## Title: Why are health workers not going to rural areas? : A systematic review of the qualitative and quantitative studies.

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**Background:** Universal health coverage in India is precluded by the unavailability of human resources for health (HRH) in the largely populated rural and remote areas. The issue has generated national-level political attention with often abrupt policy changes, showing limited impact. Actively incorporating preferences and attributes of HRH into deployment and retention policies is crucial. We report a systematic synthesis of qualitative and quantitative studies looking at factors responsible for rural HRH shortage in India from a larger scoping review that we conducted.

**Methods:** Systematic data searches were conducted using comparable and validated search phrases in Pubmed, Google Scholar, and Cochrane Library between September 2018 and March 2019. Articles were screened at title, abstract and full-text levels for relevance for inclusion by two independent investigators as per PRISMA guidelines. References of relevant articles were also screened for inclusion. Studies looking at qualitative and/or quantitative analysis of determinants/preferences of HRH for deployment and retention in rural India were included. Reviews and perspectives, articles without full-text, and those without full-text and those published in languages other than English were excluded.

**Results:** From the initial pool of 2809 entries, ten qualitative, seven quantitative, and one mixed-methods studies were included. The factors affecting rural HRH retention were largely similar across these studies. The primary motivating factors were monetary incentives (9 studies), posting in good areas with housing and education for children (7

studies), professional advancement (6 studies), opportunities for higher education (4 studies), and professional recognition (3 studies). As a corollary, lack of incentives, inadequate facilities, and low professional growth were the main demotivating factors. Factors identified specifically in qualitative studies included personal safety and job security. In quantitative studies, advancing age and experience were associated with increased job satisfaction.

**Significance:** India is unable to improve rural HRH retention in spite of multiple policy changes in the last two decades. Understanding the causes of the apprehension of rural service is important. Instead of dispersed bureaucratic attempts, rural service should be curated for the professional, personal, and holistic growth of the candidate. With this review, we aim to bring forth these factors systematically.

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