Assessing the impact of intensive programme utilisation on HIV and sexually transmitted infection prevalence among a high-risk population in urban settings of Karnataka: evidence from three cross-sectional surveys, 2005–12

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Abstract

Background We evaluate the impact since 2003 of the Bill & Melinda Gates Foundation's Indian AIDS initiative, Avahan, in four districts of Karnataka, south India. The programme involved comprehensive outreach, clinical care, and other services to reduce the risk of HIV and other sexually transmitted infections (STIs) among high-risk women and men by promoting behavioural changes. Though there were reviews of the programme performance through periodic cross-sectional surveys, the actual impact of the programme could not be assessed in the absence of a suitable control group.

Methods Using three rounds of biobehavioural assessment data gathered between 2005 and 2012 in four districts of Karnataka, south India, we used the propensity score matching (PSM) method to demonstrate the true effect of different components of programme exposure on HIV/STI prevalence and consistent condom use with different sexual partners. This method creates a contrafactual group of control individuals who were not exposed to the programme intensively and compares the outcome measures with each respective case that was intensively exposed to the programme. Principal component analysis was used to generate a composite indicator of intensity of programme exposure.

Findings Of the 7071 study individuals, 6364 (90%) received any services from the programme; however, only 4455 (63%) utilised the programme intensively. The PSM analysis indicated that intensive programme utilisation could account for an 18, 11, and 5 percentage point increase in self-efficacy in condom use with clients (p<0·0001), regular partners (p=0·023), and with all partners (p=0·035), respectively, compared with programme utilisation that was not intensive. There was a reduction of 2% (95% CI 1.02–2.34) to 5% (4.86–5.93) prevalence in STIs and about 2% (0.96–2.74) in prevalence of HIV among those who utilised the programme intensively.

Interpretation PSM has methodologically gained importance in programme evaluation studies. Findings clearly conclude that programme utilisation could bring effective behavioural change; nevertheless, emphasis should also be placed on intensity of programme utilisation.

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