Perception about central induction policy among postgraduate trainees of Punjab - a mixed method qualitative study

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ABSTRACT

Background: Central induction policy is recently implemented for induction of doctors for post-graduation training based on their performance in MBBS, post-graduation entrance exam, house job, studying in public institute, work in periphery and research. Despite controversies this policy was implemented in May 2016 and no feedback was taken by the stakeholders. This discrepancy aroused the need for data collection to determine effectiveness of CIP in terms of PG perceptions.

Subjects and methods: An interview based qualitative study was conducted in four tertiary care hospitals from 05 June 2018 to 30 November 2018. Request forms were randomly sent to 75 residents inducted through and before CIP. Total 39 residents participated in the study after giving consent. Interview questions were selected by the authors after detailed discussion. Each interview was heard thrice, manuscripts were prepared in the same words used by the participant. Manuscripts were discussed among the team members to identify themes. Depending upon themes questionnaire was designed and quantitative data was collected.

Results: Qualitative evaluation identified following major themes including policy being merit based allowing every candidate to get a fair chance of induction; financial security on all the slots and provision of qualified doctors at primary health care centers for the induction policy whereas issues with choice of specialty and place of work; delay in start of training due to various factors and discrepancy in special cases like wedlock, FMGs, authenticity of research papers were identified as demerits.

Conclusion: CIP is a good initiative and is acceptable due to its merit based policy and financial security however there is need to improve the standard and evaluation method of research and option for change of specialty.

Keywords

Central Induction Policy, Postgraduation, Training, FCPS, Peripheral Health Care Centres, Research

INTRODUCTION

Central induction policy is a recently introduced policy for induction of doctors into different specialties and hospitals for post-graduate training in the province introduced by the Department of Health, Government of the Punjab. This policy faced a lot of controversy and resulted in protests by the young doctors, but despite all the backlash it was enforced in May 2016. The policy was a major change in the process of higher medical education trainee induction. The system specified a well-drafted criterion for selection (Table 1) which enabled aspirant candidates to fulfill the minimum criteria by completing their house job for one year after MBBS, pass entrance examination for their respective postgraduate system FCPS or MS/MDS programs.

Various factors were attributed to the proposed policy. The new system took into account candidate's past performance and achievements. New criteria, including research and community work in basic health units were added to the system to encourage candidates to get involved in these areas as well (Table 1). This policy allocates seats to the trainees based on weightage given on the following criteria: academic performance during 5 years of medical college, academic distinctions, scores obtained in post-graduation entrance exam (FCPS 1 & JCAT), house job in public hospital, medical education at a public sector institute, work in a peripheral area, published research and applying in parent institute for post-graduation.

The previous policy required mere clearance of entrance exam and the final selection of trainees for residency was the sole prerogative of the supervisor of the desired discipline. Despite controversies and rejection, the policy was implemented and no feedback was taken by the stakeholders. This discrepancy aroused the need for data collection to determine effectiveness of CIP in terms of PG perceptions.

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was taken by the Health Department from various stakeholders about the effectiveness and its flaws in these two years. The satisfaction of the candidates in training is of utmost importance for improvement in the current system. This study is designed to determine the perception of the residents inducted in the new system by mixed method qualitative study. The objective of our study was to determine the perception of Central Induction Policy (CIP) among residents of teaching hospitals, exploring merits and demerits as perceived by trainees using qualitative methods. Secondary objectives were to quantify themes generated by the trainees using questionnaire from stake holder and to critically analyze the data driven from questionnaires for quantitative analysis.

**SUBJECTS AND METHODS**

A mixed method qualitative questionnaire-based study was designed to identify major themes by trainee doctors who are inducted through and/or before the implementation of CIP. Initially 75 trainees in different specialties were sent request regarding conduction of interviews and consent to take part in the research in four hospitals in the two cities of Punjab. The institutions included 3 medical universities and one medical college including King Edward Medical University Lahore, Fatima Jinnah Medical University Lahore and Faisalabad Medical University Faisalabad and Services Institute of Medical Sciences, Lahore. The interviews were carried out by the authors randomly and distributed using various social media groups (WhatsApp group, research information cards, Facebook, Linkedin and Twitter) for maximum participation where direct travelling by the authors was not possible.

**RESULTS**

A total of 39 postgraduate residents of different specialties were interviewed (Table 2). Ten of them were inducted before CIP implementation, 7 of them got their initial induction through the older system and are now being inducted for their second fellowship or specialty fellowship training through CIP. Among the

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**Table 1. Scoring system for induction in central induction policy (CIP)**

| Criteria                                      | Weightage | Additional marks/ Description |
|-----------------------------------------------|-----------|--------------------------------|
| Performance of five years of medical school   | 20%       | 2 marks each distinction (a maximum of 6 marks). |
| Passing undergraduate exam in single attempt  | 5 marks one mark for each professional examination |
| Performance in post-graduation entrance exam  | 40%       |                                |
| Experience of peripheral health care units    | Up to 20 marks |
| Graduation from a public institute            | 2.5 marks  |
| House job in public hospitals                 | 2.5 marks  |
| Preference of parent institute                | 2.5 marks  |
| Research publication in a HEC or PM & DC recognized journal | 5 marks |

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participants, 16 (41%) were females and 23 (49%) males. n=35/39 (89%) of the trainees were convinced that the new system is fair and merit based (Table 3). According to 28/39 participants, residents are also distributed equally among different units of a hospital, leading to equal distribution of work load and more chances of learning. Second most frequent theme for the new policy was financial security in form of paid slots after implementation of CIP supported by 97% (n=38/39) of participants. The system was preprogrammed to identify exact number of slots at each training center in the province managed by a central server hosted at the Pakistan Information Technology Board (PITB).

Further in depth questionnaire based analysis of the scoring system (Table 4) by 104 participants showed that 79% (n=31/39) of CIP trainees were satisfied by the inclusion of extra marks based on jobs at hard areas to alleviate the condition of health care being provided to the neglected areas. However, the percentage of participants replying through questionnaire in its merely 43% due to fear of delay in getting fellowships and loss of career oriented tracts.

| Specialty          | No. of Participants |
|--------------------|---------------------|
| General surgery    | 11                  |
| Medicine           | 5                   |
| Orthopedics        | 4                   |
| Neurosurgery       | 4                   |
| Dermatology        | 4                   |
| Paediatric surgery | 2                   |
| Cardiac surgery    | 2                   |
| Gynaecology & obstetrics | 1          |
| Paediatric medicine | 1               |
| Anesthesia         | 1                   |
| Neurology          | 1                   |
| Radiology          | 1                   |
| Ophthalmology      | 1                   |
| Nephrology         | 1                   |

Table 3. Summary of factors for and against Punjab central induction programme (CIP)

| In favor of CIP                                                                 | Against CIP                                                                 |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| The policy is merit based and abolished the need for references, intercession, approaches etc. and every doctor whether government, private or foreign medical graduate gets a fair chance of getting inducted in specialty of his or her own choice. | Issues with the choice of specialty and place of work.                      |
| All slots are paid from day one and there is no exploitation at the hands of clerical staff and financial stability leading to less depression and anxiety. | Delay in start of training due to various factors.                         |
| Primary health care centres are being filled by young candidates aspirant to join post-graduation training. | Discrepancy in the policy for special cases like wedlock, foreign medical graduates and authenticity of research papers. |

Figure 1. Fear of workplace violence among female doctors in periphery

Figure 2. Psychological safe environment for females in working place

Perceptions against the C.I.P. system were, specialty of choice was divided but a minor majority 55% (n=16/29) of the trainees admitted that the specialty selected was not their primary choice and they had to switch specialty due to CIP. 82% (n=18/22) of participants had to work for almost one year in periphery to achieve desired merit. 71% (n=23/39) participants were of opinion that distinction marks should be added as a hardworking student deserves the reward. However, 16/39 and 28% from quantitative study suggested to omit extra marks for distinctions. A minority of candidates 18% (n=7/39) questioned the fairness of system and suggested publication of merit list instead of simple email based selections. Detailed analysis of survey result were tabulated in Table 4. Security of workplace and ease of doing job for females were also explored (Figures 1 and 2).

DISCUSSION

Based on the interviews, three most common themes in favor of CIP were: (1) the policy is merit-based (89%) (n=35/39) according to qualitative and 69% from quantitative data) and abolished the need for references, intercession, approaches etc. and every doctor whether government, private or foreign medical graduate gets a fair chance of getting inducted in specialty of his or her own choice. This in turn has abolished the need for references, intercession, approaches etc. and every doctor whether government, private or foreign medical graduate gets a fair chance of getting inducted in specialty of his or her own choice. This in turn has abolished the need for intercession, approaches etc. and every doctor whether government, private or foreign medical graduate gets a fair chance of getting inducted in specialty of his or her own choice. This in turn has abolished the need for
Table 4. Frequency distributions for quantitative data based on questionnaire

| Questions                                                                 | Yes  | No  |
|---------------------------------------------------------------------------|------|-----|
| Whether inducted through CIP?                                             | 53.4 | 38.8|
| Did you get hospital of your choice?                                      | 42.7 | 57.3|
| Did you get specialty of your choice?                                     | 66.7 | 33.3|
| Did you get supervisor of your choice?                                    | 38.8 | 61.2|
| Migrated for training                                                    | 44.6 | 55.4|
| CIP is merit based                                                        | 68.3 | 31.7|
| Research marks should be added                                            | 49.0 | 51.0|
| Do you agree that lack in research is due to dearth of orientation at undergraduate level? | 50.0 | 49.0|
| Do you think publication process is a hindrance for researchers?          | 62.5 | 37.5|
| The whole research process is transparent                                 | 68.3 | 31.7|
| Worked in primary / secondary healthcare for marks                        | 49.0 | 51.0|
| Learnt new things in peripheral healthcare centres                        | 26.9 | 41.3|
| Difficult for females to work in periphery                                | 80.8 | 19.2|
| Experience of peripheral healthcare centres should be compulsory           | 41.3 | 58.7|
| Foreign graduates should be inducted through same criteria                | 61.5 | 38.5|
| Selection of foreign graduates is transparent                             | 48.1 | 51.9|
| Did you notice any workplace discrimination against foreign graduate inductees? | 29.8 | 70.2|
| Do you think that assessment differences among government, private and foreign graduates are being accommodated in this system? | 32.7 | 38.5|
| You feel psychologically safe in your working environment                 | 29.8 | 59.6|
| You feel physically safe in your working place                            | 28.8 | 51.2|
| There is gender inequality at workplace                                   | 46.2 | 53.8|
| Number of PG trainees recruited for a specialty enough to meet the workload | 18.3 | 81.7|
| Marks for graduation from public medical institute should be given         | 69.2 | 30.8|
| Marks of house job in public hospital should be given                      | 75.0 | 25.0|
| Marks should be given for distinctions                                     | 71.2 | 28.8|
| Marks should be given for preferring parent institute                      | 57.7 | 42.3|
| Family life is affected because of CIP                                    | 68.3 | 31.7|

References, intercession and personal contacts to get a training slot. Candidates can apply online in desired hospitals instead of physically approaching Heads of department or institutions or submitting multiple applications to a number of centres to get slot, which in turn delayed the process of induction and start of training. With implementation of central induction policy, inductees now know their center of selection and can plan their training periods accordingly. As quoted by a participant, “there is no need to roam everywhere, no need to beg/ request to professors and clerks”. Another candidate said, “Professor’s blessing is no more mandatory”.

Previously more residents used to opt one unit with better supervisor and working environment leading to increased burden on other units with lower number of residents. However, specific choice of a ward or a supervisor is still prerogative of the head of institution.

(2) Certain paid posting from day one was the second most commonly favoured aspect of the CIP, as 95% of the candidates opinioned in its favour. There is no exploitation at the hands of clerical staff and financial stability led to decreased incidence of depression. Before the implementation of CIP several trainees had to work unpaid indefinitely. There were many reasons attributed to these unpaid trainings but most common were mismanagement by the clerical staff, incompetence, corruption and inequality in training opportunities at different centers. Merit based training with financial security is a strong aspect of both the policy and the trainee’s output. There is no exploitation at the hands of clerical staff. Financial stability leading to psychological health and career satisfaction.

(3) Vacancies in primary health care centers were filled by young candidates aspirant to join post-graduation training. Inclusion of additional marks for the experience of working at primary basic health units was perceived as a great step benefiting population living in suburban areas. Better financial remuneration for jobs in hard areas acted as an external motivation as well. As said by a trainee: “residents of small towns and villages also deserve to be treated by qualified doctors”. However, when it was asked in quantitative study that experience of peripheral healthcare centres should be made compulsory then only 43% agreed.

Three commonest negative themes identified against CIP were; (1) issues with choice of specialty and place of work, (2) delay in start of training due to various factors, and (3) discrepancy in the policy for special cases like wedlock, foreign medical graduates and authenticity of research papers.6
a) Specialty of choice

Most common demerit perceived by the post graduate trainees was their inability to get primary specialty of their choice, while others had to compromise on center of training and/or supervisor. A few candidates were unlucky in all three aspects. One of the trainees mentioned: “you can be thrown to anywhere”.

Another said, “I am not happy, just did not want to waste time. So, whatever I got, I accepted it as a compulsion”. These factors can lead to dissatisfaction and psychological stress.1

b) Delay in training

Implementation of CIP has lead to delay in start of training due to various factors. Previously, graduates used to start their training immediately after completion of house job and passing the entrance exams. However, one of the trainee said: “I have waited for whole year after passing Part I examination”.

The candidates were of opinion that despite the improvement in health care provision in the Basic Health units, precious time is lost when the trainees are fresh with their knowledge bases and usually do not have a family to tend to. A gap of more than a year in a peripheral center away from the teaching environment can decay the learning aptitude.

These clauses have resulted in a number of potential candidates to indulge in private practices and lose interest in getting into the tedious training programs. Whereas, many female graduates prefer to get married and leave the medical profession, resulting in major loss in form of brain drain.

The reported rate of drop out among female graduates is high. In a country where female to male ratio in medical colleges is 70:30, if such a large number of lady doctors continue to quit the profession this might lead to collapse of health care system and wastage of government funds. To avoid this factor a number of graduates in order not to lose a year of their most productive time had chosen a different specialty with a lower merit which was not their specialty of choice. At least 3 of the participants of our study chose neurosurgery instead of Radiology, Medicine or Obstetrics and Gynaecology for the same reason.

Although most of the candidates are happy and satisfied on the addition of marks for experience of periphery but along with it they have opinion that the environment of periphery is non-teaching and non-technical. Resources are very limited and doctors feel helpless in most of the cases where they referred the patients to cities although they could manage the patient themselves if they had necessary drugs and instruments available.

One of the candidates explained his experience of BHU in a one-liner as, “after working in BHU we remember only three drugs Amoxil, PCM, and CPM (paracetamol and chlorphenaramine maleate)”.

Moreover, there is severe exploitation of doctors at the hand of paramedic staff, technicians, clerks, etc. who were working as doctors for quite a long period befouling the illiterate residents. One of the trainees said, “I have been disgraced in BHU the whole year”. Females find it difficult to work in periphery due to unsafe environment. One of female participants stated, “it is impossible to stay in towns and villages for years”.

c) Rigid specialty selection criteria

The system can be improved by making it more flexible by induction of candidates into the program initially and after a specified probation they may be allowed to choose the specialty of their choice. In this way it would be more candidate friendly and allow candidates to identify their needs and aptitudes. This would result in a cohort of dedicated, satisfied and self-motivated trainees with better outcome. However, few participants regarded this as a good aspect because before the implementation of CIP few residents had to opt other specialty after intermediate module (IMM) due to unavailability of slot in desired department.

d) Blanket selection lists

Another major concern about the validity of the system was lack of vacancy positions and training slots. Inadequate slot allocation with lack of proper merit list displayed with the names of the candidates and their merit was a point of distress among 18% candidates mostly who failed to get the specialty of their choice.

e) Ghost researches and malpractice issues

One of the major drawback of the policy is the marks of research publication. All 39 participants did express concern about the validity of the research papers. Participants were of opinion that most of the people pay for ghost articles for ghost authorships. CIP currently has no filter to identify authenticity of papers at the time of induction.5,6

Moreover, when asked the reasons for not performing quality research, participants enumerated various factors including institutional review boards and research concerned department’s user unfriendliness and lack of infrastructure. Publication process and criterion of majority journals is also very tedious.
these factors encourage people to opt for ghost publication rather than performing research (“rich people bought research and got inducted and we were left watching”).

f) Migration on selection
Migration is especially difficult for married lady doctors. 44.6% (n=13/22) participants had to travel from their hometowns to other cities for training either because of extra marks of preferring parent institute or higher merit in the hospitals of their hometown. There is no proper law of migration or mutual exchange. There is no proper wedlock rule to accommodate married couples in same city or same hospital. No extra privilege is provided to mothers to get training in the same city of family residence. A female trainee said, “it is not difficult for boys to migrate to other city but how can we leave our kids and in laws”

g) Same scoring system for different university systems
7 out of 39 participants were of opinion that foreign medical graduates were not being accommodated properly by this policy. Participants had mixed views regarding provision of equal opportunities of post-graduation to all public, private and foreign medical graduates.

7/39 of the participants think that foreign graduates are lagging behind due to marks of public institute and preference of home institution. One of the trainees said: “FMGs and private graduates are treated as outcast in CIP”. Another major concern was difference of marking system among different universities nationally as well as internationally. It was a general comment by all the public graduates that private graduates get higher marks in vivas as compared to public graduates. Theory examination of some foreign universities were of objective style e.g. multiple choice/ best choice Questions (MCQ/BCQ); graduates score even more than 90%.

There is also a difference of marking system among King Edward Medical University, University of Health Sciences & Fatima Jinnah Medical University. There is no standardized method of scoring across the board and different table of specifications, assessment tools and their markings exposed a fault in the CIP.

Based on the interviews, additional marks for distinctions were found objectionable since these candidates already had secured more marks and getting the benefit in the scoring system. With extra marks for distinction they get a double favour for the same criteria. Various foreign universities award distinction in sports & inclusion of such distinctions in CIP causes inequality and affects the overall merit of students.

The study has a few limitations. Authors could not identify cases where the CIP prevented someone from getting a training slot. The interviews carried out to determine the themes were mainly devised by interviews of the candidates who had succeeded in getting a training slot in the new system and were placed at the centres of excellence. However, the results were generalized by use of questionnaire which was sent openly to focused groups on Facebook, WhatsApp and Twitter; which included participants who might have been affected by the new system. A further exploratory study needs to be designed to focus issues and perceptions of candidates who failed to get selected in the new system. The study will add to the information concluded in our study and provide a holistic view of the system.

CONCLUSION
Central induction policy is perceived as a good intervention by the candidates currently inducted in various specialties in different teaching hospitals of the province. The study has identified some areas where improvement can be made to make the system of induction more robust and student friendly.

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REFERENCES
1. Chaudhry A. DAWN-The daily newspaper. New postgraduate induction policy to end medics intrusion. (2016, accessed 05 September, 2019). Available from: https://www.dawn.com/news/1255771/new-postgraduate-induction-policy-to-end-medics-intrusion
2. Sageer A, Rafat S, Agarwal P “Identification of Variables Affecting Employee Satisfaction and Their Impact on the Organization.” IOSR Journal of Business and Management 5 (2012): 32-9.
3. Khader Y, Al-Zoubi D, Amarin Z, Alkaflake A, Khasawneh M, Burgan S, et. al. Factors affecting medical students in formulating their specialty preferences in Jordan. BMC Med Educ. 2008 Dec 8;8(1):1-7.
4. Hudan N, Youssuf S. Career preference of final year medical students of Ziauddin Medical University. Educ Health (Abingdon). 2006 Nov 1;19(3):345-53.
5. Iqbal M. What ails medical research in Pakistan? Role of institutions. PJMS 2015 Nov;31(6):1287-8
6. Aslam F, Qayyum MA, Mahmud H, Qasim R, Haque IU. Attitudes and practices of postgraduate medical trainees towards research—a snapshot from Faisalabad. J Pak Med Assoc. 2004;54(10):534-7
7. Ozkan Ozay EA, Onsz MF, Isikli B, Metintas S. Participation of people living in rural areas of Eskisehir province in field researches, and factors affecting their rates of participation. North Clin Istanb. 2015;2(1):33-40.
8. Bouzenita AI, Bouloumar AW. Maslow’s hierarchy of needs: An Islamic critique. Intellectual Discourse. 2016 Jun 30; 24(1).
9. Carmeli A, Brueller D, Dutton JE. Learning behaviours in the workplace: The role of high-quality interpersonal relationships and psychological safety. Syst Res Behav Sci. 2009;26(1):81-98
10. Punjab Residency Program Manual, 2019. Pakistan, Punjab Information Technology Board. (2019, accessed September 06, 2019). Available from: https://prp.punjab.gov.pk/user_manual