

## Conception Prodigious Supervision Contact with Medical Students Provides Professional Experience

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DOI: <https://doi.org/10.30880/hsp.2023.03.01.003>

Received 24 February 2023; Accepted 16 May 2023; Available online 30 June 2023

**Abstract:** Experience matters when it comes to learning outcomes. Experience can be gained by applying knowledge and skills and working with supervisors. This study investigates the supervisor's role in assisting doctor trainees in making the connection between the use of knowledge and skills and the achievement of learning experiences. The learning is geared towards housemanship. This research focuses on three main goals. Examine first the level of knowledge and skills of trainee doctors, then the level of experience of trainee doctors, and finally the role of supervision as a moderator in the relationship between knowledge and skills and trainee doctors' experience. The research employs a quantitative approach. Descriptive and inferential methods were used to analyse the study. The first and second objectives were accomplished through descriptive analysis. For the third objective, inferential analysis (hierarchical regression) was used. There were 303 total respondents identified, with 172 female trainee doctors and 65 male trainee doctors. Malays make up most respondents, followed by Chinese, Indians, and others. The first objective demonstrates that most trainee doctors possess advanced knowledge and skills. The second objective, level of experience, reveals that 61.72 percent of trainee doctors have extensive experience. The findings of the third objective study show that supervision is important in assisting doctor trainees in gaining experience through the influence of knowledge and skills. It is evidence that the supervisor's role is to guide, facilitate, and instruct the trainee doctor as they progress through housemanship.

**Keywords:** Experience, Supervision, Housemanship, Trainee Doctors, Supervisor

## 1. Introduction

The COVID-19 pandemic will have shocked the world by 2020. Because of the stubbornness and irresponsibility of a few people, this pandemic has become a widespread epidemic. This epidemic has spread due to a selfish and unbalanced mentality. Many people have been impacted by the spread of this epidemic. Economic, political, religious, and social development were all hampered (Aguar et al., 2019; Ahmad et al., 2019). The pandemic's series of transmissions also demonstrates that those on the front lines, particularly medical practitioners, are being forced to risk their lives to deal with the pandemic and resolve it later. However, responsibilities were implemented to ensure that this mission was completed (Warwick & Roshen, 2020; Wasiul et al., 2020).

The frontline, particularly medical practitioners, must be emotionally, mentally, and physically prepared to help reduce the spread of the COVID-19 pandemic that is still wreaking havoc on the community. However, emotional, physical, and mental frailty will make it difficult for the medical practitioner to complete the task effectively. Various steps and initiatives have been implemented to ensure that doctors and medical practitioners are always ready and competent. The government has assigned 1,000 doctor trainers to hospitals across the country to help with the COVID-19 outbreak's follow-up operations (Bernama, 2020). The previous Minister of Health, Dr. Adham Baba, has also stated that all doctor trainers will receive a five-day induction training aimed specifically at assisting in the control of the COVID-19 case (Bernama, 2020).

During the induction, it is stressed that the trainee doctors will be exposed to methods of controlling COVID-19 patients. The emphasis on patient control is critical to avoid the risk of infection for the treating doctors. Furthermore, hiring 1,000 doctor trainers is a government initiative to alleviate the burden on doctors on duty and implement workload reduction measures (Zubir, 2020). Workload reduction was critical to maintaining the doctor's competence and momentum throughout the period of duty. The main essence that becomes the rubric and guide for doctors to carry out the process of transferring theory into a practical context is the application of knowledge and clinical skills gained during medical programmes at universities (David et al., 2020).

This study's context focuses on doctor trainee learning. This is since, according to Nor Shela (2019), doctoral trainee learning is the first stage of a person's career as a medical practitioner. As evidence of professional medical practise, the demonstration of solid knowledge and skills is highly emphasised. According to Lisi et al. (2020), the significance of learning from doctoral trainers must be recognised because it will be a source for and contribution to career development. Housemanship learning provides the opportunity to gain first-hand experience as a nurse and care for patients. After completing the Bachelor of Medicine Program, a doctor must complete housemanship. They will be accepted as a medical officer student or doctor trainer before graduating as a medical officer.

During the learning period, six positions will be filled. It is undeniable that trainers require consistent replenishment of physical and emotional capabilities during this period. The quality of trainers' learning can be impacted by task harmony and pressure (Fangyi & Kartik, 2014). Housemanship is a process that seeks to assist and develop the careers of trainers as a form of meaningful experience in this regard. It also includes the ability to handle a variety of illnesses and difficult situations. The transmission of the COVID-19 pandemic, which is becoming more serious over time, is the most recent phenomenon that has taken the most emotional and physical toll on trainers (David et al., 2020; Jennifer et al., 2020).

## 2.0 Problem Statement

Experience, according to Lovell (2018), is a situation that provides a person with various approaches, feelings, knowledge, and skills for dealing with upcoming challenges. Experience is also important for a trainee doctor because it can help advance a career and expand knowledge. As a result of the upcoming challenges and problems, trainee doctors will be more diligent in balancing successes and mistakes throughout their duties (Karen et al., 2020). It is a major challenge because of the

COVID-19 pandemic. This pandemic has had an emotional and physical impact on the medical staff. Indeed, whether the case is in the country or abroad, the death of a trainee doctor is a hot topic.

According to Rafidah and Noor Atika (2020), the COVID-19 outbreak has infected 416 Ministry of Health employees. However, up to 80% of cases are caused by external infections. Patients and co-workers cause only 20% of infections. A young doctor died of a brain haemorrhage after contracting COVID-19 in another country. He is, however, very capable and dedicated to taking precautionary measures, and he always wears a face mask while performing his duties (My Metro, 2020). According to the situation described on social media, doctors are extremely vulnerable to a wide range of challenging risks and probabilities. In this regard, significant knowledge and skills must be practised to provide trainee doctors with protection and career advancement.

This study examines the situation considering previous studies. Several issues have led to this research approach. The identified issue is trainee doctors' lack of knowledge and skills. According to Davie et al. (2020), the supervisor's expertise in assisting the knowledge consolidation process has an impact on the strengthening of knowledge and skills. Supervisors must have in-depth knowledge of the topics being taught. Among these specialties are issues in medicine, where the emphasis is on the concept of knowledge development and the effective and impactful application of skills. This viewpoint is shared by Hamzah and Jatin (2020), who discovered that by leveraging a supervisor's expertise and competence, he can indirectly provide a lot of input, knowledge transfer, and training to the supervised trainee doctor.

Trainee doctors are exposed to a wide range of knowledge and experience while working, particularly in ensuring the community's well-being, thanks to the expertise of a supervisor (Subha et al., 2020). This is referred to as "experience-based learning," in which trainee doctors perform practical tasks while thinking theoretically using in-depth experiential learning methods. However, according to David et al. (2020), both elements should be used at the same time. This is since action can lead to the development of experience. Actions can be formed through a combination of thoughts and strong skills. Constraints and challenges, particularly emotional effects, and reactions, must be carefully overcome to completely control disruptions during learning (Awad, 2018).

Given the significance of knowledge and skills, good supervision is required throughout the learning process. According to Brown (2019), perfect supervision will provide trainee doctors with meaningful experience. Experience can highlight one's own potential. This viewpoint is consistent with Bugaj's (2019) argument that supervisory monitoring can maximise knowledge and skills through a consistent approach of motivation and empathy. However, trainee doctors frequently face the issue of not gaining sufficient experience. Furthermore, the lack of supervision leads to less exposure and experience (Dickman et al., 2017). Indirectly, the knowledge and skills gained during higher education cannot be fully applied. Regarding the study's main problem, several research questions have been developed, namely the extent of trainee doctors' experience level during housemanship learning. Another important question is how much supervision can help trainee doctors use their knowledge and skills to gain experience.

### **3.0 Objective**

This study has identified several research objectives, namely:

1. To determine the trainee doctors' level of knowledge and skills
2. To determine the level of experience of trainee physicians.
3. To investigate the role of supervision as a moderator between trainee doctors' knowledge and skills and their experience.

#### 4.0 Literature Review

The study of cross-cultural learning in the development of medical learning is growing in tandem with the world's transition to the twenty-first century (Budden, Svechnikova, & White, 2017). Many beginnings in studies related to medical learning have been made, particularly those related to housemanship. Housemanship is a type of training for postgraduate trainee doctors (Barias, 2009). Throughout their housemanship, trainee doctors must be trained using a variety of approaches geared towards training, learning, and career development (Nor Shela, 2019). However, the focus of this study will be solely on the learning aspect.

Housemanship is the first exposure for trainee doctors after completing a medical degree at university (Gordon & Karle, 2010). According to the Malaysian Ministry of Health, trainee doctors must complete a two-year housemanship programme to obtain full certification as a certified medical officer ([www.moh.gov.my](http://www.moh.gov.my)). In this regard, trainee doctors will be trained to perform duties while adhering to housemanship guidelines. Furthermore, they are still referred to as "trainee doctors," even though housemanship is one of their learning processes. This study will examine how trainee doctors apply their knowledge and skills during housemanship. The primary requirement of housemanship learning is to ensure that experience is available throughout the learning period. Trainee doctors will transition into the application context using their knowledge and skills (Lovell, 2018). The translation of knowledge and skills will be evaluated based on trainee doctors' ability to complete tasks efficiently and productively (Lavina & Lawson, 2019). Task accessibility also includes the ability to overcome challenges or problems while learning.

One of the study's focal points is to investigate aspects of supervision's influence. The impact of supervision is investigated to determine the extent to which it can act as a moderator in the relationship between trainee doctors' knowledge and skills and their achievement during housemanship. Figure 1 depicts the researcher's conceptualization of the research framework. According to Figure 1, three variables are studied: the independent variable (level of knowledge and skill level of trainee doctors), the dependent variable (level of experience of trainee doctors), and the moderator variable, supervision during housemanship.

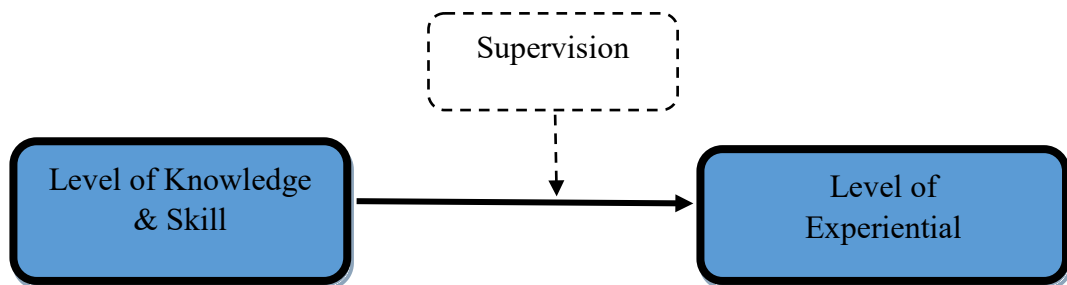


Figure 1: Research Framework

#### 4.1 Level Knowledge of Trainee Doctors

Trainee doctors should be well-versed in their field (Watmough, O'Sullivan, & Taylor, 2006). Excellent achievement during housemanship learning is defined as the ability of trainee doctors to perform tasks well, make fewer mistakes, have a low level of work stress, and gain meaningful experience (Cantillon, Nordan, De Grave, 2019). Aspects of learning based on medical technology are increasingly being introduced in this context. Mailing et al. (2010) discovered that the Danish National Board of Health (DNBH) had monitored 79 hospitals and examined in detail trainee doctors' achievement of the learning phases during housemanship. The effort aids in increasing trainee doctors' learning phase achievement and is monitored every two years to determine average learning achievement (Cho & Jonassen, 2009). According to foreign studies, Denmark's efforts to establish the Danish National Board of Health (DNBH) demonstrate that the country is very realistic about the importance of housemanship. They improve observation and experimentation skills through the "see

and do" method so that trainee doctors can observe well while learning and apply knowledge effectively during experimentation (Richardson & Higginson, 2005). In contrast, university curricula in the United Kingdom (UK) are constantly strengthened to ensure that trainee doctors' knowledge is always up to date with current needs.

In addition to witnessing the phenomenon in Malaysia, learning in England emphasises knowledge aspects during housemanship. M. Ellis et al. (2011) discovered that the Chief Medical Officer in England, Professor Liam Donaldson, had published a learning scheme for trainee doctors in the theory of clinical knowledge. The theoretical learning scheme is an attempt to demonstrate the importance of clinical knowledge in a trainee doctor's learning. Additionally, the international professional education scheme allots \$100 billion USD per year for trainee doctors to learn through clinical knowledge application. Similarly, the United States and Sweden each contribute \$300 billion to the same effort (Gordon & Karle, 2010). The World Health Organization (WHO) and the United Nations Educational, Scientific, and Cultural Organization (AIMER) are among the international organisations involved (Cantillon & Macdermott, 2008).

Since efforts to improve clinical knowledge are a global issue, the researcher will examine how knowledge use affects the level of experience of trainee doctors during housemanship. Furthermore, properly applied knowledge can aid in the learning process. Indirectly, it can reduce stress while studying, particularly by ensuring the well-being of the community (Cruess, Cruess, & Steinert, 2018). In fact, trainee doctors' confidence can be increased. This is because the stress level during learning stems from a lack of knowledge to apply, such as during the COVID-19 pandemic (Richard, 2020). Similarly, to feelings of confidence, feelings of worry and discomfort will exist when knowledge cannot be effectively used.

#### 4.2 Level of Trainee Doctors Skill

Clinical abilities are acquired while attending university (Cook-Sather, 2017). These abilities are included in the medical learning curriculum. In this regard, it is claimed that good curriculum software can improve trainee doctors' performance during housemanship (Steinert, Naismith, & Mann, 201). However, Watmoug, Garden, and Taylor (2006) argue that excellence during university cannot be used to measure excellence during housemanship learning. In fact, there are trainee doctors who are competent and skilled during their university studies but are less confident during their housemanship (Harrison et al., 2017). Skills, according to Street et al. (2009), are learned through behaviour or actions gained experimentally. Skills-related interests are highly valued and get the attention of several parties. The following is a list of resources for those interested in learning more about how to use the internet for research. This method allows trainee doctors to follow each learning step three times more successfully. This is due to the program's substantial content, which is founded on the notion of a mix of theory and practise appropriate for use throughout housemanship.

CanMEDs is implemented in stages via the concept of seminars and courses (Bandira, Sherbiho, & Frank, 2006). Furthermore, analysts observe Malaysia as a country that emphasises stability in medical education. The CanMEDS programme was established and is always changing based on a certain period. Even the CanMEDS programme is not limited to small organisations. The CanMEDS programme, on the other hand, is a collaboration of major powers, including the Accreditation Council for Graduate Medical Education (ACGME) in the United States, the Australian Medical Council, the Royal College of Surgeons of England, the Central College of Medical Specialists of the Netherlands, and several others. Implications and positive impacts of the CanMEDS programme include medical students at the Royal College of Physicians and Surgeons of Canada demonstrating greater competence throughout training and learning because of the introduction of a new clinical skills curriculum (Frank & Danoff, 2007).

Budden, Svechnikova, and White (2017) define "skills" as a learning term that cannot be logically or conceptually defined. Moreover, Lovell (2018) notes that abilities must be interpreted within the context of implementation. Although good thinking and ideology can generate innovative

people, they have yet to demonstrate competence. Individuals demonstrate their different and dominating talents through skills (Cruess, Cruess & Steinert, 2018). The abilities addressed in the scope of the study are the competencies of trainee doctors. The investigation will determine the extent of trainee doctors' ability level. This component should be highlighted since it includes social contact with co-workers and patients. The researcher investigates supervisory methods and interventions that are thought to be a reference in the efficacy of a person's skill level in this study. The study's findings will show if the basis for the supervision is considerable or not.

#### 4.3 Trainee Doctor's Level of Experience

Experience is the fresh learning that trainee doctors will gain if they are able to apply the information and skills implemented. According to Geraghty (2020), adult students benefit from experience-based learning since they are more adaptable to new learning. Fresh knowledge is critical in assisting trainee doctors in developing character and personality as professional medical practitioners. Trainee physicians' personalities must be nurtured for them to gain confidence and strength in their careers. Van Melle et al. (2017) believe that the communication method is critical in assisting trainee doctors in gaining varied experiences. Communication enables contact between individuals and the indirect transfer of information and skills.

Housemanship is important because it enables trainee doctors to realistically adjust to their tasks and work environment. A medical job is demanding and demands a lot of dedication. As a result, housemanship learning is one type of experience that trainee doctors go through to ensure that information and skills are implemented correctly. The diversity of experience is critical in assisting trainee doctors to be holistic (Van Melle et al., 2017). In tackling life's obstacles while learning, one must be holistic as well as adaptable in carrying out numerous activities. The disclosure of assignment methods is done on purpose and with forethought through experience-based learning. As a result, supervisory oversight and aid are critical in ensuring that trainee doctors continue to have a meaningful and excellent experience (Schuwirth, Van Der Vleuten, & Durning, 2017).

Nonetheless, time limitations and a wide range of patients tremendously assist student doctors in gaining diverse experience. Exploration across housemanship also enables training doctors to notice varied patient backgrounds, age backgrounds, and gender diversity (Eady & Moreau, 2018). Experience must be worked on and used as a lesson, and it becomes a key demand. This is seen when trainee doctors must pass through at least four departments before being admitted to the trauma and emergency departments. When it comes to entering the trauma and emergency departments, training doctors must have extensive experience. When working in the trauma and emergency department, it is critical to prepare emotionally, physically, and intellectually.

Recognizing this reality, the researcher will examine how trainee doctors might recognise changes in learning. Learning changes can be performed both directly and indirectly, according to Bogetz et al. (2017). Modifications in learning are also linked to the passage of time and impediments to a person's ability to reach a high degree of experience (Lockyer et al., 2017). Interest and inclination may also be used as components in improving and gaining experience (Cruess, Cruess, & Steinert, 2018). For example, if a doctor is interested in children, the trainee doctor's job performance in the children's department will improve. Job satisfaction, on the other hand, will suffer if the trainee doctor's interest is poor. Work happiness is also associated with job performance. The level of experience attained is connected to the success of work performance throughout housemanship learning.

#### 4.4 Supervision During Housemanship

Competence determines trainee physicians' professionalism (Lovell, 2018). The first stage of a career is established by theory and information that may be used in the learning setting through skill application. According to Budden, Svechnikova, and White (2017), knowledge is cognitive and clinical knowledge obtained at institutions of higher learning prior to engaging in housemanship.

Nevertheless, talent refers to the capacity to accomplish activities competently (Lovell, 2018). The activities performed at the study level are not the same as those performed at the housemanship level since they are frequently performed as laboratory or observational activities. Trainee doctors are less intimately involved in the process of integrating practical medicine throughout the learning process in medical schools (Lavina & Lawson, 2019). The educator does extensive monitoring to guarantee that no errors or dangers arise during experimenting (Cruess, Cruess, & Steinert, 2018). Housemanship training prepares trainee doctors to be realistic by providing them with practical duties (Lovell, 2018). Experiential learning requires exposure and practice. With practise, trainee doctors may detect changes and perform duties properly from time to time (Awad, 2018). Experience is also an asset for future professional advancement. Yet, experience must be gained with caution to prevent undesirable outcomes, since it might lead to dangers and issues (Dickman et al., 2017).

Supervision assists trainee doctors in becoming capable so that they can realise and continue to be wonderful and competent. According to Cruess, Cruess, and Steinert (2018), the medical education system necessitates minimal monitoring, which frequently results in trainee doctors not receiving a lot of current experience. In this regard, the curriculum approach must be modified. One type of progress in medical education is the Bologna process (AMEE, EMSA, and IFMSA, 2010). Trainee doctors will be trained and schooled in the Bologna process to develop competent cognition, skills, and attitudes. The supervisor must stimulate and develop the trainee doctor's career for it to be completed and fulfil the requirements established by the Malaysian Ministry of Health. The following are some of the primary responsibilities of supervisors and supervision:

- i. Introduce or explain the department's organisation to trainee doctors.
- ii. Describe the policies and standard operating procedures (SOP) in their departments.
- iii. Describe the trainee doctor's duties and responsibilities in the appropriate department.
- iv. Describing the department's attitude towards and response to housekeeping.
- v. Describing the assignment parameters and the rotation of trainee doctor placement in the ward that is taking place.
- vi. Serving as a mentor, counsellor, and resource for trainee doctors when they are unable to perform their obligations.
- vii. Verify the processes documented in the logbook.
- viii. Throughout the placement phase, as an evaluator.
- ix. Give thorough performance evaluations for trainee doctors under their supervision.

Clinical supervision clearly plays a role in assisting, educating, and assessing trainee doctors, based on the description and specification. The goal of supervision is also to ensure that trainee doctors learn effectively through housemanship. Supervisors serve as mentors or counsellors to trainee doctors. This is because housemanship is one of the occupations that requires a significant time investment to learn (Jauregui, 2019). In addition to tasks, the component of learning achievement must be stressed so that trainee doctors may efficiently complete each step of learning. The efficacy of success may be judged by trainee doctors' capacity to follow each phase with excellence while learning (Choi et al., 2020).

It is difficult to develop a relationship between knowledge, skills, and experience-based learning if they are incompatible. Compatibility in the experiential learning phase is difficult to accomplish if the learner is unable to apply theory and skills maturely. This also involves the scope of learning for trainee doctors, where theory and skills are a critical combination in ensuring that learning is implemented correctly (Harrison et al., 2017). The reflection of knowledge and abilities must be managed and investigated so that the theory's meaning and priorities, as well as the intended application, may be flawlessly accomplished. According to Lovell (2018), a few student doctors find it challenging to systematically reflect on their knowledge and abilities. Contrary to Geraghty's (2020) viewpoint, knowledge reflection is more difficult to achieve than skill reflection. Skill reflection is simple since it is accomplished via action. Experience is more relevant when it is applied and produces tangible benefits. Knowledge reflection, on the other hand, necessitates dedication and cognitive strength in structuring and carrying out a synthesis of the ideas utilised during learning.

Because it is difficult to achieve a mature reflection of information and abilities, trainee doctors confront limits while accomplishing experiential learning. Yet, Lovell (2018) considers this a concerning phenomenon because experience is a crucial component of student doctors' learning. The doctor's experience on the job might help him or her improve emotional and physical talents. Doctors gain competence and confidence over time as they gain experience. This is the first gap in the study where researchers have not yet discovered the extent to which reflection of knowledge and abilities can aid in the process of building trainee doctors' experience while learning.

According to Karen et al. (2020), the assistance of supervisors is critical in assisting trainee doctors in gaining experience. Supervisors must be professionals who are knowledgeable in both theoretical and clinical elements. The supervisor's responsibility is to assist and advise trainee doctors in using their information appropriately while they are studying (Newton, 2017). On the other hand, Davie et al. (2020) claimed that the supervisor's major role is to observe trainee doctors applying skills in an orderly and prescribed manner. Student doctors' ethics and integrity must also be evaluated throughout skill application, particularly when dealing with patients (Ng, Baker, & Leslie, 2017). Integrity and ethics clearly demonstrate that the talent element is the primary focus in supervisor monitoring. As a result, effective supervision will be attained if the supervisor performs the supervising procedure very well. The experience, expertise, abilities, and attitude of supervisors, who must be professional, devoted, and could teach successfully, are among the qualities that are stressed (Richard, 2020; Harrison et al., 2017). But to what degree can supervision help trainee physicians gain experience while learning to create a long-term medical career?

## 5.0 Research Methodology

**Table 1: Details of the Objective Analysis of the Study**

| Objective   | Analysis                        |
|---|---------------------------------|
| 1. The level of knowledge and skills of trainee doctors   | Percentage, mean, and frequency |
| 2. The level of experiences of trainee doctors  | Percentage, mean, and frequency |
| 3. Moderator analysis:<br><br>3.1 Supervision as a moderator between the knowledge and experience of trainee doctors<br>3.2 Supervision as a moderator between the skills and experience of trainee doctors | Hierarchical Regression         |

A survey is used in this study as a quantitative research design. A cross-sectional study is the research's emphasis. The use of a cross-sectional survey saves time since it incorporates trainee doctor respondents. All parties are aware that trainee doctors are extremely busy and have little time to do their obligations (Harrison et al., 2017). A questionnaire is used in this study to get input from respondents. There are various research factors, including independent variables (trainee doctors' knowledge and abilities), dependent variables (experiential learning), and moderator variables (supervision). All variable explanations have been presented in the literature review section and are depicted in Figure 1. The research was carried out in a hospital in the Malaysian state of Johor. The study participants are housemanship-learning trainee doctors. The detected population is expected to be 450 people. According to the findings of Kreijie and Morgan (1970), the researcher only required 210 study samples. To meet the study's aims, many analyses were performed, including descriptive and inferential analyses. Table 1 summarises the analysis of each aim.

## 6.0 Findings

### 6.1 Backgrounds of Respondents

Figures 2 and 3 depict the study's findings for the first aim. According to the findings of the research, the researcher discovered that 131 respondents were male trainee physicians and 172 were



female trainee doctors. The bulk of those who responded are Malay. The number of ethnic Chinese respondents is second only to the overall number of respondents (65). In the meantime, 24 respondents are of Indian origin. There are also two respondents among the other respondents.

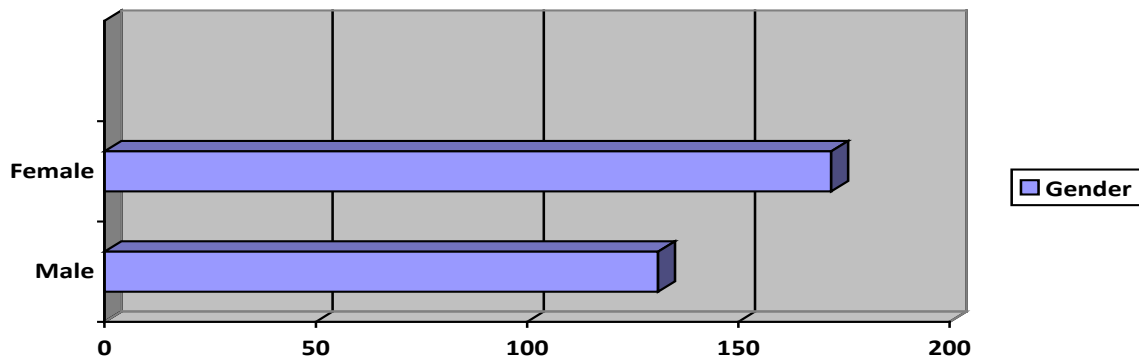


Figure 2: Gender-Based Research Findings

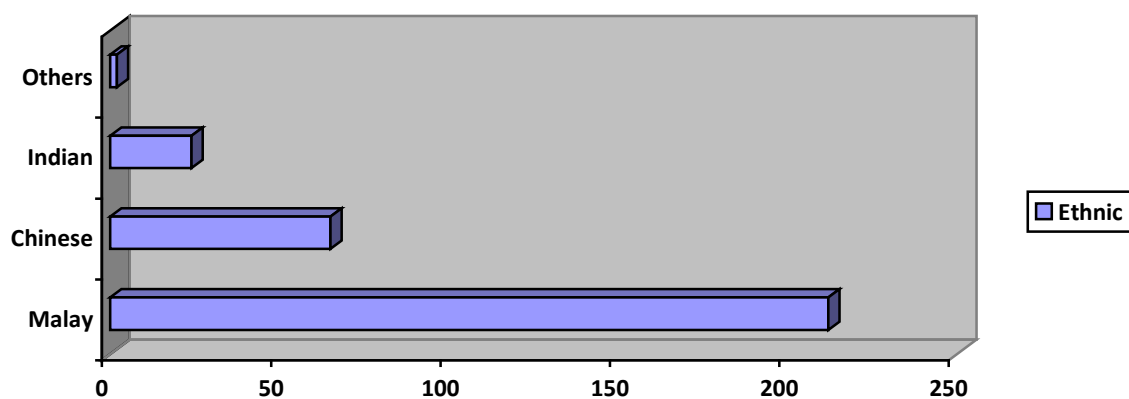


Figure 3: Ethnic-Based Research Findings

## 6.2 Objective 1: The Level of Knowledge and Skill among Trainee Doctors

The findings for the first research aim are shown in Tables 2 and 3. The study's findings clearly show that most trainee doctors have a high level of knowledge and capabilities (92.41% and 95.71%, respectively). In terms of medium level achievement, knowledge level achievement is higher than skill level achievement, with just 4.29 percent of trainee doctors having a medium skill level. During housemanship, 7.59 percent (23 people) of trainee doctors have a modest level of expertise. This study also clearly reveals that the mean value for the degree of skill performance is greater than the mean value for knowledge (means = 4.01 and 3.94, respectively). The standard deviation figure indicates that the skill level is lower than the knowledge level (standard deviation = 0.32 and 0.37, respectively). The minimal knowledge level value is 2.67, whereas the minimal skill level value is 2.74. Both, however, have the same maximum value of 5.00. Overall, the preliminary objective data show that all student doctors have a high level of knowledge and abilities during their housemanship learning (means = 3.94 and 4.01).

**Table 2: Level of Knowledge Use**

| Level    | Frequency ( <i>f</i> )<br>(n=303) | Percentage (%) | Min  | Standard Deviation | Minimum Value | Maximum Value |
|----------|-----------------------------------|----------------|------|--------------------|---------------|---------------|
| High     | 280                               | 92.41          | 3.94 | 0.37               | 2.67          | 5.00          |
| Moderate | 23                                | 7.59           |      |                    |               |               |
| Low      | 0                                 | 0              |      |                    |               |               |

**Table 3: Level of Skill Use**

| Level    | Frequency ( <i>f</i> )<br>(n=303) | Percentage (%) | Min  | Standard Deviation | Minimum Value | Maximum Value |
|----------|-----------------------------------|----------------|------|--------------------|---------------|---------------|
| High     | 290                               | 95.71          | 4.01 | 0.32               | 2.74          | 5.00          |
| Moderate | 13                                | 4.29           |      |                    |               |               |
| Low      | 0                                 | 0              |      |                    |               |               |

### 6.3 Objective 2: The Level of Experience among Trainee Doctors

Table 4 summarises the research findings regarding trainee doctors' degree of accomplishment during housemanship learning. According to the study's findings, 187 trainee doctors had a high degree of experience, whereas 116 gained experiences at a moderate rate. The average mean value is high, at 3.58. Notwithstanding the fact that no trainee doctor received a low level, the minimum value was 1.83. This minimal value denotes a poor outcome. This might be because almost half of the respondents achieved a moderate level. However, the highest value for the level of experience attained is 5.00. This demonstrates that the overall degree of success of the trainee doctor's experience is moderate (mean = 3.58).

**Table 4: Experience Phase Achievement Level**

| Level    | Frequency ( <i>f</i> )<br>(n=303) | Percentage (%) | Min  | Standard Deviation | Minimum Value | Maximum Value |
|----------|-----------------------------------|----------------|------|--------------------|---------------|---------------|
| High     | 187                               | 61.72          | 3.58 | 0.54               | 1.83          | 5.00          |
| Moderate | 116                               | 38.28          |      |                    |               |               |
| Low      | 0                                 | 0              |      |                    |               |               |

### 6.4 Objective 3: Supervision as a Moderator between Knowledge, Skills, and Practitioner Experience and Achievement

The study's analysis was carried out using a combination of knowledge and skills (merge). Based on the value of change  $R = 0.018$ , the value of 2.07,  $p = 0.011 < 0.05$ , found in Table 5 demonstrates that supervision impacts the link between knowledge and skills with experience attainment by 1.8 percent. As a result, this demonstrates that supervision serves as a mediator between the acquisition of information and abilities and the acquisition of experience.

**Table 5: Results of the Analysis of the Influence of Supervision on the Achievement of Knowledge and Skills with the Experienced Achievement of Trainee Doctors**

| Predictor  | Achievement Experience |              |         |        |
|--|------------------------|--------------|---------|--------|
|  | R <sup>2</sup>         | $\Delta R^2$ | $\beta$ | Sig.   |
| <b>Step 1: Independent Variables</b><br>Achievement of Knowledge and Skills          | 0.171                  | 0.171        | 0.414   | 0.000  |
| <b>Step 2: Moderator Variables</b><br>Supervision                                    | 0.189                  | 0.018        | 0.140   | 0.011  |
| <b>Step 3: Interaction Variables</b><br>Knowledge and Skill Attainment X Supervision | 0.207                  | 0.018        | 2.07    | 0.011* |

\*p<0.05

## 7.0 Conclusion

Experienced supervisors are better equipped to assist trainee doctors in achieving the experiential learning phase by utilising their clinical knowledge and abilities (Richard, Sam, and James, 2023). Additionally, according to Gurvinder et al. (2023), supervisors can advise student doctors on how to obtain experience based on their own expertise and abilities (Jolene et al., 2023). The professional development of medical practitioners, particularly trainee doctors, is critical to ensuring society's well-being and peace. Numerous things are at the heart of medical professional services, including patient care and recovery. Moreover, the advancement of trainee physicians' careers not only helps to advance medical learning, but it also serves as a catalyst for the certification of professional medical officers. Competent trainee doctors will have outstanding career outcomes. The quality of the tasks accomplished is used to assess trainee doctors' excellence. Deena et al. (2023) discovered that exceptional trainee doctors can handle duties successfully without experiencing emotional disturbances or making mistakes while doing activities.

Trainee doctors' brilliance is fostered as early as the housemanship level. As a result, one of the variables that motivates trainee doctors to excel is the supervision process. A qualified and experienced supervisor is required for supervision. The expertise and experience are used to provide trainee doctors with advice, mentorship, and counselling (Brenton, Clare, & James, 2022). The function of supervision in assisting trainee doctors in using knowledge and skills throughout the experience phase necessitates a consistent effort (Jihyun et al., 2022). This conclusion is justified by the fact that supervision allows trainee doctors to reflect on their knowledge and abilities while tracking learning improvements. The supervisor's expertise and knowledge resulted in a wealth of information and understanding about housemanship as an experience that one learns from and adapts to. This conclusion is consistent with Lovell (2018), which states that during supervision, supervisors always share their experiences with trainee doctors. Supervisors analyse knowledge and abilities so that they can be enhanced if there are shortcomings and improved at other times.

Based on the findings of the research, several recommendations can be made, particularly in terms of knowledge contribution in the field of experiential learning. The researcher proposed that trainee doctors be exposed to challenging skill-based learning to become acquainted with current challenges. For example, the COVID-19 pandemic is one of the epidemics that pose a challenge to trainee doctors' careers because it is a new epidemic with no official vaccine. As a result, supervisors must assign difficult tasks in addition to providing guidance on precautionary measures. Furthermore, risks and accidents in the environment should be taken seriously to avoid complications and problems.

According to previous research, two factors influence supervision: meaningful supervision and supervision that fails to provide meaning (Alper et al., 2022). The researcher discovered that this study adds more meaning to the achievement of the experience phase by increasing the contribution of knowledge and skills. Supervision must be done well because it is extremely complex and necessitates maximum commitment from trainee doctors. This study clearly shows that supervision is done to help

trainee doctors gain experience through supervision. A supervisor's responsibilities in supervision include providing positive support, always providing feedback, and making every effort to support every knowledge and skill used by the doctor during housemanship. Biased supervision should also be avoided to ensure that all trainee doctors receive the same guidance. However, it clearly shows that most trainee doctors felt supervised while applying knowledge and skills during the housemanship experience phase.

It is also important to emphasise the use of emotional and mental experiences. According to Rafidah and Noor Atiqah's report, 416 health workers have been infected with COVID-19. This phenomenon will indirectly cause anxiety and stress. This stress is caused by trainee doctors' stressful new experiences. Furthermore, trainee doctors are on the front lines, risking their lives to save the community. This challenge is one of the factors that will help trainee doctors advance in their careers. The direction and abilities of trainee doctors will be determined by challenges for them to improve work readiness and performance in the context of organisational excellence. Among other things, the challenge contributes to the duty readiness policy in a variety of ways. The challenges were highlighted and developed as a guide and rubric for the future development of doctors' careers.

Challenges are enriching experiences. It will provide a lot of learning and task improvement while working through workplace challenges. Trainee doctors must be challenged while also being guided by competent individuals during supervision. During the learning process, supervision also serves as an evaluator and critic (Jianbin et al., 2022). Supervision is more than just pointing out flaws; it is also about identifying aspects of employee knowledge and skills that can be appropriately applied in organisational learning. Supervisors will make recommendations and suggestions to employees to identify strengths and weaknesses and improve employee performance (Pieter et al., 2022). Improvements will be made to ensure that the contribution of knowledge and skills to organisational learning can be implemented and achieved successfully. Previous research evidence also suggests that supervision should be led by supervisors with extensive knowledge and skills who understand the value of learning if it occurs (Nisarg, Oghenewoma, & Uwe, 2023). The supervisor's role as a facilitator in linking knowledge and skills to learning through encouragement during learning as well as the supervisor's ability to link knowledge and skills with experiential learning (Jye et al., 2022)

### **Acknowledgement**

All representatives of the IMPAK group worked together to generate writing ideas. Similarly, going beyond the authors' knowledge and experience is encouraged, particularly around educational development. Hopefully, the study's findings will provide benefits and have an impact on society, as intended by the IMPAK focus group.

### **References**

- [1] Aguiar, A., Chepeliev, M., Corong, E., McDougall, R., & van der Mensbrugge, D. (2019). The GTAP Data Base: Version 10. *Journal of Global Economic Analysis*, 4(1), 1-27.
- [2] Ahmad, A. H., Ibrahim, A., Ahmad, Z. H., & Masri, R. (2019). The Predictors of Sports Tourism Involvement in Malaysia: An Extreme Sport Overview. *Humanities & Social Sciences Reviews*, 7(2), 449-453.
- [3] Alper Bayazit, Hale Ilgaz, Ipek Gonullu & Sengul Erden (2022). Profiling Students Via Clustering in a Flipped Clinical Skills Course Using Learning Analytics. *Medical Teacher*, DOI: [10.1080/0142159X.2022.2152663](https://doi.org/10.1080/0142159X.2022.2152663)
- [4] Awad S. H. & Mohamed M.H.N. (2018). Effectiveness of Peyton's Four-Step Approach on Nursing Students' Performance in Skill-Lab Training. *JNEP*, 9(5):1.

- [5] Bandiera. G., Sherbino. J. & Frank. J. (2006). *The Canmeds Assessment Tool Handbook*. Edisi ke-3. Ottawa: The Royal College of Physicians and Surgeons of Canada.
- [6] Barias. D. & Ryan. J. G. (2009). Does Correlation of Faculty Assessment of Emergency Medicine Residents' Medical Knowledge Competency with Performance on the in-Training Examination Improve with Advancement Through the Program. *Journal of Medical Learning*, 54(3), 33-34.
- [7] Bernama (2020, 14 Mac). *Menteri: KKM Tempat 1,000 Doktor Pelatih di Seluruh Negara Bantu Operasi Covid-19*. Diakses di laman <https://www.freemalysiatoday.com/category/bahasa/2020/03/14/menteri-kkm-tempat-1000-doktor-pelatih-di-seluruh-negara-bantu-operasi-covid-19/>
- [8] Bogetz. A., Rassbach. C., Chan. T. & Blankenburg. R. (2017). Exploring the Educational Value of Patient Feedback: A Qualitative Analysis of Pediatric Residents' Perspectives. *Accad Pediatric*, 17, 4-8.
- [9] Brenton L. G. Button, Clare Cook & James Goertzen (2022). Impact of a professional Development Session Based on Learner Evaluations within a Preceptor Community of Practice. *Medical Teacher*, DOI: [10.1080/0142159X.2022.2155121](https://doi.org/10.1080/0142159X.2022.2155121)
- [10] Brown N. (2019). Partnership in Learning: How Staff-Student Collaboration can Innovate Teaching. *Euro J Teach Educ*, 42(5), 608–620.
- [11] Budden C.R., Svechnikova K, White J. (2017). Why do Surgeons Teach? A Qualitative Analysis of Motivation in Excellent Surgical Educators. *Med Teach*, 39(2), 188–194.
- [11] Bugaj TJ, Blohm M, Schmid C, Koehl N, Huber J, Huhn D, Herzog W, Krautter M & Nikendei C. (2019). Peer-Assisted Learning (PAL): Skills Lab Tutors' Experiences and Motivation. *BMC Med Educ*, 19, 353.
- [12] Cantillon P, Dornan T & De Grave W. (2019). Becoming a Clinical Teacher: Identity Formation in Context. *Acad Med*, 94(10), 1610–1618.
- [13] Cantillon. P. & Macdermott. M. (2008). Does Responsibility Drive Learning: Lessons from Intern Rotations in General Practice. *Journal of Medical Teaching*, 30(2), 254 - 259.
- [14] Cho. M. & Jonassen. D. (2009). Development of the Human Interaction Dimension of the Self-Regulated Learning Questionnaire in Asynchronous Online Learning Environments. *Journal of Educational Psychology*, 29(1), 117–138.
- [15] Cook-Sather, A. (2017). Virtual Forms, Actual Effects: How Amplifying Student Voice through Digital Media Promotes Reflective Practice and Positions Students as Pedagogical Partners to Prospective High School and Practicing College Teachers. *Br J Educ Technol*, 48(5), 1143–1152.
- [16] Cruess. R.L., Cruess. S.R. & Steinert. Y. (2018). Medicine as a Community of Practice: Implications for Medical Education. *Accad Med*, 93(2), 185–191.
- [17] David Muller, Valerie Parkas , Jonathan Amiel , Shashi Anand , Todd Cassese , Tara Cunningham , Yoon Kang, Joshua Nosanchuk , Rainier Soriano , Lori Zbar & Reena Karani (2020): Guiding Principles for Undergraduate Medical Education in the Time of the COVID-19 Pandemic. *Medical Teacher*, DOI: [10.1080/0142159X.2020.1841892](https://doi.org/10.1080/0142159X.2020.1841892)

- [18] Deena M. Hamza, Karen E. Hauer, Anna Oswald, Elaine van Melle, Zeenat Ladak, Ines Zuna, Mekdes E. Assefa, Gabrielle N. Pelletier, Meghan Sebastianski, Diana Keto-Lambert & Shelley Ross (2023). Making Sense of Competency-Based Medical Education (CBME) Literary Conversations: A BEME Scoping Review: BEME Guide No. 78, Medical Teacher, DOI: [10.1080/0142159X.2023.2168525](https://doi.org/10.1080/0142159X.2023.2168525)
- [19] Dickman N, Barash A, Reis S & Karasik D. (2017). Students as Anatomy Near-Peer Teachers: A Double-Edged Sword for an Ancient Skill. BMC Med Educ, 17, 156.
- [20] Dougal Williams & Alison Ledger (2019). Starting Work as A Doctor: Challenge Is Essential. The Clinical Teacher, 16, 1–5
- [21] Eady. K & Moreau. K. (2018). Using Parent Feedback: A Qualitative Study of Residents’ and Physician-Educators’ Perspectives. Perspect Med Educ, 7, 33–39.
- [22] Fangyi Xie & Kartik Kumar (2014). What Drives Junior Doctors to Become Involved in Medical Education? Medical Teacher, 36(6), 544
- [23] Frank. J. R. & Danoff. D. (2007). The Canmeds Initiative: Implementing an Outcomes-Based Framework of Physician Competencies. Journal of Medical Teaching, 29(8), 642-647.
- [24] Geraghty, J.R., Young, A.N., Berkel, T.D.M., Wallbruch, E., Mann, J., Park, Y.S., Hirshfield, L.E. & Hyderi, A. 2020. Empowering Medical Students as Agents of Curricular Change: A Value-Added Approach to Student Engagement in Medical Education. Perspect Med Educ, 9(1), 60–65.
- [25] Gordon. D. & Karle. H. (2010). The State of Medical and Health Care Education: A Review and Commentary on the Lancet Commission Report. Journal of World and Health Policy, 4(1), 91-102.
- [26] Gurvinder S. Sahota, Victoria Fisher, Bakula Patel, Kiranjit JuJ & Jaspal S. Taggar (2023). The Educational Value of Situational Judgement Tests (SJTs) when used during Undergraduate Medical Training: A Systematic Review and Narrative Synthesis. Medical Teacher, DOI: [10.1080/0142159X.2023.2168183](https://doi.org/10.1080/0142159X.2023.2168183)
- [27] Hamzah Farooq Niaz & Jatin Rohit Mistry (2020). Twelve Tips for Being an Effective Clinical Skills Peer Teacher. Medical Teacher, DOI: [10.1080/0142159X.2020.1841130](https://doi.org/10.1080/0142159X.2020.1841130)
- [28] Harrison C.J, Keonings K.D, Schuwirth L.W.T, Wass V & van der Vleuten C.P.M. (2017). Changing the Culture of Assessment: The Dominance of the Summative Assessment Paradigm. BMC Med Educ, 17(1), 73.
- [29] Jauregui. J., O’Sullivan. P., Kalishman. S., Nishimura. H. & Robins. L. (2019). Remoting: A Qualitative Focus Group Exploration of how Educators Maintain Identity in a Sea of Competing Demands. Acad Med, 94(1), 122-128.
- [30] Jennifer Cleland, Judy McKimm, Richard Fuller, David Taylor, Janusz Janczukowicz & Trevor Gibbs (2020). Adapting to the Impact of COVID-19: Sharing Stories, Sharing Practice, Medical Teacher, 42(7), 772-775, DOI: [10.1080/0142159X.2020.1757635](https://doi.org/10.1080/0142159X.2020.1757635)
- [31] Jianbin Ding, Andrew Shi-Jie Yap, Zheng Xian Thng, Nicola Yi’an Gan, Johnson Choon-Hwai Tan & Chee Chew Yip (2022). Investigating Mental Rehearsal’s Applicability in Guiding Independent E-learning (IMAGINE) of Eye Examination Skills during the Pandemic. Medical Teacher, DOI: [10.1080/0142159X.2022.2145941](https://doi.org/10.1080/0142159X.2022.2145941)

- [32] Jihyun Lee, Hyoseon Choi, Robert O. Davis & Marcus A. Henning (2022). Instructional Media Selection Principles for Online Medical Education and Emerging Models for the New Normal. *Medical Teacher*, DOI: [10.1080/0142159X.2022.2151884](https://doi.org/10.1080/0142159X.2022.2151884)
- [33] Jolene Ee Ling Oon, Shao Feng Mok, Dujeepta D. Samarasekera & Pim Teunissen (2023). Training Infectious Diseases Senior Residents during COVID-19: The Impact and the Lessons Learnt. *Medical Teacher*, DOI: [10.1080/0142159X.2023.2168182](https://doi.org/10.1080/0142159X.2023.2168182)
- [34] Jye Gard, Clare Polley, Angela Cisternino & Amy Gray (2022). The Void: COVID-19 Restrictions and Junior Doctor Education Opportunities. *Medical Teacher*, 44, 11, 1290-1295, DOI: [10.1080/0142159X.2022.2093701](https://doi.org/10.1080/0142159X.2022.2093701)
- [35] Karen D. Konings, Serge Mordang , Frank Smeenk , Laurents Stassen & Subha Ramani (2020): Learner Involvement in the Co-Creation of Teaching and Learning: AMEE Guide No. 138. *Medical Teacher*, DOI: 10.1080/0142159X.2020.1838464
- [36] Lavina L & Lawson F. (2019). Weaving Forgotten Pieces of Place and the Personal: Using Collaborative Auto-Ethnography and Aesthetic Modes of Reflection to Explore Teacher Identity Development. *Int J Educ Arts*, 20(6), 1–30.
- [37] Lavina. L. & Lawson. F. (2019). Weaving Forgotten Pieces of Place and the Personal: Using Collaborative Auto-Ethnography and Aesthetic Modes of Reflection to Explore Teacher Identity Development. *Int J Educ Arts*, 20(6), 1–30.
- [38] Lisi Gordon, Pim W. Teunissen, Divya Jindal-Snape, Joanna Bates, Charlotte E. Rees, Michiel Westerman, Roona Sinha & Anne van Dijk (2020). An International Study of Trainee-Trained Transitions: Introducing the Transition-To-Trainee Doctor (T3D) Model. *Medical Teacher*, 1-10.
- [39] Lockyer. J, Carraccio. C., Chan. M-K, Hart. D., Smee. S., Touchie. C., Holmboe. E. & Frank. J.R. (2017). Core Principles of Assessment in Competency-Based Medical Education. *Med Teach*, 39, 609–616.
- [40] Lovell B. (2018). What do we Know About Coaching in Medical Education? A Literature Review. *Med Educ*, 52(4), 376–390.
- [41] M. Ellis., B., Rutter. P., Greaves. F., Noble. D. & Lemer. C. (2011). New Models in Clinical Leadership: The Chief Medical Officer Clinical Advisor Scheme. *The International Journal of Clinical Leadership*, 17(2), 1-6.
- [42] Mailing. B., Mortensen. L. S., Scherpbier. S. J. & Ringsted. C. (2010). Educational Climate Seems Unrelated to Leadership Skills of Clinical Consultants Responsible of Postgraduate Medical Education in Clinical Department. *Journal of Medical Education*, 10(5), 62-70.
- [43] My Metro (2020, 11 Oktober). Doktor Korban Koronavirus. Diakses di laman <https://www.hmetro.com.my/global/2020/10/629489/doktor-korban-koronavirus>
- [44] Newton. K., Lewis. H., Pugh. M., Paladugu. M. & Woywodt. A. (2017). Twelve Tips for Turning Quality Assurance Data into Undergraduate Teaching Awards: A Quality Improvement and Student Engagement Initiative. *Med Teach*, 39(2), 141–146.
- [45] Ng. S.L., Baker. L.R. & Leslie. K. (2017). Re-positioning Faculty Development as Knowledge Mobilization for Health Professions Education. *Prospect Med Educ*, 6(4), 273–276.

- [46] Nisarg Shah, Oghenewoma Oghenesume & Uwe Fischer (2023). Using Immersive Externship Experiences within Medical Education to Bridge the Physician-Administrator Divide. *Medical Teacher*, 45(1), 111 -113, DOI: [10.1080/0142159X.2022.2104701](https://doi.org/10.1080/0142159X.2022.2104701)
- [47] Nor Shela Saleh, Hashim Fauzy Yaacob, Mohd Shafie Rosli, Thuaibah@Suaibah Abu Bakar & Azlah Md. Ali (2019). Pengaruh Kompetensi Doktor Pelatih terhadap Pembelajaran Perubatan. *Journal of Social Transformation and Regional Development (JSTARD)*, 1(2), 40-51.
- [48] Pieter C. Barnhoorn, Vera Nierkens, Mattijs E. Numans, Yvonne Steinert & Walther N. K. A. Van Mook (2022). What Kind of Doctor do you Want to Become?": Clinical Supervisors' Perceptions of their Roles in the Professional Identity Formation of General Practice Residents. *Medical Teacher*, DOI: [10.1080/0142159X.2022.2137395](https://doi.org/10.1080/0142159X.2022.2137395)
- [49] Rafidah Mat Ruzki & Noor Atikah Sulaiman (2020, 13 Jun). COVID-19: Seramai 416 Petugas Kesehatan Turut Dijangkiti. *Berita Harian Online*. Diakses dilaman <https://www.bharian.com.my/berita/nasional/2020/06/700018/covid-19-seramai-416-petugas-kesehatan-turut-dijangkiti>
- [50] Richard Darnton, Tony Lopez , Megha Anil , Jonathan Ferdinand & Mark Jenkins (2020): Medical Students Consulting From Home: A Qualitative Evaluation of a Tool for Maintaining Student Exposure to Patients During Lockdown, *Medical Teacher*, DOI:10.1080/0142159X.2020.1829576
- [51] Richard Darnton, Sam Amey & James Brimicombe (2023). Medical Students Remote Consulting from Home and from the health Centre: A Survey of Prevalence and Supervisor Perspectives. *Medical Teacher*, DOI: [10.1080/0142159X.2022.2158068](https://doi.org/10.1080/0142159X.2022.2158068)
- [52] Richardson. A. & Higginson. I. J. (2005). Communication Training for Health Professionals Who Care for Patients with Cancer: a Systematic Review of Effectiveness. *Journal of Supportive Care in Cancer*, 12(3), 692–700.
- [53] Schuwirth. L.W., Van der Vleuten. C.P. & Durning. S.J. (2017). What Programmatic Assessment in Medical Education can Learn from Healthcare. *Prospect Med Educ*, 6(4), 211–215.
- [54] Steinert. Y., Naismith. L. & Mann. K. (2012). Faculty Development Initiatives Designed to Promote Leadership in Medical Education. *Journal of Medical Teaching*, 34(6), 483–503.
- [55] Street. R. I., Makoul. G., Arora. N. K. & Epstein. R. M. (2009). How Does Communication Health: Pathways Linking Clinician - Patient Communication to Health Outcomes. *Journal of Patient Education Counselling*, 74(23), 295-301.
- [56] Subha Ramani, Judy McKimm , Ardi Findyartini , Vishna Devi Nadarajah ,Richard Hays , Margaret S. Chisolm, Helena P. Filipe , Alice Fornari , Elizabeth K. Kachur , Rashmi A. Kusurkar , Harish Thampy & Keith W. Wilson (2020): Twelve Tips for Developing a Global Community of Scholars in Health Professions Education. *Medical Teacher*, DOI: 10.1080/0142159X.2020.1839034
- [57] Thea van Lankveld, Harish Thampy , Peter Cantillon , Jo Horsburgh & Manon Kluijtmans (2020): Supporting a Teacher Identity in Health Professions Education: AMEE Guide No.132. *Medical Teacher*, DOI: 10.1080/0142159X.2020.1838463



- [58] Van Melle. E, Gruppen. L, Holmboe. S, Flynn. L, Oandasan. I. & Frank. J. (2017). Using Contribution Analysis to Evaluate Competency-Based Medical Education Programs: It's all about Rigor in Thinking. *Acad Med*, 92(6), 752–758.
- [59] Warwick McKibbin & Roshen Fernando (2020). The Global Macroeconomics Impacts of COVID-19: Seven Scenarios. *CAMA Working Paper 19/2020*, 1-43.
- [60] Wasiul Karim, Ahasanul Haque, Zohurul Anis & Mohammad Arijie Ulfy (2020). The Movement Control (MCO) for COVID-19 Crisis and its Impact on Tourism and Hospitality Sector in Malaysia. *International Tourism and Hospitality Journal*, 3(2), 1-7.
- [61] Watmoug. S., Garden. A. & Taylor. D. (2006). Pre-Registration House Officers' Views on Studying Under a Reformed Medical Curriculum in the UK. *Journal of Medical Education*, 40(25), 893–899.
- [62] Watmoug. S., Garden. A. & Taylor. D. (2006). Pre-Registration House Officers' Views on Studying Under a Reformed Medical Curriculum in the UK. *Journal of Medical Education*, 40(25), 893–899.
- [63] Zubir Sulaiman (2020, 16 Mac). 1,000 *Doktor Pelatih Mampu Kurangkan Beban*. *Sinar Harian*. <https://www.sinarharian.com.my/article/73974/KHAS/Koronavirus/1000-doktor-pelatih-mampu-kurangkan-beban>