

ORIGINAL ARTICLE

PREFERENCES OF DOCTORS FOR WORKING IN RURAL ISLAMABAD CAPITAL TERRITORY, PAKISTAN: A QUALITATIVE STUDY

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Background: Developing countries are faced with acute shortages of human resources in rural/remote areas. Decisions of human resources for health to work in rural areas are influenced by many financial and non-financial factors. This study focused on preferences of doctors for working in rural and resource constrained areas of Pakistan. **Methods:** The study was based on qualitative research techniques. Focus group discussions (FGDs) were conducted with final year medical students and house officers and In-depth Interviews (IDIs) with senior health managers of Islamabad Capital Territory (ICT). Results were analyzed using qualitative content analysis technique to present the findings. **Results:** The results showed that quality of facilities; career development, lack of incentives, quality of life, and lack of connectivity between rural and urban health facilities, transportation services and governance issues are some of the main factors identified by young doctors of ICT that contribute in their decision of choosing a certain job or not in rural areas. **Conclusion:** Study results show the in-depth detail of deciding factors for attracting and retaining health workforce in rural areas. These can be used for designing DCE (Discrete Choice Experiment) questionnaire to further analyze the preference incentive packages for attracting doctors to work in rural Islamabad.

Keywords: Human resource; Job Preferences; Rural Islamabad

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INTRODUCTION

An optimal health service for improving people's health is the prime objective of health systems¹ for which health workforce is an identified building block². World Health Report (WHO, 2006) estimated a global shortage of health workforce to be approximately 4.3 million³, particularly pronounced in 57 countries, Pakistan being one of them. Globally, about one-half of the population lives in rural areas but is served by less than 25% of the total doctor workforce.⁴ Within health care providers, doctors are considered key to effective supervision and management of health care services, particularly in rural areas.⁵ Unavailability of doctors is influenced by many factors like migration, motivation and incentives, often leading to delay in health care delivery, especially in rural areas. However, in order to better address these issues there is a need to investigate the nature and determinants of job choices that health workers make when opting for employment in rural and underserved areas.⁶⁻⁸

In Pakistan insufficient data on availability, distribution and trends in Human Resources for Health (HRH) has been a blockade to effectual HRH planning. Considering that 63% of Pakistani population resides in rural areas⁹, currently only 3.6% of the 8 doctors per 10,000 Pakistani population are working in rural settings¹⁰. Majority of the doctors choose to practice in urban settings as they are neither trained to work in a rural setup nor are given facilities and services to work there.¹¹ To improve this situation, different policies and incentive packages have been developed within

available health sector budget such as hard area allowance, pay for performance and performance-based allowances.¹² The utility of these interventions, however, needs to be tested for cadre specific preferences.

Discrete choice experiment (DCE) is an analytical method that can be used to quantify respondent's preferences for various attributes of a service or goods. In HRH planning and deployment, DCE is being increasingly used for assessing potential effectiveness of various strategies for attracting and retaining health work force for a particular setting.¹³ The information thus generated is helpful in understanding how health workers may respond to financial and non-financial incentives for practicing in situations such as rural health facilities, conflict areas and frail systems. DCE has been used by several countries to filter the most preferred attributes by health care workers for deciding to work or keep working in a rural area.¹⁴

A critical step for developing a DCE is identification of the preferred attributes for a specific cadre. In-depth information regarding existing policies, issues at grass root level and priorities of specified cadre need to be investigated. This exploratory process offers an insight to doctors' perception regarding rural jobs while also assisting in identifying key factors that doctors seek when deciding to opt for a rural job. To date, little evidence is documented about the preferences of doctors for working in rural areas of Pakistan, thus necessitating further exploration.

This paper is based on a qualitative exploration undertaken for development of a DCE questionnaire,

thus identifying factors (attributes) that freshly graduated doctors look for in a job. The information thus generated formed the basis of DCE survey designed to understand the comparative importance that doctors give to various attributes when deciding to work in rural areas of Islamabad Capital Territory, Pakistan.

MATERIAL AND METHODS

This study was conducted using qualitative research techniques of key informant interviews (KI) and focus group discussions (FGDs) in Islamabad Capital Territory (ICT) and was completed in two phases, i.e., HRH market analysis followed by identification of attributes and their levels for the design of DCE survey.

Islamabad is the capital of Pakistan with a population of over 2 million, 61.4% of which is rural.¹⁵ Health care services are provided by both the private and public sector hospitals. The public sector health facilities include 15 BHUs and 3 RHCs in ICT. Only 8% of the total doctors in ICT are working in its rural areas which has 66% of its population.¹⁰

There are five (5) medical colleges in Islamabad of which only one is in public sector. Rest of the institutes are private and have their own teaching hospitals.¹⁷ In this study only those Medical colleges were selected for this study from which at least one batch of doctors had graduated. Purposive sampling was done to select final year medical students and house officers. Data collection was done in two phases. In Phase-I key informant interviews were conducted with Director, General Health Pakistan, Senior Health Managers and Policy Makers. The interviews focused on interest among doctors for working in a rural health facility, existing policies for attracting and retaining doctors to work, attrition levels of doctors in public sector rural health facilities, reasons for leaving the job posting and to ascertain whether retention or attraction of doctors is a challenge for the public sector health services in rural areas of Islamabad Capital Territory (ICT). For Phase-II, based on KI interviews and literature review, Focus Group Discussions (FGDs) were designed. FGDs were conducted with groups of Final year medical students and house officers to determine priority job attributes desirable by doctors for working in rural areas. Each focused group consisted of an average seven (7) participants. FGDs were conducted until saturation was achieved. FGDs and KIs were then analyzed to determine priority six attributes for designing DCE survey. Selection is limited to six attributes only as evidence suggests that with options more than six, participants tend to focus only on the salary indicated for each job scenario presented in DCE questionnaires.¹⁸ Data of the study was analyzed using Qualitative Content Analysis technique. This technique is useful in assessing the point of view of an individual based on their experience and interpretation of a

situation.¹⁹ Complete transcripts were read several times to identify important factors for doctors when choosing a certain job in rural area. Transcripts were then compared with the most highly ranked attributes and priority attributes for DCE survey identified.

RESULTS

The results of the qualitative research information were used to outline the retention and attraction factors preferred for uptake of employment in rural areas. These were combined with a policy review to define various levels for each of the identified factors while ensuring that they are aligned with the existing health sector policy.

Table-1: Socio-demographic information of participants

Variables	n (%)
Gender	
Male	28 (50%)
Female	28 (50%)
Age	
22-23	9 (16.66%)
24-25	43 (76.66%)
26-27	4 (6.66%)
Domicile	
Punjab	37 (66.66%)
Federal	11 (20%)
KPK	8 (13.33%)
Marital Status	
Single	50 (90%)
Married	6 (10%)
No of children	0.00%
Lived in rural areas for more than 1yr since childhood	0.00%

Table-2: Attributes and levels

Quality of the Facility	Level 1: Basic (unreliable electricity, equipment; drugs/supplies not available; lack of supportive management) Level 2: Advanced (reliable electricity, equipment; drugs/supplies available and supportive management, ambulance availability)
Salary	Level 1: 10% of basic salary Level 2: 30% of basic salary, 15% annual increment Level 3: 50% of basic salary, 10% annual increment
Living Condition	Level 1: No housing facility Level 2: Housing and security allowance Level 3: Housing availability with basic amenities
Transportation	Level 1: Availability of transport Level 2: Transport allowances
Career Promotion	Level 1: Commitment for two years Level 2: Commitment for 3 years and then upgrading (e.g. From BPS 17 to 18) Level 3: Commitment for 5 years and then upgrading (e.g. From BPS 17 to 18)
Study Assistance	Level 1: No support Level 2: Partial Financial support (partial scholarship by government for further study after commitment is over) Level 3: Full Financial support (full scholarship by government for further study after commitment is over)

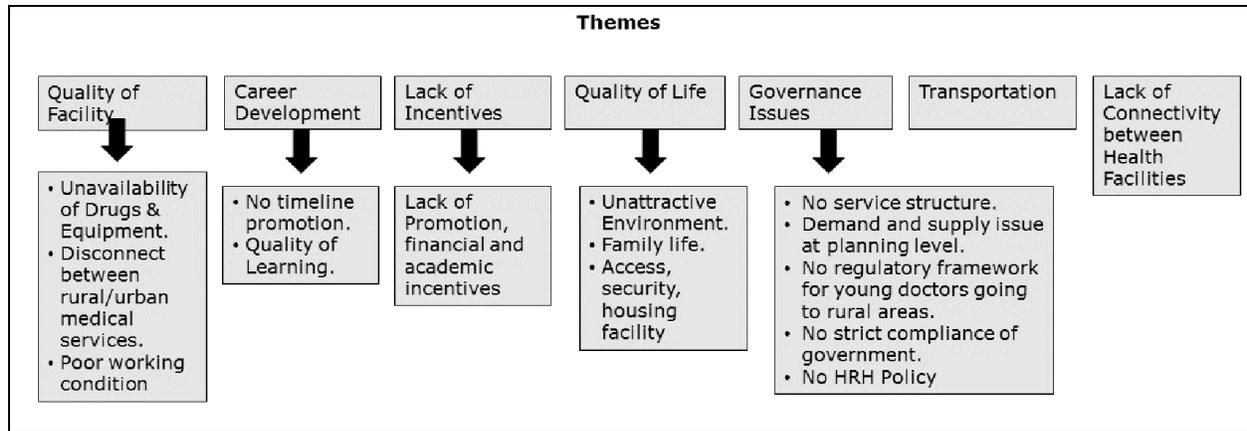


Figure-1: Identified themes from IDIs and FGDs

Three in-depth interviews and Eight FGDs were conducted. The socio demographic information of the participants in FGDs is summarized in the table below (Error! Reference source not found.). There was an equal ratio of male and female participants (50%) in FGDs, between the age range of 24–25 years, unmarried and having no experience of living or working in a rural area for more than 1 year since childhood.

Key emerging themes: Seven key factors were identified in the preliminary analysis of the data from IDIs and FGDs, which were: quality of facilities, career development and lack of incentives, quality of life, governance issues, and transportation.

The participants were of the view that poor quality of infrastructure at health facilities which includes poor working conditions and unavailability of drugs and equipment is one of the main factors that contribute towards the reluctance of doctors to work in rural settings. They said that there should be tools to treat and manage patients. Their unavailability gives the sense of unproductivity to doctors and leads to frustration. One of the participants said that;

Working environment should be congenial. If you are working you should feel that you are contributing towards something. If there is lack of availability of drugs and equipment you will get frustrated. [K11]

Career development was defined in terms of timeline promotions, capacity development and quality of learning. Participants valued these attributes for a prospective job and said that so far there is no service structure and incentive for promotion in rural jobs of ICT. Also, doctors in urban areas have better learning opportunities and means of career development and their unavailability was a limiting factor for doctors for taking up employment in rural areas. One of the participants said that;

I do not see anything attractive in terms of personal development or career development in a rural job... [IDI 2].... After spending on high fee structures of medical colleges, working in a rural area is like stepping down instead of stepping up in professional life... [FGD 1.6]

Financial, promotional and academic incentives act as major contributing factors for attracting and retaining doctors to work in rural areas. Participants reported that currently there are no such incentive packages in ICT and there's a need to allocate special budget for incentives at policy level and manage them properly. Also, the mechanism of reward if not working properly, demotivating the health providers. In such conditions the doctors who get attracted to rural jobs are not professionally oriented and cause issue in quality of work. One of the participants reported that;

Incentives are not just salary. There are incentives beyond salary. If a doctor is very regular and honest he should be called to urban area, or should be given a scholarship to study abroad or some kind of award from Director General Health [FGD 3]

Participants highlighted that quality of life in a particular area is important for deciding whether to work there or not. Housing facilities which include basic facilities like availability of electricity, water, wi-fi (internet connection) and a guard for security were considered prime factors in decision. However, easy access and pleasant external environment also contributes significantly for staying in a job. One of the participant said that;

Environment counts. At one place we are living in an AC room in a city and on the other hand we have a small BHU in a rural area, where there are no such advanced facilities and outside we can hear a cow mooing. Also the people who are coming to a doctor do not have the level of understanding that the patients in urban areas have. [FGD 6]

Participants reported that there is lack of service structure at grass root level. Firstly, the bureaucrats and decision makers are non-technical people and they are unaware of the ground realities due to different in terms of planning, budgeting and resource allocation. Secondly, there should be a strict compliance of rules and regulations at all levels. Participants said that there is lack of scientific match at planning level of students graduating and their placements. Also, there no accountability and proper mechanism for monitoring. One participant mentioned that;

Rules and regulations exist but they are not implemented. There are doctors who have been posted in rural areas and they are getting salaries for years but they do not go and sit there. [IDI3]

Lack of connectivity between urban and rural health facilities poses resistance in doctors to opt for rural jobs. They said that there should be some mechanism that connects the rural doctors with the urban ones. This includes advance referral system as well as mentorship and monitoring. Lack of connectivity not only results in high fatality and mortality rates but may also result in poor diagnosis without advanced equipment. Also, they feel isolated from the major chunk of urban doctors who are considered more groomed and knowledgeable. One participant reported that;

We can't compromise referral system. There are many issues either big or small that sometimes we are unable to understand and they need to be referred and for this connectivity is very important. Or maybe there should be someone in urban area that should supervise the rural doctor in terms of any complication. [FGD4.3]

With increasing transportation fares in Islamabad Capital Territory, distance of health facility from residence and availability of transport in the job package was considered important. Long distance travelling was also not favored by the participants. When participants were asked about the provision of transport in job package their response varied across the group. Majority of the doctors have their own transport so few favored transport allowance whereas, others said that transport should be provided. One participant said;

Either there should be a pick and drop service to the employees at health facilities or they should be given transport allowance in salaries [FGD1]

In the second level, further analysis was done on the frequency levels with which each factor was given priority over the other by each participant, and then deciding what could be the possible incentives within

each factor that can be given to the doctors. This analysis was done in two steps. 1) Identification of appropriate themes to be included in the DCE questionnaire as attributes and 2) Setting levels for each attribute.

Step 1: Identification of appropriate themes to be included in the DCE questionnaire as attributes based on the results of frequencies with which each theme was given importance in FGDs, literature review and key informant interviews with senior health manager, top six attributes that were pliable to policy change were identified. The identified attributes were 1) Quality of the facility, 2) Salary, 3) Living Condition, 4) Transportation, 5) Career Promotion 6) Study Assistance.

Step 2: Following the identification of the six attributes and the most striking factors for each, appropriate attribute levels were determined using KI interviews and literature of government policy documents. Additional levels were determined to signify reasonable advancement from the base level. These are given in the Table 2. Two to three levels were determined for each attribute.¹⁸

DISCUSSION

Shortage of doctors in rural areas is not just an issue of Islamabad but is common across Pakistan. The WHO policy guidelines on rural retention explain that decision makers have vast options available for policies. However, the appropriateness of these alternative policy options relies mainly on adapting these policies to country context.²⁰ It is recommended in these guidelines to carry out context focused analytical work so that the incentive packages are better calibrated and customized. It is evident from other studies that preferences of health workforce vary significantly across and within countries, depending on the characteristics of individuals of that cadre.²⁰ The results of this study provided an important insight into the priority attributes that can be used for the design of Discrete Choice Experiments on this issue, for the Pakistan context.

The study results showed that both attraction of doctors to work in rural areas as well as their retention is an issue in ICT. The key emerging themes that were identified through KI interviews and FGDs were related to quality of facilities, lack of connectivity between urban and rural health facilities, career development, and lack of incentives, quality of life, transport services and governance issues. Most of these themes are similar to other Qualitative DCE design studies in other developing countries.²¹⁻²³

These results in the light of literature review and recommendations of policy makers will

be helpful in designing a DCE survey with attributes closest to realities for implementation in policies.

The importance attached to Quality of facilities was found similar to that reported in studies from India²⁴ Laos²⁵, Uganda²⁶; where health facility infrastructure is greatly valued by doctors, especially new graduates, who are often disappointed by the gap that exists between tertiary hospital environment where they have been trained and the unavailability of equipment, drug and supplies in rural health facilities²⁵.

Connectivity in terms of efficient referral system as well as rural urban connectivity of doctors for mentoring was found to be minimal in Islamabad. Mæstad and Mwisongo say that lack of these two elements leads to frustration in doctors. Importance of career promotion and financial as well as non-financial incentives was evident in this study. WHO has also recommended in its policy for improving retention of health workforce that in order to support retention, government should design professional development programs and continuing education that meet the needs of the desired cadre.²⁰

Quality of life in rural areas is also different from the city life. Poor accommodation facilities and external environment, Long distance travelling and lack of transportation in the job package were also cited impediment in this study.

According to Thomas L. Hall ineffective planning of governance in terms of poor functional distribution, lack of properly managed budget allocation and unavailability of data of ground realities and ineffective communication channels to decision makers' compromises the ability of the management to succeed.²⁸

The priority list of attributes that were identified are in line with the WHO identified list of incentives²⁰ as well as other studies on DCE like in Vietnam²⁹, Uganda²⁶ and Cameroon³⁰ where these attributes were given priority by medical students and fresh doctors which signifies that these attributes specifically represent priorities of fresh graduates and upcoming fresh doctors whose prime concern is good salary and career development³¹.

However, factors like schooling of children which also came out to be an important attribute in some studies²⁵ was ignored in our study mainly because majority of our participants were unmarried. This unique study used the information from key informant interviews and focused group discussions to refine the language of attributes and their levels to make it meaningful to the DCE survey participants.

CONCLUSION

This study using qualitative research methods identified the priority attributes of the targeted population (fresh doctors) for the development of relevant DCE questionnaire. However, the stated preferences method used, even if it allowed us to determine the relative strengths of the different attributes explored, cannot fully anticipate the decisions eventually made by participants in real life situations.

Competing Interests: The authors declare that they have no competing interests.

AUTHORS' CONTRIBUTION

SAR carried out the study (study design, literature review, data collection, analysis, manuscript writing). MS contributed in supervising the study, manuscript editing and review. IK was involved in editing and review of the manuscript. HJ was involved in review of the manuscript. All authors read and approved the final manuscript.

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REFERENCES

1. Chisholm DB, Evans D. Improving health system efficiency as a means of moving towards universal coverage. 2010. Available from: <http://www.who.int/healthsystems/topics/financing/healthreport/28UCefficiency.pdf>
2. The WHO Health Systems Framework [Internet]. WHO Western Pacific Region. 2016. Available from: http://www.wpro.who.int/health_services/health_systems_framework/en/
3. Working Together for Health. Who.int. 2006. Available from: http://www.who.int/whr/2006/whr06_en.pdf?ua=1
4. WHO. Health systems [Internet]. [cited 2016 Mar 22]. Available from: http://www.who.int/topics/health_systems/en/
5. Lehmann U, Dieleman M, Martineau T. Staffing remote rural areas in middle- and low-income countries: A literature review of attraction and retention. BMC Health Services Research. 2008;8(1).
6. Crisp N, Chen L. Global Supply of Health Professionals. N Engl J Med 2014;370(10):950–7.
7. Purohit B, Bandyopadhyay T. Beyond job security and money: driving factors of motivation for government doctors in India. Hum Resour Health 2014;12(1):12.
8. Qayum M, Haider SH, Mehmood HM. Motivating employees through incentives: productive or a counterproductive strategy. J Pak Med Assoc 2014;64(5):567–70.
9. WHO. HRH Country Web Profiles [Internet]. [cited 2015 Mar 22]. Available from: <http://www.who.int/workforcealliance/countries/countryprofiles/en/>

10. Jensen N. The Health Worker Crisis: an analysis of the issues and main international responses. 1st ed. 2013. Available from: <https://www.healthpovertyaction.org/wp-content/uploads/downloads/2013/11/Health-worker-crisis-web.pdf>
11. NHEPRN. Mapping of Government resources (Health care facilities, Human resources and other's) [Internet]. [cited 2015 Mar 25]. 2013. Available from: <http://www.nheprn.gov.pk/gop/index.php?q=aHR0cDovLzE5Mi4xNjguNzAuMTM2L25oZXBybi8uL2ZyURldGFpbHMuYXNweD9veHQ9bWlzY2xpbmtzJmlkPTI4>
12. De Bekker-Grob E, Ryan M, Gerard K. Discrete choice experiments in health economics: a review of the literature. *Health Econ* 2010;21(2):145–72.
13. Kolstad JR. How to make rural jobs more attractive to health workers. Findings from a discrete choice experiment in Tanzania. *Health Econ* 2011;20(2):196–211.
14. Rao K. How to attract health workers to rural areas? Findings from a Discrete Choice Experiment in India. *Bio Med Central Ltd* 2012;6(Suppl 5):1–2.
15. Daily Times. Rapid urbanization: rural areas population decreases to 60.1%. [Internet]. 2016;. Available from: <http://dailytimes.com.pk/islamabad/27-Jun-16/rapid-urbanisation-rural-areas-population-decreases-to-601>
16. Islamabad Health Facilities Map | Alhasan Systems (Private) Limited. Alhasan.com. 2013. Available from: <http://www.alhasan.com/maps/islamabad-health-facilities-map>
17. PMDC. The Statutory Regulatory and Regulation Authority for Medical and Dental Education and Practitioners for Pakistan. Recognized Medical Colleges In Pakistan [Internet]. 2015 [cited 2015 Mar 25]. Available from: <http://www.pmdc.org.pk/AboutUs/RecognizedMedicalDentalColleges/tabid/109/Default.aspx>
18. Jaskiewicz W, Deussom R, Wurts L, Mgomella G. Rapid Retention Survey Toolkit: Designing Evidence-Based Incentives for Health Workers | CapacityPlus [Internet]. Capacityplus.org. 2014. Available from: <http://www.capacityplus.org/rapid-retention-survey-toolkit>
19. Hamid S, Johansson E, Rubenson B. "Who am I? Where am I?" Experiences of married young women in a slum in Islamabad, Pakistan. *BMC Public Health* 2009;9(1):265.
20. Increasing access to health workers in remote and rural areas through improved retention [Internet]. 1st ed. World Health Organization; 2010 [cited 20 September 2016]. Available from: http://www.searo.who.int/nepal/mediacentre/2010_increasing_access_to_health_workers_in_remote_and_rural_areas.pdf
21. Kruk ME, Johnson JC, Gyakobo M, Agyei-Baffour P, Asabir K, Kotha SR, *et al.* Rural practice preferences among medical students in Ghana: a discrete choice experiment. *Bull World Health Organ* 2010;88(5):333–41.
22. Vujicic M, Witter S, Shengelia B, Alfano M. Attracting doctors and medical students to rural vietnam: Insights from a Discrete Choice Experiment. HNP Paper 2015.
23. Witter S, Thi Thu Ha B, Shengalia B, Vujicic M. Understanding the 'four directions of travel': qualitative research into the factors affecting recruitment and retention of doctors in rural Vietnam. *Hum Resour Health* 2011;9(1):20.
24. Purohit B, Bandyopadhyay T. Beyond job security and money: driving factors of motivation for government doctors in India. *Hum Resour Health* 2014;12:12.
25. Rockers PC, Jaskiewicz W, Kruk ME, Phathamavong O, Vangkonevilay P, Paphassarang C, *et al.* Differences in preferences for rural job postings between nursing students and practicing nurses: evidence from a discrete choice experiment in Lao People's Democratic Republic. *Hum Resour Health* 2013;11:22.
26. Rockers PC, Jaskiewicz W, Wurts L, Kruk ME, Mgomella GS, Ntalazi F, *et al.* Preferences for working in rural clinics among trainee health professionals in Uganda: a discrete choice experiment. *BMC Health Serv Res* 2012;12(1):212.
27. Mæstad O, Mwisongo A. Informal payments and the quality of health care: Mechanisms revealed by Tanzanian health workers. *Health Policy* 2011;99(2):107–15.
28. Hall T. Why Plan Human Resources for Health? [Internet]. 2000. Available from: http://www.who.int/hrh/en/HRDJ_2_2_01.pdf
29. Vujicic M, Witter S, Shengelia B, Alfano M. Attracting doctors and medical students to rural vietnam: Insights from a Discrete Choice Experiment. HNP Paper 2015.
30. Campbell N, McAllister L, Eley D. The influence of motivation in recruitment and retention of rural and remote allied health professionals: a literature review. *Rural Remote Health* 2012;12:1900.
31. Kwansah J, Dzodzomenyo M, Mutumba M, Asabir K, Koomson E, Gyakobo M *et al.* Policy talk: incentives for rural service among nurses in Ghana. *Health Policy and Planning*. 2012;27(8):669-676. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22349086>

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