

## **NEWLY-GRADUATED INDONESIAN MEDICAL DOCTORS PERCEPTION TO INDONESIAN INTERNSHIP PROGRAM**

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### **ABSTRACT**

*This manuscript present the perceptions from intern doctors regarding their abilities, confidence and experience. A mailing survey was conducted with the question of how respondents would perceive if they did not undergo the internship program. The purpose of the study is to describe the view related to Internship from the user's point of view. Analysis using simple bivariate logistic regression. The results there were 6830 responden, Average ability= 6.31 Confidence=6.27 dan Experience=5.95. 46.8% of respondents felt they had abilities, 47.5% felt confident and 54.6% had experience without having to participate in an internship program The variable that statistically significantly affects the perception of ability is gender (Man p <0.01 OR=0.679 95%CI=0.612-0.754), while for self-confidence also gender (Man p <0.01 OR=0.667 95%CI=0.601-0.741); Experience (Man p <0.01 OR=0.721 95%CI=0.650-0.799) Conclusion. Perception of newly graduated doctors almost same between the groups that feel capable, confident and have experience and the group without having to go through the internship process. Suggestions need to be done cost benefit studies to assess whether the internship program is useful for all parties.*

**Keywords:** *internsip, doctors, perception, program, abilities, confidence, experience*

## **INTRODUCTION**

World Federation of Medical Education (WFME), an educational authority under WHO, stated that medical education is divided into two stages: basic medical education, which graduates doctors, and PGME (post-graduate medical

education), often known as pre-registration training or internship.<sup>1</sup>

Since the enactment of Laws of the Republic Indonesia number 29 year 2004 concerning Medical Practice,<sup>2</sup> and also the evolution of global developments in medical practice ethics require that patients should not be made objects of medical

student practice, The existence of fundamental changes in the control of medical practice has an impact on the current medical education process. During their education at the medical faculty, in the clinical clerkship period, students no longer handle patients independently and the medical education period becomes shorter.<sup>3</sup>

Seeing these developments, to improve proficiency and independence, apply competency standards achieved during education, and apply medical professional standards, a pre-registration professional training process called the Indonesian Doctor Internship Program (PIDI) is needed.

Therefore in Indonesian Medical Education history, there are some policy that stated the need of internship program, such as: Regulation of the Minister of Health no 39 year 2017 about Implementation of the Indonesian Internship Program for Doctors and Dentists; updated with Regulation of the Minister of Health no 299 year 2010 and the last policy is updated with Regulation of the Minister of Health no 7 year 2022.

The program is a prerequisite for obtaining medical practice authority in the form of a Registration Certificate from the Indonesian Medical Council. This process is known in many countries as an internship or housemanship program. Studies in South Africa reveal that internment is an urgent need that can strengthen health systems, especially in primary health care.<sup>4</sup>

Furthermore, Laws of the Republic Indonesia number 29 year 2004 were supersede with Laws of the Republic Indonesia number 17 year 2023 concerning Health, where in article 214 the graduate given title by university after finishing the education, after that in article 215 graduate must take oath and after that in article 216

graduates must take the internship programme. So in this law, imply that internship held after the formal education.

The Indonesian Doctor Internship Program (PIDI) is one of the government's initiatives to solve the problems above and also to enhance the quality of health care in Indonesia, particularly in medicine.<sup>5</sup> Internship is a process by allowing the fresh graduate to apply the competencies they learned in school in an integrated, comprehensive, independent, and family medicine setting, with a focus on proficiency and alignment between educational outcomes and field practice.<sup>6</sup> PIDI has been initiated and agreed upon by the Ministry of Health, the Indonesian Medical Council (KKI), the Indonesian Medical Association (IDI) and the Ministry of National Education starting in 2008. But after 16 years implementation there are some pro contra regarding this program.

As comparison In India, fifth year medical education (after 4 years of completing formal education) is considered to have entered into internship.<sup>7</sup> In China, for doctors who want to practice, they only need to take the MLE (Medical License Examination), there is no internship process.<sup>8</sup> In recent article it was stated that the interns perceived the meaning of the internship as an opportunity to work and learn in an authentic setting.<sup>9</sup>

In this manuscript we would like to see perspective of the fresh graduate or the subject on this program about their abilities, confidence and experience if they do not participate in this program. Because many consider that internships have many disadvantages, namely increasing the learning period (after graduation you can not immediately work, but you have to do an internship first), then from the users themselves, there is an assumption that

there is no need for internship stages. Furthermore why we must considerate the view from the subject that undergo the proram, because when making policies, we should consider input from all parties.

## METHODS

The research design was cross sectional with a quantitative approach. Data collection is carried out by sending mail surveys to all PIDI participants in 2023. The mailing survey conducted in October 2023. In the survey, respondents were asked: 1. Do you think you are able to become a doctor/dentist with the skills needed in the world of work without going through the Internsip process? 2. Do you think you have the confidence to become a doctor/dentist that is needed in the world of work without the internsip process? 3. Do you think you have the experience needed to become a doctor/dentist in facing the world of work without the Internsip process?. We use Likert scale for the answer with 10 scales where the smallest scale (1) means they percieved that they do not have the ability or confidence or experience and the highest scale (10) . For the analysis, we classified the result into binomial category using cut off the average of each perception. Dependent variable is respondents' perceptions that classified into 2 groups, namely good (above average) and less good, in analysis with simple bivariate logistic regression. The independent variables used include gender, age category, university location and status of university.

Ethical clearence for this study is given from health research ethics committee national research and innovation agency, no 113/KE.03/SK/10/2023.

## RESULT AND DISCUSSION

Of the total 10,399 doctors who carried out internships in 2023, 6,830 responses were obtained (after being cleared of double or absurd data) with respon rate 65,7%. The characteristics can be seen in table 1 where male respondents compared to female respondents is 2:1. For the age category we divided into 2 parts with a cut off of 25 years. And it was seen that the majority of participants were over 25 years old. For the origin of universities, universities located on the island of Sumatra-Java-Bali send more graduates to take part in internships than outside it. While the status of the home university of intern doctors is almost the same between public universities and private universities.

**Table 1.** Characteristic Respondents

Variables	n	%
Gender		
Women	2093	30,65
Man	4736	69,35
Age Category		
≤25yo	1887	27,63
>25yo	4942	72,37
University Location		
Sumatera Jawa Bali	5785	84,71
Other	1044	15,29
University Status		
Public	3480	50,96
Private	3349	49,04

**Table 2.** Number of respondents who answered the likert-scale in each perception

Likert	Ability	Confidence	Experience
1	226	232	275
2	222	273	300
3	446	449	535
4	370	410	469
5	1110	1051	1178
6	822	832	969
7	1352	1320	1282
8	1351	1291	1109
9	442	483	368
10	488	488	344
Average	6,31	6,27	5,95

On questions related to the perception of abilities, confidence and experience of fresh graduate doctors if they do not attend the internship program, it is known that more than 50% of respondents assume they already have these three variables without having to undergo internship. In another research also mention same amount that only half internship felt that they were well prepared to start the next step in their career at the end of internship (50.7%), while 25.4% felt that they were moderately prepared.<sup>10</sup>

But if we look at the average value of each of these variables, for the ability variable it is at 6.31; The confidence variable is 6.27 and the experience variable is 5.95 (table 2).

We use 10 scale of likert, with the smallest scale (1) means responden feels/percept that he/she do not have the ability or confident or experiece if they do not undergo the internship program and the highest scale (10) mean that participats have the ability or confident or experiece if they do not undergo the internship program.

**Table 3.** Perception category of the responden

Variable	Less Good		Good	
	n	%	n	%
Ability	3633	53,2	3196	46,8
Confidence	3582	52,5	3247	47,5
Experience	3103	45,4	3726	54,6

After divided the result into 2 groups (less good and good) with the cut off point is the average value, then it can be seen that the comparison is almost balanced. So in general, the comparison between fresh graduate doctors who feel capable without participating in an internship program with fresh graduate doctors who must take part in an internship program is almost balanced.

Further analysis, we conduct bivariate analysis between independent variable: gender, age, university location and status university and dependent variable perception cathegory. It can concluded that only gender have significaly stastistic correlation with the perception. That male gender are less have the perception about ability compared to female if they don't undergo the internship program. it also same for the confidence ant experience variable. (table 3). With these results it can be said, statistically there is no difference between the ages of  $\leq 25$  and  $> 25$ ; between University graduates on the island of Sumatra-Java-Bali and outside the island; and between public and private universities regarding their perception of having the abilities, confidence and experience needed if they do not participate in the internship program.

Although World Federation of Medical Education (WFME) dividing the medical education into two stage, which is basic medical education, which graduates doctors, and PGME (post-graduate medical education), often known as pre-registration training or internship. This does not mean that when a doctor has not done PGME then it cannot be considered unfit to be a doctor.

In the world of medical education, for example in the United States. A person will be considered a doctor when he has completed his professional education. for PGME itself it is optional where they can carry out an internship program at the hospital where he will work (equaled to the probation period).<sup>11</sup>

In research, it was mentioned that depressive symptoms rose significantly during internship.<sup>12</sup> And in another research mentioned that internship experience can be challenging due to the rapid transition from medical school to clinical practice,

especially long working hours, high workloads, and constant new learning and assessment.<sup>13</sup> but in other research mentioned that transition from medical school to clinical work as a professional does not necessarily have to be characterised by stress and mental

exhaustion but can provide opportunity for medical interns to grow into their roles as doctors.<sup>14</sup> Another article mentioned that Internship has patient related burnout predominantly impacted interns' Quality of life and depression more than working hours did.<sup>15</sup>

**Table 4** Bivariate test factors affecting perception

Variable	Less Good	Good	P Value	ExpB	95%CI
<b>ABILITY</b>					
Gender					
Women	841	1252	reff		
Man	2355	2381	<0,01	0,679	0,612-0,754
Age Category					
≤25yo	907	980	reff		
>25yo	2289	2653	0,195	1,073	0,965-1,193
University Location					
Sumatera Jawa Bali	2725	3060	reff		
Other	471	573	0,236	1,083	0,949-1,237
University Status					
Public	1584	1896	reff		
Private	1612	1737	0,030	0,900	0,819-0,990
<b>CONFIDENCE</b>					
Gender					
Women	850	1243	reff		
Man	2397	2339	<0,01	0,667	0,601-0,741
Age Category					
≤25yo	918	969	reff		
>25yo	2329	2613	0,260	1,063	0,956-1,182
University Location					
Sumatera Jawa Bali	2764	3021	reff		
Other	483	561	0,367	1,063	0,931-1,213
University Status					
Public	1619	1861	reff		
Private	1628	1721	0,084	0,920	0,836-1,011
<b>HAVE EXPERIENCE</b>					
Gender					
Women	1024	1069	reff		
Man	2702	2034	<0,01	0,721	0,650-0,799
Age Category					
≤25yo	1027	860	reff		
>25yo	2699	2243	0,889	0,992	0,892-1,104
University Location					
Sumatera Jawa Bali	3169	2616	reff		
Other	557	487	0,394	1,059	0,928-1,209
University Status					
Public	1860	1620	reff		
Private	1866	1483	0,060	0,912	0,830-1,004

Another tools that can use to measure the internship are standardized tools like the Maslach Burnout Inventory (for measuring burnout), Patient Health Questionnaire-9 (depression), General Health Questionnaire-12 or 30 (psychological distress) and Perceived Stress Scale (stress).<sup>16</sup>

To increase the performance of the intern, there are some ways to measure it for examples the use of DOPS (Direct observation of procedural skill) in carrying out various actions. This has been applied to the Indonesian internship where internship doctors are directly under the supervision of the supervising doctor in doing the work. DOPS can be used as a standard method to test fundamental practical skills in the surgical sector. Given that action research entails a paradigm change and requires continuing reflection and improvement, it is recommended to conduct more studies to evaluate the performance of interns in all other departments. DOPS can be used as a standard method to test fundamental practical skills in the surgical sector. Given that action research entails a paradigm change and requires continuing reflection and improvement, it is recommended to conduct more studies to evaluate the performance of interns in all other departments.<sup>17,18</sup>

In the analysis, the author wants to compare universities from Sumatra, Java, and Bali with others because several journals mention that locations that are easily accessible are more in demand than locations that are somewhat difficult to access.<sup>19</sup>

Meanwhile, in other journals, the hospital factor also plays a role in the decision to take the internship location.<sup>20</sup> Hospitals that are considered to be able to

provide a more in-demand experience compared to hospitals with limited patients.

In the research conducted by Sugiarto, regarding medical internship, it was found that: Effort-reward imbalance has a negative effect on job satisfaction and job interest in the region; Work engagement has an influence on job satisfaction and interest in work in the region; Job satisfaction affects work interest in the region; Job satisfaction does not mediate the influence of effort-reward imbalance and work engagement on job interest in the region.<sup>21</sup>

Other methods for improving intern performance include the use of instructional problem-based learning (IPBL). The research state it feasible in large classes, consist almost 50 students into 7-10 squads. In this case, problem-and-lecture-based learning (PLBL) led to more number of test questions correctly answered by all students in a class, more students in higher test score buckets, and higher student perception scores on the methodology. PLBL facilitates fundamental knowledge acquisition in large classes within 50 students prior to medical internships.<sup>22</sup>

On the African continent, especially Kenya, where there is a severe shortage of doctors, Research found that the resources available in hospitals overall was often inadequate to support medical internship training in Kenya, especially for district or smaller hospitals. This situation make the internship preferred to leave the public sector, or in other situation internship immediately undergo specialist training after comleting the program.<sup>23</sup>

In Indonesia, there are vast range of differences between health facilities between rural and urban. In that case, the

distribution of health facilities make a major difference regarding the in a research it was observed that majority of the internship not unusual issues passed off in the scientific section. these problems also are labeled in the form of limitations or challenges confronted with the aid of clinical college students who come from personal (internal) and environmental (external) factors.<sup>24</sup>

In other manuskrip, it was stated that factors associated with performance in the National Medical Internship Exam in Peru:

Licensing of medical programs and belonging to national universities were associated with higher scores on the examination.<sup>25</sup>

## CONCLUSION

Almost the same perception of newly graduated doctors regarding ability, confidence and experience in terms of responding to the internship program, half of doctors feel no need for internship while the other half feel the need for intervention.

## REFERENCES

1. Sugiharto, F., & Achadi, A. (2018). Analisis Kebijakan Pemahiran Lulusan Dokter Melalui Program Internsip Dokter Indonesia (PIDI). *Jurnal Kebijakan Kesehatan Indonesia*, 7(1), 26–33. <https://doi.org/10.22146/jkki.12194>.
2. Laws of the Republic Indonesia Number 29 Year 2004, Pub. L. No. 29 (2004). <https://peraturan.bpk.go.id/Download/30487/UU%20Nomor%2029%20Tahun%202004.pdf>
3. Biro Komunikasi Kemenkes. (2015). Fakta tentang Internsip. Webpage Kemenkes. <https://sehatnegeriku.kemkes.go.id/baca/rilis-media/20151114/3313727/fakta-tentang-internsip/>
4. Ramoolla et al., 2023. Medical internship training in South Africa: Reflections on the new training model 2020-2021. *South African Medical Journal*. 113(5), 1195–1198. <https://doi.org/10.7196/SAMJ.2023.v113i5.16784>
5. Pusat Perencanaan dan Pendayagunaan SDM. (2019). Laporan Kinerja. <https://docplayer.info/storage/108/183339414/183339414.pdf>
6. Peraturan Menteri Kesehatan Nomor 7, Pub. L. No. 7 (2022). <https://peraturan.bpk.go.id/Download/212687/Permenkes%20Nomor%207%20Tahun%202022.pdf>.
7. Supe, A., & Burdick, W. P. (2006). Challenges and Issues in Medical Education in India. *Academic Medicine*, 81(12), 1076–1080. <https://doi.org/10.1097/01.ACM.0000246699.94234.ab>.
8. Han, X., Li, X., Cheng, L., Wu, Z., & Zhu, J. (2020). Performance of China's new medical licensing examination for rural general practice. *BMC Medical Education*, 20(1). <https://doi.org/10.1186/s12909-020-02234-x>
9. Yvonne Carlsson et all (2023). The medical internship as a meaningful transition: A phenomenographic study. *Med Educ*. 2023;57(12): 1230-1238. <https://doi:10.1111/medu.15146>

10. Ali I Swaid, et al (2017) Medical internship training in Saudi Arabia: interns' views and perceptions, *Advances in Medical Education and Practice*, 121-128, <https://doi.org/10.2147/AMEP.S123119>
11. Miles, S., Kellett, J., & Leinster, S. J. (2017). Medical graduates' preparedness to practice: a comparison of undergraduate medical school training. *BMC Medical Education*, 17(1), 1–9. <https://doi.org/10.1186/s12909-017-0859-6>.
12. Stefanie E. Mayer et al, (2018). Chronic Stress, Hair Cortisol and Depression: A Prospective and Longitudinal Study of Medical Internship. *Journal of Psychoneuroendocrinology*. 92: 57–65. <https://doi.org/10.1016/j.psyneuen.2018.03.020>
13. Zhao Y, et al. (2023). Development and validation of a new measurement instrument to assess internship experience of medical doctors in low-income and middle-income countries. *BMJ Glob Health*;8:e013399. doi:10.1136/bmjgh-2023-013399
14. Yvonne Carlsson, et al (2022). Junior doctors' experiences of the medical internship: a qualitative study. *International Journal of Medical Education*. 2022;13:66-73. <https://10.5116/ijme.6229.d795>
15. Zhao Y et al. (2021). Tools for measuring medical internship experience: a scoping review. 19:10 <https://doi.org/10.1186/s12960-021-00554-7>
16. Lin Y-H, et al (2019) A prospective study of the factors associated with life quality during medical internship. *PLoS ONE* 14(8): e0220608. <https://doi.org/10.1371/journal.pone.0220608>
17. Yalew Hasen, et al, (2024). Analysis of Clinical Skill Performance During Medical Internship at Department of Surgery, Debre Tabor University, Ethiopia. *Sriwijaya Journal of Surgery*. Vol. 7 No. 1. <https://doi.org/10.37275/sjs.v7i1.100>.
18. Sangameshwar Patil, et al. (2024). Direct observation of procedural skills evaluation of suturing skills in surgical interns: A comprehensive analysis. *Asian Journal of Medical Sciences*. Vol 15 No 7. <https://doi.org/10.3126/ajms.v15i7.64979>
19. Matthew McGrail, et al. (2024). Exploring recent trends (2014–21) in preferencing and accepting Queensland medical internships in rural hospitals. *BMC Health Services Research*. Volume 24, article number 236. <https://doi.org/10.1186/s12913-024-10683-z>
20. Farooq U Pasha, et al. (2024). Factors Influencing Medical Interns' Choice of Hospital for Training, Saudi Arabia: A Cross-Sectional Study. *Cureus*. 16(2): e54187. [10.7759/cureus.54187](https://doi.org/10.7759/cureus.54187)
21. Sugiarto, Aurellia Celesta (2024) The effect of effort-reward imbalance and work engagement on work interest in Java-Bali rural area mediated by job satisfaction in participant of medical internship program. Thesis. <http://repository.uph.edu/61849/>
22. Qing Li et al. (2023). Improved PBL Hybrid with LBL is Beneficial to Fundamental Knowledge Acquisition in a Large Class Prior to Medical Internship. *Journal of Problem Based Learning in Higher Education*. vol. 11, No. 3, Page 145-156. <https://10.54337/ojs.jpblhe.v11i3.7779>
23. Zhao, Y. (2023). A Examining medical doctors' internship training experience and labour market transition in Kenya. PhD Thesis University of Oxford. <https://ora.ox.ac.uk/objects/uuid:cca27e7b-9406-471d-b662-dac30d85f048>
24. Rusli, Rusli et al. (2023). Grouping of Problems of Medical Internship Students in Indonesia. *Proceedings of the 6th International Conference on Learning Innovation and*

- Quality Education (ICLIQE 2023). Advance in Social Science, Education and Humanities Research p132-140. [https://doi.org/10.2991/978-2-38476-114-2\\_13](https://doi.org/10.2991/978-2-38476-114-2_13)
25. Flores-Cohaila, et al. (2023). Factors associated with the national medical internship exam: Effects of university licensing. *Investigación educación médica*. vol.12, n.48, pp.30-40. <https://doi.org/10.22201/fm.20075057e.2023.48.23516>.