Academic Psychiatry (2020) 44:581–585
https://doi.org/10.1007/s40596-020-01246-5

IN BRIEF REPORT

Ten-Year Review of the Extern Program: a Solution to an Unsuccessful Match?

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Received: 23 October 2019 / Accepted: 7 May 2020 / Published online: 18 June 2020
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Abstract

Objective This paper presents an extern program, developed 10 years ago, which recruited unmatched medical graduates and involved them in publishing articles in academic journals, presenting poster presentations, writing grants, and networking with psychiatrists. The study examined how involvement in the extern program affected the candidates' Match reapplication outcome.

Methods Respondents were previous externs who joined the extern program. They were sent questionnaires on how the program affected their Match reapplication outcome.

Results Out of 22 externs surveyed, 15 completed the questionnaire. Results showed that the externship offered graduates opportunities in academic and clinical work, which improved their chances of getting a Match. The 15 respondents had a 100% match rate into a psychiatry residency program upon completing an average of 16 months of academic work in the externship. Respondents agreed that the extern program was beneficial, and they would highly recommend it to struggling medical graduates.

Conclusions Unmatched graduates urgently need guidance during the critical gap year. They should be given options and interventional plans, such as Dr. Rahn K. Bailey's extern program. The externship provides participants exposure to research and the scientific underpinnings of clinical medicine. It continues to expand and grow, serving unmatched medical graduates and students who need help getting into medical school or a PhD program. Further studies should be conducted on unmatched candidates, in particular, international medical graduates, who reapply and eventually match. This will provide information and insight into what they can do to advance themselves during the intervening period.

Keywords Extern program · Research · Publication · Unsuccessful match · Psychiatry

The road to becoming a physician has become increasingly difficult. Medical students must complete 4 years of medical school followed by 3 to 7 years of residency training in institutions recognized by the Accreditation Council for Graduate Medical Education (ACGME). In medical jargon, the act of matriculating into a residency program is called "matching." The Match is a system maintained by the National Resident Matching Program (NRMP) [1]. In 2020, the NRMP reported that 40,084 applicants competed for 37,256 positions [2]. As the number of applicants increase every year, the difficulty of matching also increases. For the most part, this reality is not widely known or publicized.

The unmatched graduates find themselves in limbo, unable to move forward in their careers after investing so much time, money, and hard work. They are also unable to find jobs in other professions, which require specialized training and education. While Dr. Rahn K. Bailey was chair and professor of psychiatry at Meharry Medical College, he developed the extern program and reached out to help younger future doctors advance their careers. Under the auspices of Meharry Medical College, the program allowed unmatched medical graduates to engage in unpaid volunteer work that centers around academic projects such as research, journal publication, and presentations.

The first extern to join the program was in 2009. Over the course of a year, this extern published academic papers, wrote several forensic reports, and attended lectures held in multiple departments. At that time, the externship program guaranteed interviews with participants who committed to 3 months of

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diligent work. It had obvious benefits—an extern can potentially move from a large pool of applicants to a smaller pool of candidates invited for an interview. After struggling to match, the extern program's first participant took advantage of this opportunity. He worked tirelessly for almost a year, he secured an interview, and he went on to match at Meharry Medical College. Furthermore, this individual performed exceedingly well throughout his residency, scoring the highest in the annual Psychiatry Resident-In-Training Examination (PRITE), and was voted as a chief resident by peers (i.e., the other residents). Meanwhile, previous externs who were invited for interviews, and subsequently matched, described their interviews as "merit-based" or "earned" after completing numerous projects in the program. Some of them worked 4 to 6 months or even longer before they landed an interview.

Through the years, the program has further diversified and currently offers externs opportunities to attend conferences, see patients in a clinical setting, and assist in paralegal work and forensic cases. In this study, we investigated whether medical graduates who completed the externship benefited from the program when they reapplied to the Match.

Methods

Twenty-two previous externs were contacted via email or phone. They included medical graduates in various levels of training who did not successfully match into a psychiatry residency program on their first attempt. Participants were not asked if they were US graduates or international medical graduate physicians (IMGs). Some respondents were, at the time of the survey, in a residency program, while others were practicing independently as licensed physicians. By email, respondents were instructed to answer a set of questions in short essay form. By phone, respondents were read the same set of questions and their answers were written down by the interviewer. Questions are available from the corresponding author on request.

Informed consent was obtained from all the externs before emailing the questionnaire reading the questionnaire by phone. Additionally, they were informed that participation is voluntary, they have a right to confidentiality, and a right to withdraw from the study at any time without consequences. The Charles R. Drew University IRB reviewed the study and determined that it did not require further formal review.

Results

Twenty-two previous externs were sent questionnaires on how Dr. Rahn K. Bailey's extern program affected their Match reapplication outcome; 15 completed the survey (Table 1). Among the 15 respondents, the shortest interval (number of years) between leaving medical school and starting the extern program was 2 years; the most common interval between leaving medical school and starting the extern program was 6 years.

Respondents were asked how many times they applied to the Match before and after joining the externship. Before joining, 1 respondent applied to the Match 10 times; 1 respondent applied 5 times; 2 respondents applied 4 times; 4 respondents applied twice; and 7 respondents applied once. After joining the extern program, 12 (or 80% of the respondents) were matched at once; 2 matched after applying twice; and 1 matched after applying 5 times (Fig. 1a).

Respondents were asked how many residency programs they applied to before and after joining the externship. Before joining, they applied to as many as over 200 programs, and as few as 10. After joining the externship, the number of programs they applied to was cut by half. They applied to as many as 120, and as few as 4 (Fig. 1b). This shows a 50% decrease in the number of residency programs applied to after joining the externship compared with the number of programs applied to before joining the externship.

Respondents were asked how many interviews they were offered by residency programs before and after joining the externship. The request for interviews ranged from 0 to 7 in the Match year(s) before joining. The request for interviews ranged from 0 to 12 in the Match year(s) after joining the externship, with one respondent receiving 12 interview offers (Fig. 1c). There is a slight increase in the percentage of total interviews offered after joining the externship compared with the percentage of total interviews offered before joining the externship.

On average, each respondent spent 16 months in the extern program with a minimum of 2 weeks and a maximum of 36 months. Whether the extern did a short or an extended stint, each person's experience is unique. Having said that, the externs were immersed in a variety of academic projects. They worked on article publications and poster presentations, helped in billing and medical coding, wrote grants, assisted on paralegal work and forensic cases, and attended American Psychiatric Association conferences. All but two respondents said the externship gave them opportunities to network with practicing psychiatrists, psychiatrists in the academic field, and staff in residency programs of interest.

One hundred percent of respondents reported that the program was beneficial, and they would highly recommend it to struggling medical graduates. The 15 respondents who participated in this study all matched to a psychiatry residency program after completing the extern program.

Discussion

There is a growing number of medical graduates unable to obtain a graduate medical education (GME) in the Match and in the Supplemental Offer and Acceptance Program

Table 1 Survey respondence raw data and statistical analyses

	1a	1b	2a	2b	3a	3b	4a	4b	5	6	7	8
Respondent	Before	After	Before	After	Before	After	Years from medical school graduation	Years in externship program	Accomplishments and duties in externship	Opportunity to network in externship?	Externship increased chances of matching?	Recommend this externship?
1	2	2	110	40	0	1	17	2	Publication, several posters	Yes	Yes	Yes
2	4	1		0	7	0	6	1	Publication, a few presentations	No	Yes	Yes
3	2	5	10	1	5	1	6	3	Publications, grants	Yes	Yes	Yes
4	1	1	50	70	3	12	5	0.75	Publications, presentations, posters, conference	Yes	Yes	Yes
5	1	2	40	60	1	7	7	2	Publications, presentations, posters, LOR, mentor	Yes	Yes	Yes
6	5	1	50	0	3	0	8	0.25	Networking into PGY-2	Yes	n/a	Yes
7	2	2	60	10	2	4	8	2	Publications, presentations, cases, billing	Yes	Yes	Yes
8	4	1	40	5	4	3	18	3	Publications, presentations, cases, conferences	Yes	Yes	Yes
9	1	1	10	0	4	1	2	0.1	Posters, Power Points	No	Yes	Yes
10	1	1	180	20	0	2	25	1	Publications, presentations, cases, conferences	No	Yes	Yes
11	1	1	100	100	3	9	5	1	Clinic, article, cases, projects		Yes	Yes
12	2	1	30	30	3	9	7	9	Publications, presentations, cases, abstracts	Yes	Yes	Yes
13	1	1	100	20	3	3	24	1	Publications, grants, presentations, cases, billing	Yes	Yes	Yes
14	1	1	75	75	4	5	3	1	Publications, presentations, articles	Yes	Yes	Yes
15	10	4		4	5	3	15	1.5	Publications, conference	Yes	Yes	Yes
N	15	15	13	15	15	15	15	15				
Mean	2.53	1.67	65.77	29	3.13	4	10.4	1.91				
Std Dev	2.45	1.23	47.25	32.68	1.89	3.68	7.45	2.14				
p value	0.117		0.014		0.213							

This table is a collection of raw data from the survey with *N*, sample size; mean, the average in the corresponding column; *Std Dev*, the standard deviation of the corresponding column; *p* value, the *p* value is obtained by using a *t* test comparing the before and after responses, to determine if there is a statistical significance

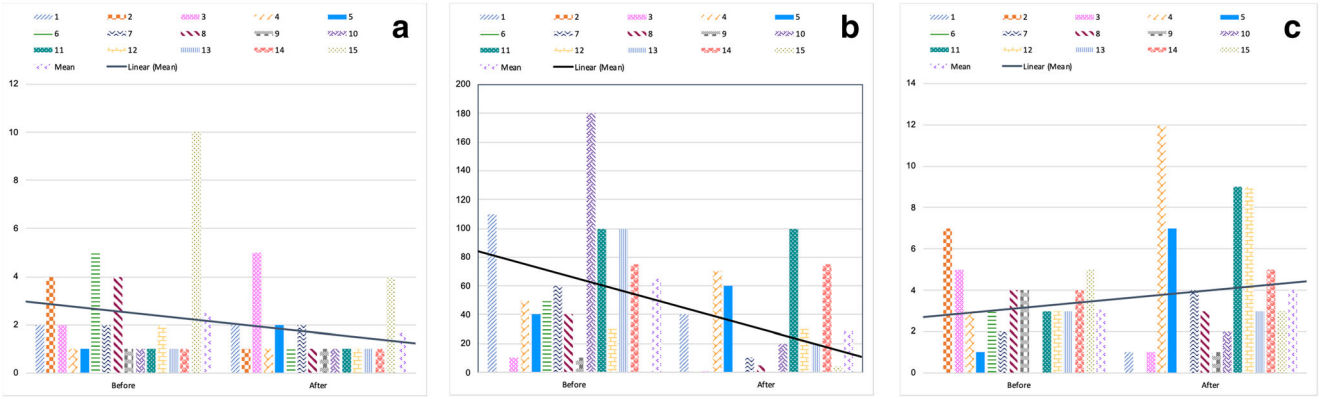

Fig. 1 Combination of 1a, 1b, 2a, 2b, 3a, 3b responses, with each respondent having an associated pattern. The before and after are side by side and a linear trendline was creating the means of each group. **a** is the Number of Match Applications Relative to Starting the Externship. **b** is the Number of Programs Applied to Relative to Starting the Externship. **c** is the Number of Interviews Relative to Starting the Externship

(SOAP). Many in the medical community are not aware of this occurrence. The reasons are complex and multifactorial. For one thing, the number of applicants increases every year, but the number of GME positions has not kept pace. What can be done to help unmatched graduates?

Sadly, there is a dearth of resources such as evidenced-based studies on how to secure a successful Match. Bumsted et al. [3] reported that previously unmatched reapplicants can improve on 10 variables. They should join activities that would enable them to do the following: (1) obtain letters of recommendation in their specialty; (2) enhance their personal statement; (3) demonstrate the commitment to the desired specialty; (4) gain personal knowledge of faculty; (5) demonstrate leadership qualities; (6) demonstrate interest in a program; (7) gain volunteer experiences; (8) demonstrate involvement in research; (9) gain fluency in another language; (10) Take Step 3 of the United States Medical Licensing Examination.

Data from subsequent Match cycles show a success rate of 25% after completing a research project, 14% after applying to a different specialty, 13% after acquiring clinical experience, and 4% after pursuing an additional degree [4]. These numbers suggest there is no single strategy for securing a Match.

Out of 22 externs, 15 completed the survey. Fincham [4] reported that researchers should expect at least a 60% survey research response rate. This study has a 68% response rate with a nonresponse bias of 32.

Our survey of 15 externs, responding by email or by phone, showed that opportunities in research and publication, made available through the extern program, resulted in an improved match rate outcome. This concurs with Bumsted et al.'s findings [3]. Our survey also indicated a decrease in the number of Match reapplications after involvement in the externship, as well as an increase in the number of interviews for residency programs. Meanwhile, an average period of 16 months spent in Dr. Bailey's externship gave graduates ample experience in writing and presenting research projects in the academic realm of psychiatry. Although the 15 respondents all matched after the externship, the status of the 7 non-responders is unknown. It is possible that they did not match. Although the externship does not assure participants a match, it is helpful in acquiring new skills and experience.

Another interesting though oftentimes overlooked reality is that a significant number of US IMGs and non-US-citizen IMGs do not match. In the 2020 Match, the NRMP reported there were 5167 US IMGs who submitted applications, but only 3154 were matched to postgraduate year 1 (PGY-1) positions or a match rate of 61%. Similarly, NRMP reported there were 6907 non-US citizen IMGs who applied, but only 4222 were matched to PGY-1 positions, or a match rate also of 61% [2].

This situation was not helped by unifying allopathic (MD) and osteopathic (DO) applicants for the first time in a "Single Match" starting 2020. Growth in the US DO medical school seniors seeking positions pushed the 2020 Match to record highs. There were 6581 US DO seniors who applied, an increase of 1103 over 2019. Among those seniors, 5968 or 90.7% matched to PGY-1 positions, upping the match rate for the US DO seniors to 2.6% from 2019 [2].

Since 2016, the number of US DO seniors seeking positions has risen by 3599 or 120%. "The number of U.S. MD seniors who submitted program choices was also record-high: 19,326, an increase of 401 over 2019. The 93.7% match rate to first-year positions for this group has remained very consistent for many years," said Donna L. Lamb, DHSc, NRMP President and CEO, in an interview with MDedge [5].

The combined figures represent greater competition for IMGs as the number of allopathic and osteopathic medical graduates have been increasing. What can IMGs do to improve their chances of getting matched? For starters, they can strengthen their applications by pursuing an externship, observership, volunteering, or research. One study examined the role of research experience in successfully matching IMGs in US-based programs in plastic surgery. Kokosis et al. [6] reported that successfully matched plastic and orthopedic surgery IMGs have double the research experience compared

with their US counterparts at the time of the Match. Furthermore, Rivero and colleagues [7] studied the impact of candidates' published works on subsequent Match cycles during the intervening period. Their results showed that successfully matched reapplicants had significantly higher publication productivity than those who did not match.

Unmatched graduates urgently need guidance during this critical time. They should have options and interventional plans such as Dr. Bailey's extern program, which was instituted on July 1, 2009. The participants are given opportunities to do research, publish articles and book chapters, write grants, present poster presentations, attend conferences, and network with established psychiatrists. Exposure to such intellectual pursuits helps develop critical thinking skills in externs.

For existing and future programs, here are lessons learned over the past decade about establishing and running an externship program: The externship works because it bridges the gap between academic preparation and clinical practice. The program is more effective when there is a partnership between school and hospital. It has a positive effect on the participants' professional behavior and attitudes toward healthcare. An externship can be viewed as a form of continuing education and a way to generate topics for research papers. Externs devote hours doing research, writing abstracts/articles/book chapters, creating presentations, and applying for grants. In the process, they learn from mentors of the program, establish relationships with specialists, and expand their network and contacts. Overall, externs become stronger, more confident candidates because they emerge as clinically competent doctors who have proven that they can do the work.

Our study has limitations. First, the study describes the experiences of one program that has helped unmatched candidates. Second, we sent questionnaires to 22 previous externs, but only 15 completed the survey. Third, some of the survey questions were ambiguous and elicited various interpretations. Fourth, the study did not take into account whether the extern was a US medical graduate, US IMG, or a non-US IMG. Non-US IMGs have the added limitation of applying for the appropriate visa after they match. The type of visa and its duration will affect their ability to participate in externship programs, as well as the Match outcome. In future surveys, we plan to identify the candidate's status. We want to widen the sample by distributing questionnaires to externships other than Dr. Bailey's. This will allow us to collect data from a larger pool and follow trends in the residency matching program in psychiatry. We also plan to have a separate section on unmatched US IMGs and non-US IMGs who reapply and eventually match. This will provide information on the intricacies of the Match from the standpoint of all IMGs.

Compliance with Ethical Standards

Disclosure On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

1. The Match: Getting into a Residency Program. American Academy of Family Physicians, Leawood, KS. 2019. Last accessed June 8, 2019. https://www.aafp.org/medical-school-residency/residency/match.html
2. "New! Press Release: Thousands of Medical Students and Graduates Celebrate NRMP Match Results." The Match, National Resident Matching Program, 23 Mar. 2020, www.nrmp.org/2020-press-release-thousands-resident-physician-applicants-celebrate-nrmp-match-results/
3. Bumsted T, Schneider BN, Deiorio NM. Considerations for medical students and advisors after an unsuccessful Match. Acad Med. 2017;92(7):918–22.
4. Fincham JE. Response rates and responsiveness for surveys, standards, and the Journal. Am J Pharm Educ. 2008;72(2):43.
5. Lubell, Jennifer. "Milestone Match day sees record highs; soar in DO applicants." MDedge Internal Medicine, 21 Mar. 2020, www.mdedge.com/internalmedicine/article/219412/business-medicine/milestone-match-day-sees-record-highs-soar-do
6. Kokosis G, Leto Barone AA, Grzelak MJ, et al. International medical graduates in the U.S. plastic surgery residency: characteristics of successful applicants. Eplasty. 2018;33:270–9.
7. Rivero S, Ippolito J, Martinez M, Beebe K, Benevenia J, Berberian W. Analysis of unmatched orthopaedic residency applicants: options after the Match. Journal of Graduate Medical Education. 2016;8(1):91–5.

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