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Beyond medical degrees: employers' views of the quality indicators of medical graduates in Saudi Arabia

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ABSTRACT

In recent years, there has been a shift towards seeing employability as a key outcome of higher education (HE). Despite this, there is still a concern that graduates are not well prepared for the labour market. One way to bridge the gap between education and the labour market is to involve employers in considerations of employability frameworks or sets of required graduate attributes. This paper reports on a study aimed at identifying how employers of medical graduates in Saudi Arabia conceptualise quality in HE. The main objective of this study is to develop a model of quality in HE that incorporates employers' views of medical education and its graduates. An exploratory two-stage design was adopted, utilising interviews and survey data. This paper discusses the interview findings relating to medical graduates' attributes in particular. Fourteen medical employers were interviewed to determine how they conceptualise quality in relation to medical educational experience and graduate attributes. Thematic Analysis of these interviews suggests that views of quality fall into three broad themes: Graduate Abilities, Graduate Readiness, and Research and Engagement Experience. Data drawn from these interviews indicate that employers favour the soft skills of medical graduates over their basic medical knowledge. Additionally, effective practical skills were cited as being of particular importance and highly desirable. This study has implications for the development and delivery of medical education in Saudi Arabia, aspiring to narrow the gap between HE and the labour market.

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Quality model; employers; soft skills; employment readiness; graduate attributes

Introduction

One of the main purposes of contemporary Higher Education (HE) is the production of qualified graduates for the labour market. Whilst we acknowledge that this is a contentious point (Barnett 1992), significant consideration has been given to HE as a place for students to develop their employability skills. Although this is a controversial idea as not all scholars believe that this is a primary purpose of HE, given the demand for competent graduates and the need to gain employment, consideration of graduate attributes is essential. The issue of employability is particularly salient where the educational programme relates to a professional occupation such as medicine.

The human capital theory (HCT) calls for investment in educational quality to develop productive graduates for the labour market (Becker 1964). The theory argues that the quality of education significantly correlates with graduates' productivity in the workplace and consequently enhances job performance. To achieve the aim of HCT, Cai (2012) asserts that it is crucial to seek employers' input into the kinds of educational experiences that support the development of employable graduates.

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However, in practice, HE has been criticised for producing graduates that are ill prepared for the labour market (Gallagher et al. 2015), creating a gap between education providers and future employers. Indeed, employers in the countries of the Gulf Cooperation Council (GCC) report that graduates demonstrate low competencies in generic skills (Gallagher et al. 2015). Specifically, in 2014 in Saudi Arabia, only around 50% of employers felt that the Saudi educational system succeeded in preparing students for the marketplace (Gallagher et al. 2015).

With regards to medical education, Saudi Arabia has witnessed a massive nationwide expansion of medical colleges, in both private and public universities. However, employers appear to favour non-Saudis over Saudi medical graduates for filling vacancies in Saudi hospitals. This misalignment between HE and the labour market may have played a role in the declining rates of employment of medical graduates in Saudi Arabia in recent years.

In order to reduce unemployment among Saudi medical graduates and close the gap between HE and the medical labour market, there is a need to understand what medical employers in Saudi Arabia consider to be the crucial attributes of medical graduates and a good quality medical education. This will make it possible to develop a holistic model of educational quality. Indeed, the majority of existing educational service quality models have been developed from the perspective of academics or students (Garvin 1988; Noaman et al. 2017; Ilies, Osoian, and Zaharie 2010). Arguably employers have been neglected in the development of quality models in HE when it may well be critical to incorporate them as one of the main stakeholders.

This paper discusses the essential educational experiences that result in desirable medical graduate attributes from the perspective of medical employers in Saudi Arabia. The data presented in this paper are part of a larger project that aims to develop a comprehensive quality model in HE based on the needs of medical employers in Saudi Arabia.

Literature review

Employers consider a university to be of high quality when it produces highly competent and professional graduates for the labour market (Ilies, Osoian, and Zaharie 2010). Velasco (2012) argues that students with high grades are more likely to find employment. This would imply that good quality degrees are at the top of the list of qualifications employers usually seek in a candidate. Indeed, Carr et al. (2014) and Salem et al. (2016) have argued that GPA and final examination results are highly associated with and predict medical graduates' clinical performance in hospitals. Dicker et al. (2019) claim that employers define a graduates' quality as the attainment of personal skills and assert that quality is less about academic knowledge and performance and more about candidates' personality and skills (Branine 2008; Chhinzer and Russo 2018).

Brown, Chapman, and Graham (2007) argue that developed countries, such as Germany, the Uk, the USA, and Japan have shifted their focus towards preparing highly skilled workers to serve the economy. In short, the authors argue that graduates should be highly skilled, high-tech capable, and knowledgeable. Lauder and Mayhew (2020) believe that merely acquiring soft skills is insufficient. Graduates should attain soft skills, practical skills and knowledge. Physicians need to be capable of making a decision on the need for a procedure and have the required practical skills and knowledge to deliver an effective and successful procedure, if necessary. Employers are keen to recruit candidates with local context knowledge yet international experience (Brown, Chapman, and Graham 2007). However, according to Alshahrani et al. (2014), medical students express an interest in undertaking clinical training locally, in Saudi Arabia, more than they do abroad.

Dicker et al. (2019) argue that employers see earning degrees as a means for students to acquire soft skills for self- and continuous learning. Indeed, employers believe that students should acquire self-learning skills and learn by research. They believe that graduates with high research skills have higher chances of being recruited (Al-Amri et al. 2020). Graduates with high levels of self-confidence

are also more likely to be recruited (Makki et al. 2015). A study conducted by Post et al. (2015) among pathology graduates indicates that employers emphasise the pathologists' work ethic, professionalism and interpersonal skills over career motivation, work style and technical proficiency.

Communication skills are essential for the work field in general and for the medical labour market specifically. Ambady et al. (2002) found that doctors who lack effective communication skills are more likely to be sued. Apart from the soft skills needed for the medical labour market, the Scottish Doctor Learning Outcomes have a specific domain for communication skills covering the ability of graduates to communicate with patients and relatives, colleagues, tutor, and media and press (Simpson et al. 2002).

Although some jobs are being eliminated due to automation in the fourth industrial revolution, this has created new jobs and the need for new skills for the labour market (Lauder and Mayhew 2020). According to World Economic Forum (2016, 81), due to the fourth industrial revolution, healthcare employers will favour the following soft skills by 2020: 'problem sensitivity, active learning, critical thinking, management of financial resources, persuasion'. According to Lauder and Mayhew (2020), the fourth industrial revolution has also created a demand for graduates with strong technical skills and low competency in these skills will probably impact chances of employment. However, according to Laidlaw, Guild, and Struthers (2009), employers consider IT skills to be the least important for the medical workplace, although this finding might change with the emergence of robotic and automated procedures, and distance medicine.

Indeed, according to the Scottish Doctor Learning Outcomes, medical graduates should obtain general IT skills and be able to handle medical informatics, such as maintaining electronic patient records and dealing with computer-based data (Simpson et al. 2002). Similarly, Zaini et al. (2011) see computer literacy as an essential attribute which enables graduates to manage patient records and medical informatics in the workplace. In Oman, employers believe that graduates must keep abreast of the latest technological advances emerging in the labour market (Al-Amri et al. 2020). Physicians should keep track of the latest robotic advances such as 'minimally invasive surgery, robot-guided procedures and deployment of prosthetic heart valves' (O'Donnabhain and Friedman 2018, 880).

Organizations usually seek to recruit experienced employees rather than recent graduates, making it even more important that graduates are equipped to compete in a highly competitive labour market. Rodman, Biloslavo, and Bratož (2013) found that employers perceive student involvement in practical training in HE institutions as a sign of quality. However, Dicker et al. (2019) argue that employers look for personal skills in graduates rather than work experience. Nonetheless, the situation in medicine is quite different. Medical training and internship are core aspects of medical education and could substitute for work experience. Medical employers believe that some medical practices cannot be effectively taught in the classroom; students should engage in the work field to understand and master such practices (Illing et al. 2013).

Employers expect trainees to join organisations and play a noticeable role as actual members of staff during their training (Chhinzer and Russo 2018). However, Illing et al. (2013) assert that graduates perceive themselves as outsiders in their residency years where they are less engaged in their training. In the USA, Langdale et al. (2003) claim that there is a gap between medical graduates' outcomes and residency trainer expectations. Post et al. (2015, 4) note that recruitment in the medical labour market is perceived as challenging because of 'inadequate training/experience' and a 'mismatch between residency training and job requirements'. These issues demonstrate the need to align theory with practice in medical education. It has been proposed that proper communication between universities and trainers contributes to improved acquisition of clinical skills, family history taking and examination results by students, and ultimately to better preparation of graduates for the labour market (Frankel and English 2004). Brown, Chapman, and Graham (2007) add that proper supervision, as well as adequate feedback from supervisors, would also facilitate medical students' transition from the learning environment to the work field place. Additionally, Illing et al. (2013) believe that in order to close the gap between universities and the medical labour market,

medical graduates must be expected to continue learning while in work. Trying to train and equip students to fully prepare them for all aspects of medical work is challenging and could result in failure.

Studies in the UK showed that medical graduates perceive themselves to be unprepared for the medical labour market (Goldacre, Taylor, and Lambert 2010; Cave et al. 2007). This situation has been encountered in other countries as well (Langdale et al. 2003; Armstrong, Mackey, and Spear 2004). In England, a study has shown that the mortality rate in hospitals peaks in August, when medical students start their first year of medical training, due to their lack of experience (Jen et al. 2009).

In 2011, the Saudi Medical Deans Committee produced a national competency-based framework to specify competencies for medical graduates called the Saudi Meds Framework. This framework consists of seven domains: Doctor and Practice, Doctor and Patient Care, Doctor and the Community, Doctor and Communication Skills, Doctor and Professionalism, Doctor and IT, and Doctor and Research (Zaini et al. 2011). Many other countries, such as Canada, the United States, the United Kingdom, the Netherlands, and Australia, have also set out such frameworks specifying medical graduates' required competencies. However, the Saudi Meds framework was developed from the perspective of academics and it is thus essential to expand the scope of this framework to include the voices of employers in terms of specifying competencies for the labour market.

Given the lack of incorporation of the voices of employers in models of educational and graduate quality in HE, the current study seeks to bridge this gap. The aim of the study is to develop a comprehensive quality model in HE in accordance with the service quality approach from the perspective of employers. This model will comprise the quality attributes of universities and graduates in Saudi Arabia. This paper reports part of the findings of the first phase of model development – the interviews with employers.

Methodology

An exploratory study was carried out to develop a quality model in HE. The data collection for this study was conducted in two phases; semi-structured interviews followed by a survey. Greater emphasis is placed on the qualitative phase, while the quantitative phase of the study is used to obtain a broader sense of perception of a larger participant sample. In the first phase of developing the model, employers at hospitals were approached for information using interviews. The interviews were carried out to develop a sense of what medical graduate attributes and medical educational experiences employers value. The interviews were semi-structured and an interview schedule was used to guide conversations. The interviews took approximately one hour and were audio recorded for later transcription. The data collection for the first phase commenced in January 2019 and lasted for two months.

The study took place in the Eastern Province of Saudi Arabia, which encompasses 31 private and public hospitals. The participants in this study come from five (16.13% of the total) hospitals, two private and three public. The sample included 14 medical department heads. To ensure targeting of representative participants, the medical directors at the participating hospitals were asked to nominate participants best suited to the study. Employers represented both public and private hospitals and were from both genders. Additionally, caution was taken to ensure that the selected employers were of different specialities. The participants' demographics are shown in Table 1.

Ethical approval (number 3147) for the study was granted by Durham University. In addition, approval from participating hospitals was obtained. Although studies in education tend not to involve much potential harm to adult participants, a number of hospitals refused to take part in this study and disclose information due to the sensitive nature of information and data at hospitals. In participating hospitals, a consent form and an information sheet was provided to participants prior to the start of the interview and time was given to participants to enable them to review these documents and ask questions, if needed. The participants were not asked to disclose any sensitive information about the running of the hospital or content of training programmes but rather to

Table 1. Participant demographics.

	Participant1	Participant2	Participant3	Participant4	Participant5	Participant6	Participant7
Gender	Male	Male	Male	Male	Female	Male	Female
Nationality	Egyptian	Tunisia	Tunisia	Saudi	Egyptian	Syrian	Saudi
Sector	Private	Private	Private	Private	Private	Public	Public
Medical Speciality	Internal Medicine	Emergency	Orthopaedic Surgery	Paediatric	Dermatology	Emergency	ENT
	Participant8	Participant9	Participant10	Participant11	Participant12	Participant13	Participant14
Gender	Male	Male	Male	Female	Male	Male	Male
Nationality	Saudi	Egyptian	Saudi	Saudi	Egyptian	Saudi	Saudi
Sector	Public	Private	Public	Public	Private	Private	Public
Medical Speciality	Surgery	Surgery	Paediatric Surgery	Ophthalmology	Surgery	Urology	Oncology

express their views on what attributes a good quality graduate should possess. The recording and the transcribed pieces were kept confidential and stored on a password-protected personal computer. No identifiable information was attached to the data reported and participants are anonymous and referred to as Participant 1 and so on.

Following the completion of interview transcriptions, thematic analysis was employed to analyse interview data using NVivo software. Deductive thematic analysis was adopted to analyse the data to link what has been already done in the literature to the data (cf. Bloomberg and Volpe 2016). Following the thematic analysis approach of Braun and Clarke (2006), codes were assigned to relevant narratives and narratives were grouped into categories and then themes. Following a continuous cycling of data analysis, data sets were ultimately narrowed down to three themes – Graduate Abilities, Graduate Readiness and Research and Engagement Experience – broken down into seven categories and 23 codes (see Figure 1). Data analysis was reported in accordance with the generated themes. This analysis prepared the ground to develop the questionnaire for the second stage. For the data validation, a peer debriefing approach was adopted where the study findings are

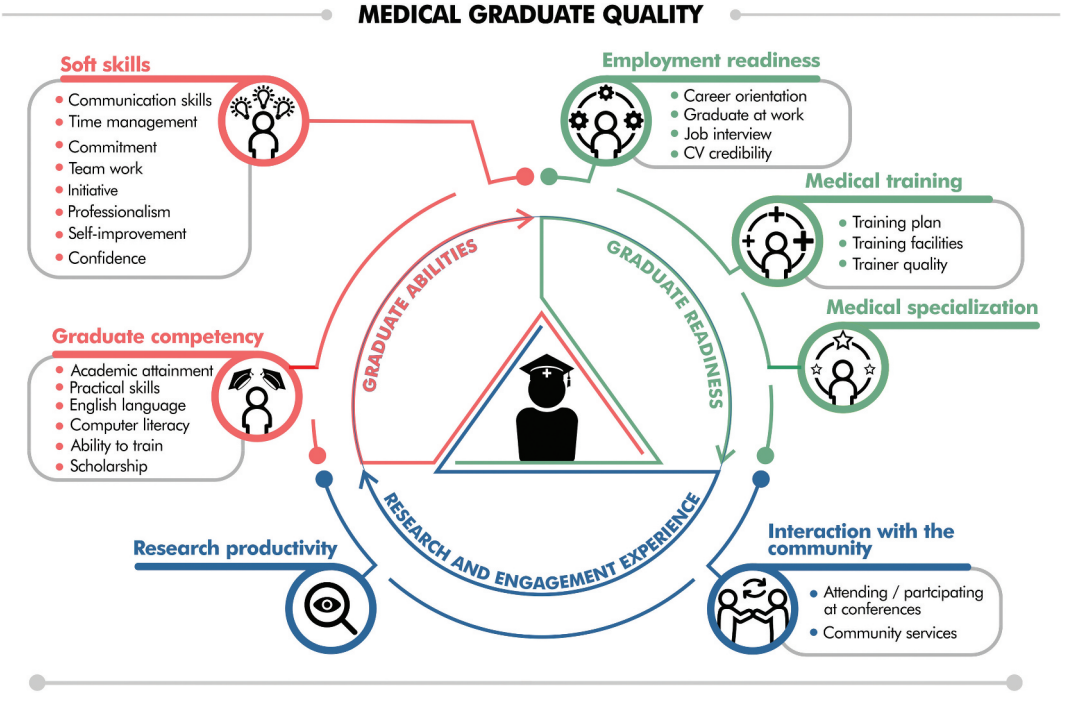

Figure 1. Visual result of thematic analysis.

reviewed by a peer who is an expert in qualitative analysis (Bloomberg and Volpe 2016; Creswell and Clark 2011). Additionally, a questionnaire will be developed for the second phase to validate and generalise the findings of this study.

Results

Theme 1: graduate abilities

This theme demonstrates the key quality attributes of medical graduates necessary for the labour market in terms of soft skills, medical knowledge and general competencies.

Soft skills

The majority of interviewees prefer medical graduates with excellent soft skills over those with high grades. They believe that graduates can be clinically trained and medical knowledge can be attained and enhanced in the workplace. Soft skills, on the other hand, are more challenging to teach.

> *Whether their theoretical knowledge is good or not [is less important]; they can learn anytime if they want to. Soft skills are more important for me.* ***Participant 13***

> *A surgeon cannot perform on his/her own without nurses and assistants. If doctors do not understand the concept of cooperating . . . they will cause a lot of trouble.* ***Participant 9***

There was considerable agreement among participants about the soft skills that are needed for the labour market. From the perspective of employers, the soft skills that are most helpful in the medical workplace are: communication skills, time management, commitment, teamwork, initiative, professionalism, self-improvement, and confidence. The employers' perspective, in terms of medical soft skills, strongly aligns with the Saudi Meds Framework, which was constructed by medical academics.

> *I prefer candidates with a personality that fits this organization. To work in harmony . . . and to handle the workload.* ***Participant 1***

> *Communication skills, personality, and knowing how to deal with people are a priority. Show me that you want to work and learn.* ***Participant 2***

> *We might have some violent patients coming to us . . . If doctors are violent as well, it would be a disaster . . . Confusion and lack of confidence may cost a patient his or her life.* ***Participant 6***

Graduate competency

A solid theoretical medical background does not suffice in the workplace. Graduates are expected to develop practical skills to succeed in the medical workplace. For medical graduates, practical skills and the ability to treat patients are crucial. Graduates are expected to develop practical skills to succeed in the medical workplace. To be attractive to employers, graduates should maintain a balance between the theoretical and the practical.

> *High grades do not necessarily indicate good performance. Students might be good at memorizing but bad at practicing what they have learned.* ***Participant 5***

> *It's great if students study and pass exams with high marks, but what I need to know is if he is able to integrate his knowledge with his practical skills.* ***Participant 3***

On the other hand, medical graduates are expected to develop computer literacy and a technological background, as noted by six out of 14 participants. This will allow them to effectively practice medicine using innovative and technological techniques.

> *I see it [robotic surgeries] as a promising opportunity that will grow in the future . . . Distance education and robotic surgery, endoscopy, minimal access surgery are very open opportunities and will eliminate traditional surgeries.* ***Participant 1***

However, traditional practical skills are also important. Students should be taught to practice medicine with an emphasis on using their hands, complemented with technological techniques. It is essential to prevent the traditional physical examination from vanishing, but employers have noticed students are weak when it comes to practicing traditional physical examination.

> *Medical students should be trained in the basic skills and how to traditionally examine and diagnose. This should be complemented with knowledge of the innovative and technical sides of medicine. There should not be an emphasis on the technological part at the cost of the basic and fundamental skills required . . . [Students] are unable to traditionally examine patients because they were trained in the easy way by relying on different types of x-ray.* ***Participant 3***

In addition, employers believe that studying abroad is beneficial for medical graduates. Scholarship opportunities could be a great chance to bring overseas experience to Saudi Arabia and ultimately teach and train others.

Participant 12: *scholarships should be granted to students. Because when they get back, they will teach others and benefit the university and the society.*

Theme 2: graduate readiness

The second theme is graduate readiness. This theme demonstrates employers' perspectives on the extent to which graduates are ready for the medical labour market. The theme reflects those factors that employers believe help prepare medical students for the labour market, including medical training and specialisation.

Employment readiness

Employers argue that, whilst working to prepare equipped graduates, universities by themselves are unable to produce fully prepared graduates for the labour market. Universities play a role in equipping medical graduates with the minimal required level of knowledge, soft skills and practical skills. Hospitals can then provide additional training in accordance with the needs of the labour market.

> *Universities cannot prepare fully competent and qualified graduates, so the focus should rather be on making students independent learners.* ***Participant 3***

> *When students earn their degree, this does not mean that they are able and equipped to work . . . It only gives them the basic skills to start work.* ***Participant 1***

Although employers acknowledge that preparing a fully ready medical graduate is difficult, the workplace still looks for candidates who are confident in dealing with patients. In this regard, medical graduates should not earn their degree until they are competent enough to hold full responsibility for patients. A large number of job opportunities are in remote areas where no support is offered to newly hired graduates.

> *A newly graduated doctor must be ready as he/she might be hired in a place and find him/herself the only doctor in that place. He/she must be able to take the responsibility for a patient.* ***Participant 11***

For most non-medical graduates, work experience, or lack thereof, is the main concern. This is different for medical graduates, because they can gain work experience through intensive training/internships. Medical employers claim that opportunities for training/internships can substitute for work experience for medical students.

> *I would also look at his grades in his training . . . [They are] more important than the ones achieved in theoretical subjects.* ***Participant 3***

Nobody reaches 100% at college. That is where the internship year comes in handy. ***Participant 8***

From the perspective of employers, preparing medical graduates in line with the needs of the labour market is the responsibility of universities, the Saudi Commission for Health Specialities (SCHS), and medical employers. They think that universities alone are not able to successfully meet labour market requirements. The SCHS should aid universities in this matter, according to employers. The SCHS is expected to constantly reach out to employers to understand and oversee the rapid changes in the labour market for the sake of enhancing medical education.

Universities cannot be responsible for ensuring medical graduates from all specializations are up to date and competent properly due to the large number of medical specialties that the university offers . . . The SCHS should take responsibility to ensure graduates develop properly and in accordance with labor market needs. ***Participant 3***

Universities can build communication channels with the SCHS. *They are aware of what the market needs based on periodic reviews.* ***Participant 13***

Medical training

Generally speaking, student training is essential in medical studies. However, apart from emphasising the role of students in medical training, the selection criteria for trainers and training locations are crucial as well. Training locations are expected to be fully equipped with advanced equipment and technology in order for students to receive the optimum benefit of training. Creating criteria for training locations would probably help in choosing appropriate hospitals. If there is no hospital attached to the university, this could hinder medical graduates in the successful development of their practical skills. Employers have observed deficiencies in the clinical skills of graduates from universities without teaching hospitals.

Some of the equipment is absent or really old. This makes the trainees suffer sometimes. ***Participant 7***

A graduate that has studied at a university that has no hospital attached to it tends to have limitations. ***Participant 4***

To ensure a proper training programme, there should be constant communication between HE and employers. Supervision strategies are expected to be established to oversee the process of training and attempt to eliminate any obstacles that may be encountered. Employers believe that students who are supervised by their universities perform better than those who lack supervision.

They were not supervised properly [during training] . . . Had they worked hard during the training period, they would have been able to examine more than just one patient per day. ***Participant 2***

The Saudi Commission for Health Specialities is the official entity in Saudi Arabia that governs health-related education. The participants stated the importance of the contribution of the Commission, particularly in the training plan of medical students. Universities and the Commission work together to create successful training plans for students and trainees. It is the role of the Commission to be part of the students' training plann. Although employers have raised some issues in student training, universities, along with the SCHS, are responsible for resolving such flaws.

Universities, along with the SCHS, are trying to set rules and regulations to make matters better [in training]. Everything must be loud and clear, and done according to the one and only approved method, which must be followed by everyone. ***Participant 11***

Medical specialisation

After successfully passing medical training, students will probably develop an interest in a number of specialities in which they would like to pursue their studies. However, employers argue that medical speciality programmes in Saudi Arabia are not well structured. Employers believe that the number of medical graduates exceeds the capacity of the labour market. In addition, in Saudi Arabia, medical

students are allocated randomly to specialities in a way that does not always match the needs of the labour market, which probably leads to unemployment among medical graduates. A medical specialisation plan should be developed. The plan should align with the needs of Saudi hospitals based on regions. This will help create an adequate distribution of medical practitioners across Saudi Arabia.

> *The number of medical graduates is more than [is] needed in the market . . . I want only two surgeons in two years, but I get 10 surgeons in one year.* ***Participant 8***

> *There must be a plan that specifies how many doctors are needed in each specialty . . . Then doctors should be trained to fill those vacancies.* ***Participant 11***

The participants asserted that universities should collaborate with the Saudi Commission for Health Specialities to control the distribution of medical students across medical specialities in accordance with the needs of the labour market. Medical specialisation, indeed, should be overseen to prevent overcrowding in certain fields, which ultimately causes unemployment. Employers should encourage universities and the commission to observe the needed specialisations in the labour market and set medical speciality options accordingly.

> *There must be a strategic plan for the whole country that specifies the number of needed doctors in each specialization and in each hospital. Everyone should apply this plan. Then the university, along with the SCHS, would supervise the training plan.* ***Participant 11***

Theme 3: research and engagement experience

The last theme is research and engagement experience. This theme reflects the activities that the employers expect students to get involved in. The theme is specifically designed for activities outside the teaching environment, where students seek to conduct research and participate in community service activities.

Research productivity

Employers claim that research productivity helps students to gain self- and continuous learning skills. The majority of participants believe that it is important for medical graduates to possess research skills. According to the Saudi Meds Framework, one of the major attributes of medical graduates is the ability to conduct medical research effectively (Zaini et al. 2011).

> *I would really be attracted to an applicant . . . who has participated in pediatric surgery research papers.* ***Participant 10***

> *Reading scientific papers is a skill and possessing this skill from the start is a very good basis for a medical student's career. This will allow them to continue exploring the developments in medicine.* ***Participant 13***

Private sector hospitals have a somewhat different perspective than public hospitals. Two participants showed no interest in the research skills of medical graduates. These two employers come from private hospitals. The reason behind this is probably private hospitals' aim to earn money rather than produce scientific research.

> *As an employer, no, it does not attract me at all. I do not want someone who is dedicated to research, but unable to perform appendix surgery.* ***Participant 4***

> *I cannot just look into your research papers and that is it. The trainee must have the surgical skill it takes to perform an operation on a patient.* ***Participant 7***

Employers believe that some faculty members' behaviour and approaches to conducting research could hinder the interest of medical students in research. Some participants raised concerns about universities and students conducting research studies in an unethical manner. Faculty members might use students' efforts when working together on a research study to get credit and earn promotion unfairly.

> *Students nowadays do not do a lot of research because they know that the university or the professor would take credit for their hard work. A professor may take a student's research paper and put his name on top of it and then get a promotion for it. That is considered a crime, as they are stealing students' hard work.* ***Participant 11***

Similarly, students' individual performance is unclear when they work in groups. Employers have perceived this issue when asking students about their research work in job interviews.

> *But what is truly happening is that students are lying to us. I examined the trainees that we have here and I found out that the universities asked them to do research papers. Unfortunately, I found many students who just added their names . . . and if you asked them about those research papers, they would not know a thing . . . I told you that I truly cherish our graduates. The only weak spot is their research papers.* ***Participant 8***

When referring to world ranking, as based on research productivity, employers assert that the significance of ranking is questionable, if ranking systems do not value students' research. Employers believe that world ranking is inadequate to determine the quality of universities if it merely indicates research productivity of faculty members.

> *Well, in that case what is the benefit [of world ranking]? When a professor undertakes research and the people who study there are not involved in it and do not benefit from the experience, it is useless and only for the sake of the university's name. However, if a group of students carries out the research and a professor or two are supervising them, that would be okay for me; in fact, it would be beneficial.* ***Participant 2***

Interaction with the community

Employers were asked whether attending conferences and carrying out community service helps in preparing high quality medical graduates. Although some employers, especially in the private sector, believe that conferences and community service have no use, the majority of employers perceive conferences as opportunities for students to gain experience. Indeed, employers assert that students should develop their knowledge through several different means, including conferences.

> *Conferences are a chance to exchange experiences with others and a good chance to gain experience from different people.* ***Participant 13***

However, one participant thought that participation in conferences would not add any value to students in terms of working in the medical field. This perspective is from an employer who works in a private hospital. He believes that graduates are appointed solely to effectively treat patients.

> *As an employer, no, it does not attract me at all.* ***Participant 4***

Medical employers strongly support community service for medical students. They believe that involvement of students in community service helps them to develop volunteering habits. Students who go through community service give an indication that they are hard workers who will give more than expected. In addition, community service and conferences make students more confident about themselves.

> *Involvement in community service gives you an indication that they are willing to work more than what they are supposed to do.* ***Participant 4***

> *It [a community service] teaches him/her a lot and makes them more confident . . . Students now engage in awareness raising [health-related campaigns] . . . This raises the awareness of people, which consequently decreases the number of patients in hospitals.* ***Participant 11***

Community service allows students to interact with patients and thus educates them on how to effectively deal and communicate with patients. In addition, medical students could gain work experience from such activities, which is what employers look for in new candidates.

For instance, students could go training in a pharmacy in their summer vacation to learn more about medicines, so that when they graduate, they have the needed experience. ***Participant 9***

When students communicate with patients [in community services], they learn more about their daily lives, details, experiences, and suffering. All that increases their experience because medicine is all about the patients. ***Participant 6***

Discussion

The results of the thematic analysis presented in this paper suggest that the medical labour market seeks to recruit confident and independent doctors who are able to handle all of the responsibilities in their job. Trainees in the workplace are seen as students, who come to hospitals to learn, as well as actual employees, who are expected to hold a role in the hospital (Chhinzer and Russo 2018). According to Brown, Chapman, and Graham (2007), graduates should be highly skilled, tech skilled and highly knowledgeable. However, similar to the findings of Illing et al. (2013), medical employers, in this study, do not think that universities are responsible for preparing medical graduates who are clinically proficient. Indeed, studies across the world show evidence that students believe they are not fully prepared for the medical labour market (Goldacre, Taylor, and Lambert 2010; Langdale et al. 2003; Armstrong, Mackey, and Spear 2004; Scheffer et al. 2010; Cave et al. 2007). The Employers' perspective aligns with this; employers think it is essential for universities to ensure the acquisition of soft skills. Additionally, in contrast to the existing literature (e.g. Lauder and Mayhew 2020; Velasco 2012), medical employers in Saudi Arabia favour soft skills over a strong medical background. Employers in this study tend to recruit graduates for their soft skills over their academic attainment, although GPA could predict clinical performance (Carr et al. 2014; Salem et al. 2016) and even though serious incidents occur in hospitals at the start of residency programmes due to a lack of students' experience (Jen et al. 2009). Employers look for graduates who possess strong soft skills and basic clinical knowledge, similar to what was discussed by Dicker et al. (2019), Branine (2008), and Chhinzer and Russo (2018). We conclude that hospitals attempt to recruit graduates who are able to effectively deal with patients and work in harmony. Employers in this study believe that advanced theoretical knowledge could be developed through training and practice, whereas the personalities of medical candidates are quite difficult to alter in the workplace.

A number of the soft skills mentioned by the employers in this study correlate with those found in the literature review. Saudi employers emphasise the importance of decision making and active learning skills, which are consistent with the needs of the 2020 labour market (World Economic Forum 2016). Nonetheless, the rest of the data gathered from employers in this study contradicts the skills emphasised by World Economic Forum (2016). Moreover, similar to the Scottish Doctor Learning Outcomes (Simpson et al. 2002), employers' most favoured soft skill is communication skills. This skill is essential to help avoid potential lawsuits (Ambady et al. 2002). Employers also favour professionalism, as discussed by Post et al. (2015), self-improvement, as discussed by Dicker et al. (2019), and confidence, as discussed by Makki et al. (2015). To the medical graduates' soft skills mentioned in the literature, employers in this study added time management, teamwork and initiative. This set of soft skills builds the personality of a graduate who fits the medical labour market. Overall, the results of this study strongly align with the Saudi Med Framework, which was constructed by academics. The perspectives of academics and employers are quite similar in terms of the essential soft skills of medical graduates.

Medical employers claim that opportunities for training/internships can substitute for work experience for medical students. However, sometimes training can be challenging for students and trainers. Students believe that their involvement in training programmes is restrained and limited (Illing et al. 2013). Employers think if universities were to create a supervision strategy, this could go a long way to overcoming the current obstacles. This perspective aligns with Brown, Chapman, and Graham (2007) and Frankel and English (2004) on the importance of supervision and feedback during training programmes. In addition, this study suggests that the availability of a university hospital enhances medical graduates' clinical skills. Employers have observed deficiencies in the clinical skills of graduates from universities without teaching hospitals. Although students prefer to be trained locally (Alshahrani et al.,

2014), employers seek to recruit graduates with international experience (Brown, Chapman, and Graham 2007). Employers in this study encourage scholarship programmes for medical students to give them the chance to study or undertake training abroad.

Employers questioned the unstructured distribution of students across medical specialities. Indeed, a study showed that the majority of medical students and interns prefer to specialise in internal medicine in Saudi Arabia (Alshahrani et al., 2014). Such studies are crucial to avoid congestion of some specialities and lack of others in the labour market. Employers assert that building a partnership with the Saudi Commission for Health Specialities is crucial. Universities, the Saudi Commission for Health Specialities, and the labour market must work collaboratively to come up with a national medical specialisation plan.

In addition, in contrast to Post et al. (2015) and Laidlaw, Guild, and Struthers (2009), medical workplace requirements have changed to favour computer literacy in keeping with the Fourth Industrial Revolution. The literature review suggests the necessity to prepare graduates who are highly technically skilled (Brown, Chapman, and Graham 2007; Zaini et al. 2011; Simpson et al. 2002; Al-Amri et al. 2020; O'Donnabhain and Friedman 2018). Technological literacy ranges from the simple ability to deal with medical records to being able to deal with innovative robotic techniques. This will allow students to effectively practice medicine using innovative and technological techniques. Likewise, employers in this study strongly agree on the importance of keeping abreast of advances in medical equipment and technology. That being said, one employer did emphasise that traditional physical examination should not be neglected. Training students in traditional practical skills, in terms of providing a physical examination, is also important from the perspective of employers. Neglecting this skill in medical education could lead to problems in ordering unnecessary, and sometimes harmful, tests and x-rays.

Similar to the findings of Al-Amri et al. (2020), employers assert that one of the quality attributes of students is to learn in several different ways, such as through scientific research, conferences and community service. Community service would help students to be more confident, especially when dealing with patients. In addition, as medicine is a dynamic science that needs constant exploration, research skills are essential to enable graduates to stay abreast of developments in medicine. This correlates with the attributes of the Saudi Meds Framework that highlights the necessity of research skills and involvement in the community (Zaini et al. 2011). However, universities should take into consideration the possible malpractice of faculty members in involving students in research, which could negatively impact students' interest in scientific research.

Summary

To conclude, this study targeted 14 employers, from five hospitals, to participate in interviews. The aim was to identify the main educational experiences and attributes that employers seek in medical graduates in Saudi Arabia. The study has revealed that employers most appreciate soft skills, competencies, medical training, interaction with the community and research skills. Further study could compare the perspective of academics and employers on quality in higher education to measure to what extent the two perspectives vary. This will also help to gain insight into how the performance of universities aligns with the expectations of the labour market.

This study is part of a larger study which aims to construct a quality model in HE based on the views of medical employers. Following the interviews, a survey took place to determine the broader appeal of these qualities and attributes. Additionally, further analysis will incorporate the employers' perspectives on the quality of universities. Towards the end of the study, a comprehensive model, comprising the quality of universities and medical graduates, will be created. This model will create enhancement and development opportunities for medical education to overcome the deficiencies causing less competent graduates. Additionally, it will provide possibilities for HE institutions to ensure alignment between the labour market and HE and, consequently, increase employment rates among medical graduates.

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