching.

Ultimately, the consideration of a needs assessment will lead to changes in practice. Thus, a needs assessment is important in the learning process; however, it should not constrain the learning process. The literature suggests that a needs assessment should contribute to the relationship between continuing professional development and that learning which leads to change, (Grant 2002).

Sweet et al. (2008) conducted a study on the needs, perceptions and recommendations of dental teachers who engage in dental chair-side teaching in the United Kingdom. The authors divided the needs of clinical teachers into many parts relating to their job titles or duties in the dental school. There are five different categories of clinical teachers with different needs and perceptions, as follows:

- **Dental practitioners** focus on how they can bring their knowledge and experience into their clinical teaching;
- **Senior academics** emphasise on changing the syllabus and ensuring that students are organised;
- **Intuitive teacher practitioners** show interest in practical learning and ask for clear guidance to help them determine what should be taught;
- **Teacher-trained academics** are focused on how to apply a number of educational theories that they have learned in their formal courses, such as quality control measures and reflective practice; and
- **Educational developers** seek to change the chair-side teaching approach and are interested in promoting teamwork and inter-professional education.

The complexity of learning needs indicates how hard it is for novice educationalists to avoid the confusion surrounding learning needs, as these are related to the tenets of motivational psychology and many educational theories. Indeed, experts in education have not agreed on a definition of learning needs, which may make the assessment of learning needs more difficult and affect its validity (Stufflebeam et al., 1985). In reviewing the literature related to learning needs assessments, it is useful to summarize the approaches used to identify these needs.

A questionnaire is a popular way of measuring learning needs, mainly because of its low cost and ease of application. In addition, questionnaires have other advantages; for instance, they can cover a wide range of topics, measure diverse learning needs and utilize a large sample (Mann , 1998). However, the disadvantages of a questionnaire include the fact that response rates to a questionnaire are poor, and this depends on questionnaire's content and context. Another disadvantage is that the quality of the data will depend on the quality of the questionnaire's questions (Lockyer, 1998). Questionnaires are limited to being used for self-assessment. Questionnaires are therefore useful for measuring general learning needs, such as workshop topics or objectives, but it is difficult to obtain in-depth information from a questionnaire. However, a questionnaire can be used in conjunction with other learning needs measures to provide reliable data. (Ratnapalan & Hilliard 2002).

The advantage of using individual interviews is that they can give the researcher or educator an in-depth understanding of the learners' perspective. Moreover, interviews can cover a wide range of learning needs and opportunities for development. On the other hand, they do have drawbacks: they take time and effort, and it is not feasible to assess the needs of a large group of learners via interviews. Moreover, analyzing the data from interviews can be challenging and take considerably more time than the data collection took. (Crandall, 1998).

Focus groups include 7–10 participants who meet the criteria for learners who need be considered for a particular educational activity; however, they are randomly selected from this wider group. The difference between focus groups and individual interviews is that the members of the groups may draw strength from one another to explain some opinions that they may consider unpopular. This is particularly important in provoking constructive criticism or negative opinions from learners, as they gain confidence from hearing each other's opinions. A focus group provides a wide range of data in a shorter timeframe than individual interviews and is therefore more cost-effective. However, the main drawback is that the information from a focus group may not represent the needs of all learners because it is not feasible to involve a large number of learners using this method. However, it can be used in conjunction with other needs assessment methods to provide more definitive data (Tipping 1998).

Observation method in this approach, learners are observed performing specific tasks by an observer who can be a peer or a senior who rates their performance. This can be conducted in a formal or informal setting. The results are then discussed with the learners and the learning needs determined . (Schon ,1987).

Gap analysis is also called discrepancy analysis and is essentially a comparison of current performance against stated competencies. It is conducted either by self-assessment, peer-assessment or by teachers (Knowles et al. 2012). The critical incidents technique is also used to identify learning needs. This method will be discussed in detail in the following section, as it is the method used in this study (Grant 2002).

The Critical Incident Technique (CIT) uses important techniques to assess learning needs. The CIT originated with the United States Army Air Forces (USAAF) during the Second World War when an Aviation Psychology Programme was developed to select and classify crewmembers. The CIT has evolved from this early military programme . (Flanagan, 1954).

The CIT utilizes a variety of techniques to allow humans to recall 'critical incidents 'and to collect direct perceptions of human behaviour in such a way as to find solutions to relevant problems. The meaning of such incidents is 'any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act' (Flanagan, 1954). For clarity, Flanagan added that, to constitute a critical incident, 'an incident must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects'(Flanagan ,1954).

The CI is primarily been used to identify applicants capable of meeting a job's requirement for performing well in multiple fields. However, it has also been utilized in training, to measure ideal performance and to determine the leadership qualities and motivational outlooks of subjects. It has also been used in research aimed to analyse complex tasks (Flanagan 1954; Carlisle 1986).

Flanagan (1954) , outlined the criteria for an incident to be considered valid: namely, it requires a defined start and end, and the participant must be able to remember it clearly. However, when Norman et al., (1992), conducted a study to confirm the indicators of low- and high-quality nursing care, from the perspectives of both the nurses and patients, participants faced challenges in remembering all the details of a given incident. Even if the interviewer was an expert, it proved difficult for many of the respondents to recall all the details. The participants, in describing an incident, tended to provide a summary of their experience, rather than recalling it in detail. Although Norman et al. (1992) asserted that these critical incidents were valid because they were clearly important from the participants' point of view, Flanagan (1954) categorised such incidents as invalid.

According to Butterfield et al. (2005), the CIT has some distinctive characteristics:

1) The focus is on critical events, 'incidents' that make it possible to extrapolate about effective performance in a certain activity or from the experience of a particular situation.
2) Data collection is mainly conducted via interviews, either individually or in groups.
3) Data analysis in the CIT uses an inductive method, which is performed from the determination of similar, small numbers of incidents which are amalgamated to form categories that emerge from the data. The process is continued by placing recent incidents into suitable categories; as a consequence, some categories need to be redefined.

The CIT has been used widely for research conducted to assess learners' needs, to determine medical supervisors' needs (Cottrell at al. 2002) and to evaluate clinical doctors' competencies It has shown the value of the interactive interview in acquiring information on these topics. Thus, the CIT has been widely used in research concerned with measuring medical and nursing needs, abilities, skills, competencies and performance. Its limitations are that it lacks a strong theoretical underpinning in comparison to other qualitative methods, such as phenomeno-graphy. In addition, the CIT's emphasis on alternative behaviours (effective or not effective, positive or negative) is not always the best way of dealing with people's experiences. (Altmaer , et al., 1997 & Kemppainen , 2000).

However, this could be compensated for by the ability to modify the CIT. CIT analysis is time consuming, and the CIT reliability is uncertain due to limitations in the generalisation of findings, the subjectivity of the researcher's analysis and the accuracy of the critical incidents. This is due to the selective memory effect and the nature of personal recall, which leads participants to forget the details. (Kain , 2004).

On the other hand, the utilization of CIT allows the researcher to seek rich information by getting the perspectives of participants regarding their behaviours and their significance in relation to the conclusions that can be drawn about critical incidents. This can lead to useful inferences being drawn about the skills and qualities required in clinical dental teachers. In addition, the insights into individuals' real experiences can help researchers to formulate a better understanding of these experiences. In interviews, CIT provides a direction for the interviews and can prompt participant recall. From the researcher's perspective, CIT implementation is relatively straightforward and practical (Kain , 2004). This means that the CIT can be applied to research studies varying in size and location, to individuals or on a group basis.

The CIT has been applied to many studies in health education, especially by those seeking to document and understand the learners' needs. Northup et al., (1983), applied it when exploring the needs of doctors and medical students for information. Williams & Webb (1944) ,used the CIT to investigate clinical radiographers and to explore their role in facilitating student learning. This technique allows for the collection of trainers' opinions and the uncovering of assumptions about learning and teaching needs from each incident.

Concerning to the utilization of interview as a qualitative research tool .Qualitative data can be collected in a variety of ways, all of which are listed in the literature. Such methods include using observations, interviews, diaries and

documents to collect data (Strauss & Corbin, 2008 & Hammersley & Atkinson, 2001).

Interviews are one of the most common methods of data collection in qualitative research. They are based on 'a set of prepared, mostly open-ended questions, which guide the interview and the interviewer' (Flick, 2014,). In addition, they enable discussion with participants about their experiences, rather than merely exploring the experience itself (Silverman, 2010).

A semi-structured interview affords the researcher the opportunity to talk directly to the participants about specific experiences that are related to the research question and to go into considerable detail about them. This sort of interview enables the interviewer to explore the 'why?', rather than simply the 'how many?' and to discover the motives behind things, as opposed to merely accumulating numerical statistics through 'yes' and 'no' questions (Fylan 2005; Flick 2014). It also provides the researcher with the opportunity to obtain more information than simply the interviewee's words by noticing his or her silences or gestures. For these reasons, this type of interview can accommodate complex situations and make it possible to distinguish the individual's unique perspective. In addition, there is the opportunity to vary the questions to address the most important parts of a participant's experience (Corbin & Morse , 2003).

Turner , (2010) , made the following recommendations for creating a successful and effective interview: (a) the wording of the questions needs to be open-ended, so that the participants feel able to answer freely; (b) questions should be phrased neutrally to avoid any bias that could influence the participants' answers (i.e., the interviewer should avoid words that might affect answers, for example, judgmental words); (c) questions should be asked one at a time, rather than several at once; (d) questions must be phrased clearly (this includes taking into account any terms particular to the programme or the participant's culture).

Another advantage of utilizing a semi-structured interview is that, should unforeseen topics come up during the interview, there is the opportunity to delve deeper into that area without being restricted by pre-set questions. In addition, semi-structured interviews afford the possibility of asking questions about anything that is unclear, either to explain unclear questions to participants or to give the researcher an opportunity to ask about unclear answers (Cohen et al. 2011).

With regard to using this tool in studies concerned with clinical teachers' needs, Aldawsari et al., (2015), conducted a study using the interview method to explore clinical teachers' experiences in a nursing programme in Saudi Arabia. Similarly, Fantilli &McDougall (2009) , conducted a mixed methods study to explore the challenges faced by and the support offered to new teachers. They used interviews to obtain qualitative data and a questionnaire for quantitative data.

Interviews are not without their weaknesses, however: their main weaknesses are related to issues of credibility and conformability. Lincoln & Guba , (1985) defined credibility as the precision by which the researcher's interpretation accurately reflects the participants' expression. The interviewer might not always be able to acquire all the necessary information because of interviewer bias, lack of interviewing skills, language barriers and trust issues, any of which can affect the study's data credibility (Marshall & Rossman , 2011).

Conformability involves the transferability of the findings to other settings and their applicability in other contexts. This is especially difficult with a small sample. Moreover, the researcher has to spend more time analysing the findings of interviews than with quantitative analysis (Saks & Allsop , 2007).

However, a researcher's awareness of the limitations of interviews can help him or her to deal with these professionally (Tylor et al., 2016). Hence, the rigors of the qualitative approach can be maximized by reflexivity and by reflecting on the researchers' perspectives and decisions, and by inviting participants to check on the research results and themes. In addition, a clear, thorough and transparent description of the research procedures from the planning stage, through the method development and the findings must be reported. With regard to conformability, a detailed description of the research context, including the service, facilities and research conclusions, must be provided to determine the extent of the findings and their application to other contexts (Noble & Smith , 2015).

4. Discussion

The results of previous studies have been included to show the importance of these qualities for the clinical teacher; moreover, they could be applied to the recruitment and promotion of teachers and in staff support and development programmes at health colleges. Interestingly, many of these qualities are non-cognitive (motivation, social skills, resilience and coping) rather than purely cognitive skills. However, these skills and qualities generally receive scant attention in clinical support and development programmes. It would therefore be more appropriate to give more emphasis to non-cognitive skills during the support of clinical teachers.

Fugill (2005) carried out a qualitative study that aimed to identify the behaviors and qualities of clinical dental teachers that affected their students' clinical learning by conducting interviews with dental students. I acknowledge that the students' opinions may be biased due to many factors, such as being influenced by the teachers' grading, and the fact that their opinion might influence their marks. Nevertheless, considering the dental students' opinions is important because the teachers' needs are directly related to the students' needs; in other words, the learning needs of clinical teachers are related to their teaching, which the students is at the core of teaching process.

The findings of Fugill's ,(2005) , study showed that dental students viewed an effective clinical teacher as one who was concerned about the quality of his/her feedback and as such would specifically provide feedback without an emotional undertone. The other point emphasized in this study was that clinical teachers should combine the theoretical part of a

subject with the practical part; in other words, they should be able to contextualize the content of the subject, particularly because dentistry is mainly based on clinical knowledge. For this reason, it is important that teachers have the ability to mesh their skills, knowledge and attitude to create the perfect learning environment.

Gerzina et al. (2005) extended Fugill's (2005) study, which only considered the topic from the students' perspective. Gerzina et al. (2005) aimed to explore both the students' and the teachers' perspectives on clinical dental teaching and to communicate the students' perspectives to the teachers. There was agreement amongst the students and teachers that empathy, discussion, alternative treatment plans and continuous feedback are the qualities that clinical teachers should have to achieve maximum effectiveness.

5. Conclusion

The current research study aimed at Review of Literature for the Learning Needs of Effective Clinical Teachers In the light of Particular Teaching Context, Saudi Arabia. Despite the different backgrounds and roles of participants in Sweet et al. (2008) study, they reached agreement concerning several important needs. The first is the importance of educational training in teaching and learning for all clinical teachers. Another issue is the need to encourage dental teachers to improve their interactive skills, especially when they have to facilitate students' clinical learning. The participants commented on the importance of the teacher/student ratio, as well as having standardized protocols and guidelines that all staff members follow. The last point involves the importance of feedback, and these results exhibit strong agreement with those of many other studies.

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