

## National Survey of Recently Graduated Thai Medical Interns' Characteristics and Perspectives Regarding Resignation Intention: A Retrospective Cross-Sectional Observational Study

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### Abstract:

**Objective:** The Thai medical internship program is a one-year post-graduation program that requires newly graduated doctors to rotate in major specialties in a government hospital. These newly graduated doctors carry a significant workload in the hospital and Thai healthcare system. However, there is a lack of data on the characteristics and attitudes of this new generation of doctors, which limits the ability to create appropriate interventions to address the issue of resignations within this group. This study aimed to collect data in order to understand the Thai medical internship program and identify the possible reasons for resignations among the new generation of doctors.

**Material and Methods:** This retrospective cross-sectional descriptive study was compiled from the recently graduated medical interns' national general information survey, 2021. We used descriptive statistics and Spearman's correlation using Statistical Package for the Social Sciences version 28.0.0.0.

**Results:** We included 2,431 participants, of which 1,139 (46.9%) were male and 1,292 were female (53.1%). The most common expected salary range during the internship was 40,000–60,000 Thai Baht per month (46.2%). Up to 3.5%, or 84 participants, planned to resign from their internship. The reasons for the resignations from the program included a poor working environment (61.4%), too much workload (51.7%), and low income (42.9%). Those interested in the cosmetic field (5.8%) and willing to work in other fields (7.6%) were much less common.

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**Conclusion:** The main reason for the possible resignations of the newly graduated Thai doctors was the miserable work environment, due to a multitude of factors that require further research and intervention.

**Keywords:** developing country, national survey, resignation, retention to health system, Thai medical interns

## Introduction

Newly graduated physicians in Thailand are required to complete a medical internship. Medical internship training is critical for the development of new doctors and, thus, the entire Thai healthcare system<sup>1</sup>. It requires physicians to complete a 12-month rotation in major wards at a tertiary hospital while performing duties and practicing medicine under supervision<sup>1</sup>. The Medical Council of Thailand requires doctors to complete medical internship training in order to be eligible for residency matching; however, the council only supervises curriculum<sup>1</sup>. Tertiary hospitals typically use medical interns as first-calls in inpatient wards, outpatient departments and surprisingly, emergency rooms. It is common for medical interns to be left to practice alone during their shifts<sup>2</sup>.

Serious criticisms have been made regarding the impact of this system on the quality of life of medical practitioners<sup>3,4</sup>. The Medical Council of Thailand has stated that physicians should not work more than 80 hours per week. However, in practice, medical interns often work 36 hours consecutively without rest and more than 80 hours per week<sup>3,4</sup>. Nevertheless, due to the council's limited authority<sup>5</sup>, the above statement does not apply to most tertiary hospitals in Thailand<sup>3</sup>.

Establishing baseline data on interns is crucial for developing a strategy for solving this problem. However, the data regarding medical interns during the training program is limited and publications rarely mention Thai medical interns. Understanding the thoughts and opinions of Thai medical interns before they start the program is vital for establishing a policy to improve the program. Fortunately, 2 years ago, the Medical Council of Thailand launched an online survey

to gather baseline information about the characteristics of recently graduated interns. The data may be utilized to gain insight into the expectations of Thai medical interns regarding working in an environment where health resources are underutilized and the working conditions are potentially unfavorable, as well as to identify personal constraints, including financial limitations<sup>2,3,4</sup>. Therefore, this study aimed to analyze the data from these online surveys in order to understand the baseline characteristics of medical interns before they commence their training and determine the correlation of certain characteristics with resignation intention.

## Material and Methods

A retrospective cross-sectional observational study was performed with data retrieved from the "National Survey of Recently Graduated Medical Interns' General Information for 2021," which was administered by the Medical Council of Thailand during the registration of newly licensed doctors. The obtained data was authorized by the Chanthaburi Research Ethics Committee (CTIRECT 096/64).

### Population and sample group

The population sample was composed exclusively of recently graduated medical interns who consented to participate in the "National Survey of Recently Graduated Medical Interns' General Information for 2021".

### Data collection

The data from the "National Survey of Recently Graduated Medical Interns' General Information for 2021" consists of 5 categories: 1) Gender of participants: Female

or male. 2) Expected salary during the first 3 years of internship: Less than 40,000 Baht, between 40,000 and 60,000 Baht, between 60,000 and 80,000 Baht, between 80,000 and 100,000 Baht, and more than 100,000 Baht. 3) Intention to resign from the internship program: Yes or no. 4) Reason(s) for resigning from the internship program: From least likely to most likely: 4.1) There is no scholarship for my preferred residency training program. 4.2) The waiting time for the scholarship application for my desired residency program is too long. 4.3) There is no applicable scholarship for my desired residency program. 4.4) The workload is too heavy. 4.5) I am willing to work in the aesthetic medicine industry. 4.6) The income is too low. 4.7) Someone is taking advantage of the participants. 4.8) The internship hospital is not in a place that I find desirable. 4.9) I need time to take care of my family. 4.10) I am willing to pursue careers other than being a doctor. 5) Undergraduate medical study programs: General program, the collaborative project to increase production of rural doctors (CPIRD), the one-district-one-doctor program (ODOD) and others.

### Methods and statistics

National Survey of Recently Graduated Medical Interns' General Information for 2021 was collected using an optional online survey at the start of the first internship year when newly graduated medical physicians were registered for The Medical Council of Thailand's service. The response rate was 2,431 of 2,868 participants (84.8%).

Data collected from the "National Survey of Recently Graduated Medical Interns' General Information for 2021" was analyzed using basic descriptive statistics and Spearman's rho correlation for non-normal distribution data using statistics package for social science version 28.0.0.0.

## Results

The sample included demographic data for 2,431 participants, all of whom were recently graduated medical interns in 2021 (Table 1). The sample consisted of 1,139 men

(46.9%) and 1,292 women (53.1%). Participants graduated from one of four types of undergraduate medical training programs: general programs (1,093 participants; 45.0%), CPIRD (679 participants; 27.9%), ODOD (174 participants; 7.2%), and other training programs (485 participants; 20.0%). Moreover, 31.8% of participants were from Bangkok. The primary department where interns completed their internships was the Ministry of Public Health of Thailand (76.9%), followed by universities (17.6%), the Royal Thai Armed Forces (3.5%), and others (1.9%). The expected salary range during the internship was 60,000–80,000 Thai Baht (46.2%), followed by 40,000–60,000 Thai Baht in the following years (26.2%). There were 84 participants (3.5%) planning to resign from their internship.

The Likert scale in Table 2 demonstrates participants' stated reasons for resigning. In most cases, almost half of the participants' intentions for resigning were low income (42.9%), excessive workloads (51.7%), or poor working environments (61.4%). However, among over half of the interns, an excessive waiting time for scholarships and a willingness to work in other careers, including the aesthetic medicine industry, were less likely to be motivations for resignation intention.

The correlations of "resignation intention" with various categorical and ordinal independent variables, such as the Likert scale, were proved using Spearman's rho correlation. Table 3 (Spearman's rho correlation) shows a significant correlation between undergraduate programs ( $p$ -value=0.003, 95% confidence interval [CI] 0.01–0.10) and the resignation intention of participants. Table 4 (Spearman's rho correlation) shows a significant correlation between resignation intention and (1) expected salary during the internship period ( $p$ -value<0.01, 95% CI 0.113–0.031), (2) excessive waiting time before applying for the scholarship for a residency period ( $p$ -value<0.01, 95% CI 0.03–0.111), (3) scholarship not in desired area ( $p$ -value=0.021, 95% CI 0.088–0.006), and (4) desire to pursue a career other than being a doctor ( $p$ -value=0.30, 95% CI 0.85–0.03).

**Table 1** Descriptive statistics of study variables

Demographic data (variable)	Number of medical interns in 2021 (frequency, %)
Total number of participants	2,431 (100.0)
Sex	
Male	1,139 (46.9)
Female	1,292 (53.1)
Undergraduate program	
General program	1,093 (45.0)
CPIRD	679 (27.9)
ODOD	174 (7.2)
Others	485 (20.0)
Hometown	
Bangkok	772 (31.8)
Non-Bangkok	1,659 (68.2)
Department of internship	
Ministry of public health	1,870 (76.9)
University(s)	429 (17.6)
Royal Thai Armed Forces	85 (3.5)
Others	47 (1.9)
Expected salary during an internship period	
<40,000 Baht	147 (6.0)
40,000–60,000 Baht	539 (22.2)
60,000–80,000 Baht	1,122 (46.2)
80,000–10,000 Baht	493 (20.3)
>100,000 Baht	126 (5.2)
Missing data	4 (0.2)
Resignation intention	
Yes	84 (3.5)
No	2,347 (96.5)

CPIRD=collaborative project to increase production of rural doctors, ODOD=one-district-one-doctor program

**Table 2** Reasons for resignation

Variable	1	2	3	4	5
Level of acceptance (Likert scale)	Least likely/not reasons (%)	Less likely (%)	Neutral (%)	More likely (%)	Most likely (%)
There is no scholarship for my preferred residency training program	981 (40.4)	236 (9.7)	491 (20.2)	426 (17.5)	292 (12.0)
The waiting time for scholarship application to the desired residency program is too long	1,269 (52.2)	182 (7.5)	368 (15.1)	355 (14.6)	257 (10.6)
There is no applicable scholarship for the desired residency program	987 (40.6)	308 (12.7)	532 (21.9)	399 (16.4)	205 (8.4)
The workload during an internship for participants is too heavy	528 (21.7)	185 (7.6)	461 (19)	531 (21.8)	726 (29.9)

**Table 2** (continued)

<b>Variable</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Level of acceptance (Likert scale)</b>	<b>Least likely/not reasons (%)</b>	<b>Less likely (%)</b>	<b>Neutral (%)</b>	<b>More likely (%)</b>	<b>Most likely (%)</b>
There is someone taking advantage of participants	429 (17.6)	140 (5.8)	370 (15.2)	610 (25.1)	882 (36.3)
The income is too low for me	572 (23.5)	236 (9.7)	580 (23.9)	600 (24.7)	443 (18.2)
The hospital is not in a desirable place	726 (29.9)	297 (12.2)	549 (22.6)	501 (20.6)	358 (14.7)
The time requirements for taking care of family	716 (29.5)	278 (11.4)	549 (22.6)	507 (20.9)	381 (15.7)
Willing to pursue careers other than doctor	1,526 (62.8)	377 (15.5)	344 (14.2)	100 (4.1)	84 (3.5)
Willing to work in cosmetic/aesthetic field	1,709 (70.3)	332 (13.7)	250 (10.3)	90 (3.7)	50 (2.1)

\*The data in bold are the 3 most common reasons for resignation

**Table 3** Spearman’s rho correlation between “resignation intention” and each independent variable

<b>Did you plan to resign?</b>	<b>Spearman’s rho</b>	<b>Sig. (2-tailed)</b>	<b>95% Confidence intervals (2-tailed)*</b>	
			<b>Lower</b>	<b>Upper</b>
Undergraduate program	0.060	0.003	0.010	0.100
Homeland	-0.035	0.081	-0.076	0.006
Extracurricular activities	0.013	0.508	-0.028	0.054
Departments of internship	0.013	0.529	-0.028	0.054
Student loan status	-0.011	0.578	-0.052	0.030
Sex	-0.039	0.054	-0.080	0.002

\*Estimation is based on Fisher’s r-to-z transformation

**Table 4** Spearman’s rho correlation between “resignation intention” to each independent variable

<b>Did you plan to resign?</b>	<b>Spearman’s rho</b>	<b>Sig. (2-tailed)</b>	<b>95% Confidence intervals (2-tailed)<sup>1,2</sup></b>	
			<b>Lower</b>	<b>Upper</b>
Expected salary during an internship period	-0.072	<0.001	-0.113	-0.031
Likert scale variables				
There is no scholarship in my desired residency program, but the program offers a free training position	-0.008	0.685	-0.049	0.033
The waiting time before I can apply for a scholarship for a residency program is too long. (CPIRD/ODOD)	0.071	<0.001	0.030	0.111

Table 4 (continued)

Did you plan to resign?	Spearman's rho	Sig. (2-tailed)	95% Confidence intervals (2-tailed) <sup>1,2</sup>	
			Lower	Upper
There is a scholarship, but it is not in my desired area	-0.047	0.021	-0.088	-0.006
The workload during the internship is too heavy for me	-0.014	0.494	-0.055	0.027
There is someone taking advantage of me (coworker, attending physician, or the administration)	-0.018	0.374	-0.059	0.023
The income is too low for me	-0.005	0.803	-0.046	0.036
The internship hospital is not desirable to me	-0.009	0.655	-0.050	0.032
I need time to take care of my family	-0.005	0.814	-0.046	0.036
I want to pursue a career other than being a doctor	-0.044	0.030	-0.085	-0.003
I want to work in the cosmetic/aesthetic field	0.002	0.916	-0.039	0.043

CPIRD=collaborative project to increase production of rural doctors, ODOD=one-district-one-doctor program

<sup>1</sup>Estimation is based on Fisher's r-to-z transformation, <sup>2</sup>Estimation of standard error is based on the formula proposed by Filler, Hartley, and Pearson

## Discussion

This study focused on recently graduated medical interns who had little experience in real-life workplaces, particularly in rural hospitals. They also had little experience with overwhelming workloads and unfair working environments. Therefore, this study examined the characteristics of recently graduated interns and gathered untainted data regarding the association of certain characteristics with resignation intention during the internship period.

Many studies from across the world have shown that financial factors function as a significant incentive motivating doctors to remain at their place of work, especially in rural areas and underdeveloped countries<sup>6-8</sup>. Our study similarly found that the expected salary during the internship period was directly correlated with resignation intention among recently graduated interns. In addition, we

found that recently graduated medical interns were likely to consider resignation when the incentives were lower than expected. Therefore, financial incentives are a significant factor influencing retention and resignation intentions among doctors in Thailand.

Pursuing a different career and pursuing work in the plastic surgery industry were found to be less prominent reasons for resignation than anticipated (7.6% and 5.8%, respectively). Therefore, this demonstrates that considering a career in the aesthetic medicine industry was not a significant contributor to resignation intention; instead, abuse in the workplace and unbearable workloads were the major causes of resignation intention.

Poor workplace culture and inappropriate treatment of people are factors that negatively impact the retention of healthcare professionals<sup>8,9</sup>. Having supportive peers and providing professional support during the early stages

of one's career has a positive impact on the retention of doctors working in remote healthcare settings<sup>10</sup>, and our results support these findings. We found that more than 60% of participants thought that being taken advantage of by a coworker or senior medical staff member was a motivation for resignation intention during an internship. Moreover, half of the participants stated that unbearable workloads were a critical factor in initiating resignation decisions. Consistent with the findings from earlier studies on doctors and nurses, job dissatisfaction and resignation intention are associated with workload<sup>7,8,11-16</sup>. This induced a fear of overwhelming workloads, abusive work culture, and unfriendly working environments among recently graduated interns, emphasizing the importance of these problems.

Generally, hospitals in urban areas, which are near certain amenities and have higher-quality medical equipment, are preferable to rural hospitals<sup>8</sup>. Surprisingly, our study showed no correlation between "resignation intention" and "preference for place of work". This implies that the desire to leave a rural area may not be due to the workplace, whether it is uncomfortable or lacks amenities. Rather, this desire may be due to workplace factors, such as abusive culture, inadequate incentives, and inadequate attending physicians.

The advantage of this study is its generalizability. We surveyed the data from the "National Survey of Recently Graduated Medical Interns' General Information for 2021," which surveyed the entire population of recently graduated interns in 2021. Thus, the results possess a high degree of generalizability and can serve as foundational data for future studies. However, the questionnaire was originally designed for organizational development purposes, not for research, and therefore, the use and interpretation of questionnaire items were limited. Therefore, a structured questionnaire based on the research question is suggested for further studies.

## Conclusion

This article identified reasonable incentives, balanced workloads, and appropriate workplace fairness as the most significant factors influencing resignation intention. Additional research is needed in order to resolve the issue of medical personnel burnout and resignation, which has caused significant disruptions to Thailand's healthcare system.

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## Conflict of interest

The authors declare that they have no conflict of interest.

## References

1. The subcommittee for consideration of support, the enhancement of medical skills under the medical skills enhancement program. The medical skills enhancement program (according to the certificate program under the skills enhancement project). Medical Council of Thailand; 2013
2. Manager Online. Newly graduated doctors face heavy workloads, or they may not be resilient enough [homepage on the Internet]. Bangkok: Manager Online; 2023 [cited 2024 August 4]. Available from: <https://mgronline.com/greeninnovation/detail/9660000053470>
3. Thai PBS. "Intern doctors" The driving force of Thailand's public health sector [homepage on the Internet]. Bangkok: Thai PBS; 2023 [cited 2024 August 4]. Available from: <https://www.thaipbs.or.th/news/content/328531>
4. BBC NEWS Thai. From "Machines" to "Slave" when Thai doctors demand the return of humanity [homepage on the Internet]. Bangkok: BBC NEWS Thai; 2023 [cited 2024 August 4]. Available from: <https://www.bbc.com/thai/articles/cx05q4dlj7lo>
5. The Medical Council of Thailand. The history of Thai medical council [homepage on the Internet]. Bangkok: The Medical

- Council of Thailand; 2023 [cited 2024 August 4]. Available from: <https://tmc.or.th/about.php>
6. Ashkenazi Y, Gordon M, Rosen B. Using financial incentives to attract medical residents to the periphery: the Israeli experience. *Health Policy* 2019;123:80–6.
  7. Bashar F, Islam R, Khan SM, Hossain S, Sikder AAS, Yusuf SS, et al. Making doctors stay: rethinking doctor retention policy in a contracted-out primary healthcare setting in urban Bangladesh. *PLoS One* 2022;17:e0262358.
  8. Mohammadiaghdam N, Doshmangir L, Babaie J, Khabiri R, Ponnet K. Determining factors in the retention of physicians in rural and underdeveloped areas: a systematic review. *BMC Fam Pract* 2020;21:216.
  9. Mohr DC, Burgess JF, Young GJ. The influence of teamwork culture on physician and nurse resignation rates in hospitals. *Health Serv Manage Res* 2008;21:23–31.
  10. Wieland L, Ayton J, Abernethy G. Retention of general practitioners in remote areas of Canada and Australia: a meta-aggregation of qualitative research. *Aust J Rural Health* 2021;29:656–69.
  11. Darbyshire D, Brewster L, Isba R, Body R, Basit U, Goodwin D. Retention of doctors in emergency medicine: a scoping review of the academic literature. *Emerg Med J* 2021;38:663–72.
  12. Degen C, Weigl M, Glaser J, Li J, Angerer P. The impact of training and working conditions on junior doctors' intention to leave clinical practice. *BMC Med Educ* 2014;14:119.
  13. Hämmig O. Explaining burnout and the intention to leave the profession among health professionals—a cross-sectional study in a hospital setting in Switzerland. *BMC Health Serv Res* 2018;18:785.
  14. Phillips C. Relationships between workload perception, burnout, and intent to leave among medical-surgical nurses. *Int J Evid Based Healthc* 2020;18:265–73.
  15. Schwarzkopf D, Rüdde H, Thomas-Rüdde DO, Felfe J, Poidinger B, Matthäus-Krämer CT, et al. Perceived nonbeneficial treatment of patients, burnout, and intention to leave the job among ICU nurses and junior and senior physicians. *Crit Care Med* 2017;45:e265–73.
  16. Wang JO, Li CY, Kao S, Yeh TC, Arens JF, Ho ST. Factors associated with Taiwan anesthesiologists' intention to leave anesthesia practice. *J Formos Med Assoc* 2015;114:509–16.