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Like a mother-daughter relationship: community health intermediaries' knowledge of and attitudes to abortion in Karnataka, India

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1 *“Like a mother-daughter relationship”*: *Community Health Intermediaries’ knowledge*
2 *of and attitudes to abortion in Karnataka, India*

3 **1. Abstract**

4 Community Health Intermediaries (CHIs)- ANMs, ASHAs, and pharmacists- are key to
5 realising task-sharing efforts to increase abortion access in LMICs, but their knowledge of
6 and attitudes to abortion remains underexplored. Evidence on abortion task-sharing has
7 focused primarily on CHIs’ technical and clinical abilities, overlooking social contexts and
8 norms that influence attitudes and behaviours.

9
10 This mixed-methods study describes the abortion knowledge, attitudes, and roles of three
11 cadres of CHIs in rural districts of Karnataka, India. Quantitative data on CHIs’ abortion
12 attitudes (n=118) were collected using the Stigmatising Attitudes, Behaviours, and Actions
13 Scale (SABAS), followed by in-depth interviews (n=21) with a subset of the population over
14 eight months in 2017.

15
16 Findings show that CHIs, present at multiple points in women’s abortion trajectories, serve as
17 barriers or facilitate access to abortion care. Their abortion attitudes reflect social contexts
18 and environments, drawing on social norms surrounding fertility, woman- and mother-hood.
19 They demonstrate poor knowledge of abortion laws, conflating them with sex-selection laws.
20 CHIs also reflect poor knowledge of abortion methods. They report little to no training on
21 abortion. CHIs contend with entrenched social and structural inequalities in carrying out their
22 tasks, affecting the kind and quality of care they are able to provide. Understanding CHIs’
23 experiences, knowledge and attitudes can advance abortion care-provision, support task-
24 sharing efforts, and potentially improve the quality of women’s abortion-seeking experiences.

25 **Keywords:** India; abortion; abortion attitudes; abortion stigma; community health
26 intermediaries; task-sharing; community health workers

27 **2. Introduction**

28 In India, despite legalisation of abortion under the Medical Termination of Pregnancy (MTP)
29 Act (GoI, 1971), access to quality abortion care remains difficult. In 2015, of 15.6 million
30 abortions, only 22% (3.4 million) took place in registered health facilities. 11.5 million
31 medical abortions (use of pharmacological drugs to terminate a pregnancy, MA) occurred
32 outside health facilities (Singh et al., 2018b).

33

34 Abortion provision is restricted to trained and registered doctors in authorised clinics.
35 Primary Health Centres (PHCs) can provide medical abortion up to eight weeks of gestation
36 (GoI 2003). The paucity of trained/available providers, coupled with legal restrictions,
37 contribute to delays. Rural areas, where 68% of India's population reside, are particularly
38 affected. Studies show that MA provision through PHCs are rare, affected by lack of (trained)
39 providers and poor availability of medication (Singh et al., 2018a).

40

41 Prevailing social norms surrounding fertility, reproduction, and woman- or mother-hood
42 exacerbate barriers to care. Abortion stigma (Kumar et al., 2009), underpinned by these
43 norms, influences care-seeking behaviours. Lack of knowledge about abortion and legality
44 and misinformation about sex-selection (Guttmacher Institute, 2018), act as additional
45 barriers.

46

47 The Pre-Conception and Pre-Natal Diagnostic Act (PCPNDT, 1994), addresses imbalanced
48 sex ratios associated with son preference by prohibiting misuse of diagnostic techniques for
49 sex-determination. Widespread campaigns led to high awareness of the PCPNDT, but

50 knowledge of the MTP Act remains low. Evidence suggests that abortion is equated with sex-
51 determination and the PCPNDT, considering *all* abortions (whether sex-selective or not)
52 illegal. Unless a clear distinction can be made between the abortion and sex-selective
53 abortion, women may continue to assume that all abortion is illegal (Gandhi, 2014)

54

55 Abortion-related care is a continuum which includes access to and provision of accurate
56 abortion-related information (including legality, methods, availability, eligibility, and
57 sources), pregnancy testing and confirmation, service provision including appropriate
58 abortion options, referrals, emotional support, and post-abortion care (Coast et al., 2018).

59 Recent evidence (Puri et al., 2015) suggests that Community Health Intermediaries (CHIs)
60 can and do play a role in abortion care-provision, performing different tasks at different
61 points in women's trajectories.

62

63 WHO (2015) recommends expanding abortion-related roles of Auxiliary Nurse Midwives
64 (ANMs), pharmacists and some lay health workers (e.g. Accredited Social Health Activists
65 (ASHAs)), potentially making information and services more accessible for women in rural
66 areas or vulnerable groups (e.g. adolescents or unmarried women) (Renner et al., 2013). The
67 recommendations differentiate between CHI cadres.

68

69 Current research and programming on abortion task-sharing has focused primarily on
70 technical and clinical abilities of CHIs (Dawson 2014), overlooking the influence of social
71 contexts, conditions, and norms on attitudes and behaviours in healthcare provision (Frymus
72 et al., 2013). CHIs are trusted sources of information, services and support (Mishra, 2014),
73 but they also exist within health system and community hierarchies. CHIs can potentially
74 increase abortion access (Puri et al., 2015), but their relative lack of power within hierarchies

75 or the influence of social norms and beliefs may limit their impact. At present, there is little
76 evidence exploring these factors in abortion care.

77

78 This mixed-methods study describes the abortion knowledge, attitudes, and roles of three
79 cadres of lay CHIs – ANMs, ASHAs, and pharmacists/pharmacy workers- in rural districts of
80 Karnataka, India. It explores how abortion attitudes reflect social contexts and environments,
81 highlighting how CHIs serve as barriers or facilitate access to abortion care. Understanding
82 CHIs’ knowledge and attitudes can advance abortion care-provision, support task-sharing
83 efforts, and potentially improve the quality of women’s abortion seeking experiences.

84 **3. Background**

85 In India, frontline health workers such as ASHAs and ANMs are important for delivery of
86 sexual and reproductive health (SRH) services (e.g.: contraception advice and access,
87 administering pregnancy tests and accompanying women to clinics for antenatal care or
88 institutional delivery) (Scott et al., 2019). Viewing them as “change agents”, interventions
89 capitalise on their relationships with their communities and contexts to increase access to
90 services and knowledge (Scott and Shanker, 2010).

91

92 Globally, health systems utilise different cadres of frontline workers for different roles (Kok
93 et al., 2017). In this article, the term “Community Health Intermediaries” (CHIs) refers to
94 ASHAs, ANMs, and pharmacists/pharmacy workers. WHO (2015) recommendations on
95 expansion of roles in abortion include ANMs, pharmacists, pharmacy workers and lay health
96 workers such as ASHAs. Pharmacists/pharmacy workers are not traditionally included as
97 frontline workers, but as women increasingly turn to pharmacists for medical abortion
98 (Sowmini, 2013), they take on a more prominent role in care-provision.

99

100 SRH services in India are available through public and private health sectors. ASHAs and
 101 ANMs function primarily within the public sector, while pharmacists are key personnel in
 102 public sector PHCs, but also work in chemist shops that provide services. The three cadres
 103 require different qualifications and training periods (Table 1).

104

105 **Table 1:** *CHI cadre by sector, qualification, location, and payment structure*

Cadre	Sector	Minimum qualification/training	Location	Payment structures
ASHA	Public	Literate, preference for those who have at least ten years of formal schooling. Attend a 23-day course, meant to receive continuous training during their tenure.	Village	Performance-based incentives
ANM	Public	Two-year course with six-month internship. Possesses basic nursing skills and some midwifery training, but not a fully qualified midwife.	PHC Sub-centre	Salaried
Pharmacist	Public	Bachelor in Pharmacy (three/four-year course, depending on previous qualifications)	PHC or Community Health Centre (CHC)	Salaried
Pharmacist	Private	Bachelor in Pharmacy (three/four-year course, depending on previous qualifications)	Village, Block or District headquarters	Salaried
Pharmacy worker	(Tends to be private)	No direct Indian equivalent, but may have some relevant qualifications/apprenticeship training. In this paper, they are understood as assistants or other staff employed by pharmacies who dispense medicine but do not hold qualifications	Village, Block or District headquarters	Unknown, but likely salaried, perhaps performance-based.

106 Adapted from Ipas Development Foundation (2017) and Crigler et al. (2014).

107

108 In 2005, the National Rural Health Mission (NRHM) created a new cadre of female health
 109 workers: ASHAs (NRHM, 2015). ASHAs are ever-married women between 25-45 years and
 110 have at least one child. Deliberately conceptualised as married women, NRHM capitalises on
 111 local customs of women leaving their natal homes upon marriage and “belonging” to their
 112 marital homes and villages. Married women are given leave to speak of matters pertaining to

113 sex, otherwise taboo outside the sanctioned space of marriage. ANMs supervise ASHAs,
114 provide basic medical care and keep health records and registers.
115
116 ASHAs tend to have low educational qualifications and face severe disadvantages relating to
117 gender, class, caste, and other power hierarchies in the health system and in their
118 communities. These power differentials may affect their roles and actions, especially when
119 handling “sensitive” issues like abortion or interacting with authority figures (Schaaf et al.,
120 2018).
121
122 PHCs are required to staff qualified pharmacists. Private pharmacies or chemists are
123 embedded in village life; often the first port-of-call for minor ailments. Private pharmacies,
124 by law, must staff registered pharmacists but these rules are not largely followed (Basak et
125 al., 2009) and medication is routinely dispensed by unqualified personnel (Boler et al., 2009).
126 There is no exact equivalent for “pharmacy workers” in India but assistants or other staff
127 employed by pharmacies routinely dispense medicine. Given that women seeking abortion
128 care are unlikely to distinguish between types of pharmacy workers or their qualifications
129 (Stillman et al., 2014), I analyse data on pharmacists and pharmacy workers collectively.
130
131 Abortion access in India is situated within broader contexts of family planning and SRH
132 programmes which have historically focused on promotion of permanent methods through
133 incentives and, sometimes, coercion (Unnithan, 2019). ASHAs and ANMs’ tasks include
134 encouraging contraceptive uptake (Ahmad et al., 2012) and sterilisation to meet programme
135 targets (Scott and Shanker, 2010). ASHAs, incentivised for institutional deliveries,
136 contraceptive uptake and meeting sterilisation targets, are not similarly compensated for
137 abortion-related care (Dasgupta et al., 2017).

138

139 Availability of reproductive technologies allows sex-determination tests which have been
140 used to selectively abort female foetuses. These tests can only be conducted in the second
141 trimester, and estimates show that only a small percentage of all later-term abortions are due
142 to sex-selection (Stillman et al., 2014). Despite this, sex selection has a significant impact on
143 abortion access as providers may refuse care provision fearing sex-selection (Potdar et al.,
144 2015).

145

146 Government-run training programmes for ANMs and ASHAs include abortion laws,
147 confidential counselling and post-abortion care (Jejeebhoy et al., 2011), but delivery is
148 inconsistent and knowledge gaps remain. These programmes are less-established than family
149 planning or maternal and child health programmes. In one study, ASHAs trained to facilitate
150 access to safe abortion, felt restricted by competing programme pressures (Gupta et al.,
151 2017).

152

153 Women or their partners/relatives interact with CHIs at different points in their care-seeking
154 trajectories- pregnancy confirmation, information provision including referrals (Coast and
155 Murray, 2014), procuring medical abortion pills (Kalyanvala et al., 2010), emotional support
156 (Ganatra et al., 2010) and in post-abortion care-provision (Gupta et al., 2017). Das et al
157 (2012) find that prevailing contextual norms, histories and priorities influence or constrain
158 CHI behaviour in care-provision. Yet, literature on CHI attitudes to and knowledge of
159 abortion, and impact on quality of care in low and middle-income countries remains scant
160 (Holcombe et al., 2018).

161 **4. Study site and research methods**

162 Data were collected in villages of Bagalkot and Belgaum districts in Karnataka, India over
163 eight months in 2017. Instruments, recruitment strategies, and data analysis were tested
164 before data collection. Ethics approval was granted by the LSE research ethics committee in
165 UK and the KLE Academy of Higher Education and Research in India.

166 ***4.1 Instruments and data collection***

167 I used a mixed-methods nested design (quantitative survey followed by in-depth interviews
168 with a sub-sample of respondents) to explore CHIs' attitudes and explanations of roles in and
169 knowledge of abortion. Combining qualitative and quantitative methods allows greater
170 understanding of member experiences (Wardale et al., 2015).

171

172 Quantitative data were collected through a pre-tested, validated 18-item Likert questionnaire
173 (n=118)- the Stigmatising Attitudes, Behaviours, and Actions Scale (SABAS); designed for
174 use in multiple contexts (Ipas, 2015). It has three sub-scales: negative stereotypes about
175 people associated with abortion, discrimination of women who have abortions, and fear of
176 contagion from coming in contact with a woman who has had an abortion. There are no
177 predetermined thresholds for what determines stigmatising attitudes (Shellenberg et al.,
178 2014). Questionnaire face-validity was conducted with researchers and medical professionals
179 (n=6), supported by cognitive testing (n=7) to ascertain robustness and applicability (Collins,
180 2003).

181

182 Instruments were translated into Kannada and Hindi. I, supported by a trained research
183 assistant (GM), collected data. GM possesses previous research experience in the field sites.
184 Before fieldwork, GM was trained on protocols and instruments & tested during the pilot
185 study. ANMs and pharmacists self-administered the questionnaire. Majority of ASHAs

186 (n=30) preferred to have the statement read out by X1 or X2, simultaneously marking their
187 response on the sheet. It took approximately 10 minutes.

188

189 Qualitative data were collected through in-depth interviews (n=21). Topic guide was based
190 on the literature and integrated elements from SABAS, covering knowledge and perceptions
191 of abortion, experiences with abortion-related care-provision and attitudes to abortion.

192 Interviews were conducted in a quiet room by GM and I. Interviews lasted approximately 60
193 minutes and were audio recorded. I wrote fieldnotes, reviewing them with GM at the end of
194 interviews.

195 ***4.2 Participant recruitment***

196 The study does not aim to generalise about CHIs' abortion attitudes or actions, but to
197 understand explanations and identify the mechanisms by which they are enacted. Thus,
198 purposive snowball sampling was used to capture respondents with different backgrounds
199 and experiences.

200

201 Using the 2011 population census, I identified the most populous *talukas* (sub-districts),
202 which have a greater number of PHCs and, consequentially, CHIs. I worked with PHCs in
203 Belgaum (n=12) and Bagalkot (n=8), selecting them based on size of population served.

204 Access was established through the KLE Academy of Higher Education and Research.

205

206 CHIs attend a monthly meeting with PHC staff. At every meeting during data collection,
207 interested and available CHIs were invited to participate. Private pharmacists were identified
208 through PHC pharmacists and administrators. There were three refusals or no responses.

209 CHIs who had previous, direct contact with GM were ineligible. Written informed consent
210 was obtained from all participants.

211
 212 Respondents were asked about follow-up interview participation (one refusal, an ANM)
 213 during questionnaire consent procedures. Questionnaires (n=118) with missing responses
 214 were excluded (n=5 ANMs, 1 ASHA). Thus, there are 112 eligible responses. Respondents
 215 were categorised by cadre and SABAS score distribution (i.e. high, medium, low) to gain
 216 insight across cadres and score ranges and select respondents for interview. There were no
 217 refusals. Written informed consent was obtained again. No incentives were offered for
 218 participation. Interviewees received a small non-monetary token.

219 **4.3 Sample characteristics**

220 Recruitment strategy yielded a heterogeneous sample of providers of different ages and
 221 educational backgrounds (Table 2).

222
 223 Sample characteristics highlight the gendered nature of CHIs- 74% of my sample are women.
 224 ASHAs in my sample, similar to the literature, reflect the lowest educational qualifications.
 225 Pharmacists in my sample were also gendered, with more men (76%) in both public and
 226 private sectors than women.

227
 228 *Table 2: Sample characteristics (total n=112)*

	ASHA (n=39) N(%)	ANM (n=35) N(%)	Pharmacists* (n=38) N(%)		Interviews (n=21)
			Public (n=16)	Private (n=22)	
Belgaum	19(49%)	19(54%)	11(69%)	9(41%)	11(52%)
Bagalkot	20(51%)	16(46%)	5(31%)	9(41%)	10(48%)
Sex					
Female	39(100%)	35(100%)	7 (44%)	2(9%)	13(62%)
Male	n/a	n/a	9(56%)	20(91%)	8(38%)
Age					
23-35	7(18%)	4(11%)	3(19%)	6(27%50)	5(24%)
36-45	13(33%)	11(31%)	4(25%)	9(41%)	10(48%)
46-55	16(41%)	17(49%)	5(31%)	2(9%)	4(19%)
56-65	3(8%)	3(8.5%)	4(25%)	5(23%)	2(10%)

Qualifications					
<i>Year 10 Leaving certificate</i>	39(100%)	1(3 %)			8(38%)
<i>ANM Training Diploma</i>		34(97%)			5(24%)
<i>Diploma in Pharmacy</i>			16(100%)	8(36%)	5(24%)
<i>Other university degree</i>				13(59%)	3(14%)

229

230 **4.4 Data analysis**

231 Quantitative data were analysed using SPSS v.21.0 (IBM Corp., 2012). After initial analysis,
 232 I excluded the sub-scale “fear of contagion” as this measurement’s culturally specific
 233 connotations are not conceptually applicable to the Indian context (Holcombe et al., 2018).
 234 Reliability was not affected, Cronbach’s alpha (two sub-scales) was $\alpha=0.880$, showing good
 235 internal reliability overall. Cronbach’s alpha of 0.7 or higher shows good internal consistency
 236 and reliability (Bland and Altman, 1997). The modified questionnaire design may pose
 237 measurement error concerns (Holcombe et al., 2018) but, supported by qualitative interviews
 238 still provides valid insights into CHIs’ attitudes and beliefs.

239

240 Interviews were translated and transcribed verbatim by the author and a professional
 241 translator, checked for data quality, anonymised and assigned pseudonyms. Eight transcripts
 242 were back-translated for accuracy by a second professional translator. Transcripts were
 243 analysed using hybrid thematic analysis (Fereday et al., 2006) in NVivo 12 (2018). The
 244 skeleton codebook drew from Coast et al (2018)’s conceptual framework. I reviewed
 245 transcripts for familiarity, writing detailed memos on emerging themes and categorised them
 246 under existing codes or created new ones. I reviewed transcripts again to consolidate codes.
 247 Mixed-methods analysis included a side-by-side comparison of qualitative and quantitative
 248 findings to understand how qualitative data illuminates or explains quantitative findings

249 (Ivankova et al., 2006). Data were validated using triangulation and engaging in critical
250 reflexivity during data collection, analysis, and writing (Noble and Smith, 2015).

251
252 **4.5. Reflexivity**

253 Understanding the researcher as instrument (Pezalla et al., 2012), I take a reflexive approach
254 to data collection and analysis. GM and I are both unmarried Indian women fluent in the
255 study languages. GM is local to one of the districts, but participants clearly coded me as
256 “urban” and “foreign” due to my university affiliation. Working together, our dual positions
257 may have affected participant perceptions and responses. Our marital status may have
258 influenced responses, given respectability norms around sexuality and related matters.
259 Accounting for this during analysis, I paid special attention to the questions we asked and
260 how we asked them, as well as my own positions on abortion and abortion care-provision

261
262 **4.6. Limitations**

263 I present CHIs’ attitudes to and knowledge about abortion, as well as their experiences in
264 care-provision. These data are rich and present insights into how their practices may play a
265 role in or influence women’s care-seeking, but they do not represent women’s experiences.
266 My assumptions about its likely impact is supported by evidence from other studies (Coast
267 and Murray, 2016).

268
269 **5. Results and Discussion**

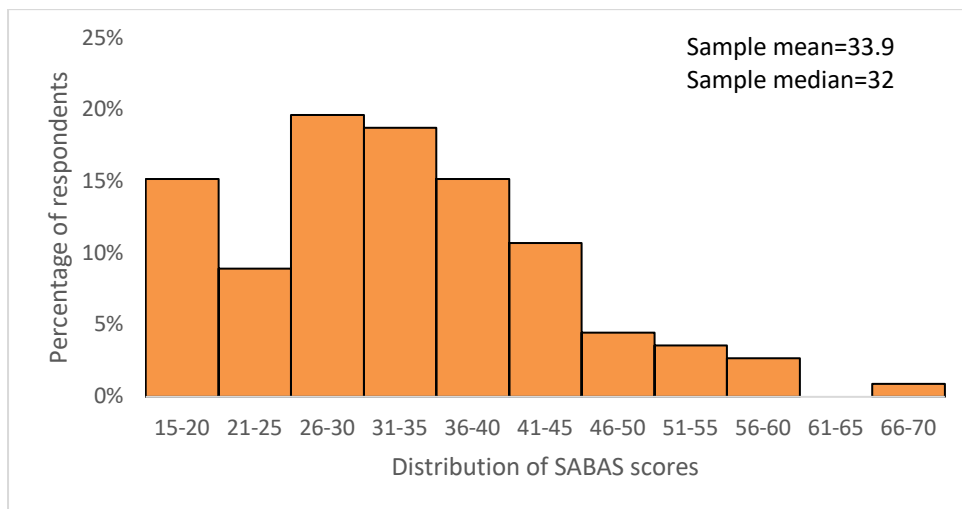
270 CHIs’ abortion-related service and information provision are shaped by their navigation of
271 individual, community, and institutional systems, potentially influencing women’s care-
272 seeking (Coast et al., 2018). Abortion stigma, manifests across these three levels and is
273 duplicated in prevailing attitudes and beliefs surrounding womanhood, marriage, and fertility

274 (Kumar et al., 2009). It shapes CHIs' attitudes to abortion, is enacted in advice to women and
275 embedded in the contexts and health systems they work with(in).

276 The modified SABAS is scored for the 15 retained items or by sub-scale. Valid scores range
277 from 15-75. There are no predetermined thresholds for what determines stigmatising
278 attitudes, but higher scores indicate greater stigma (Shellenberg et al., 2014). Reported stigma
279 was low (Fig. 1). Sample mean is 33.9 and median is 32. The distribution is skewed. My
280 sample reports a higher mean than Holcombe et al (2018)'s study with Ethiopian midwives
281 where, unlike my study, the majority of respondents were male. Sample size is too small for
282 statistical tests interrogating the role of gender, but qualitative analysis later in this section
283 suggests that gender may play a role.

284

285 *Figure 1: Distribution of CHIs' SABAS scores*



286

287

288 Table 3 shows item-level responses by cadre. Strongly agree or agree scored higher (5, 4)
289 than unsure (3), and disagree or strongly disagree (2,1). The response categories are
290 combined at the scale ends to show cadre's items responses.

291

ITEM	SCALE RESPONSES (N=112)		
	Strongly disagree/disagree (lower stigma scores)	Unsure	Agree/Strongly agree (higher stigma scores)
<i>SUB-SCALE 1: NEGATIVE STEREOTYPING</i>			
<i>1. A WOMAN WHO HAS AN ABORTION IS COMMITTING A SIN.</i>			
ASHA	59%	18%	23%
ANM	63%	11%	26%
PHARMACIST	47%	26%	26%
ITEM TOTAL	56%	19%	25%
<i>2. ONCE A WOMAN HAS ONE ABORTION, SHE WILL MAKE IT A HABIT.</i>			
ASHA	77%	18%	5%
ANM	80%	6%	14%
PHARMACIST	50%	21%	29%
ITEM TOTAL	69%	15%	16%
<i>3. A WOMAN WHO HAS HAD AN ABORTION CANNOT BE TRUSTED.</i>			
ASHA	69%	8%	23%
ANM	69%	17%	14%
PHARMACIST	60%	16%	24%
ITEM TOTAL	66%	13%	21%
<i>4. A WOMAN WHO HAS AN ABORTION BRINGS SHAME TO HER FAMILY.</i>			
ASHA	74%	15%	10%
ANM	83%	3%	14%
PHARMACIST	55%	18%	26%
ITEM TOTAL	71%	13%	17%
<i>5. THE HEALTH OF A WOMAN WHO HAS AN ABORTION IS NEVER AS GOOD AS IT WAS BEFORE THE ABORTION.</i>			
ASHA	54%	8%	39%
ANM	54%	14%	32%
PHARMACIST	19%	26%	55%
ITEM TOTAL	42%	16%	42%
<i>6. A WOMAN WHO HAS HAD AN ABORTION MIGHT ENCOURAGE OTHER WOMEN TO GET ABORTIONS.</i>			
ASHA	66%	13%	21%
ANM	71%	6%	23%
PHARMACIST	69%	13%	18%
ITEM TOTAL	68%	11%	21%
<i>7. A WOMAN WHO HAS AN ABORTION IS A BAD MOTHER.</i>			
ASHA	82%	13%	5%
ANM	77%	0%	23%
PHARMACIST	74%	11%	16%
ITEM TOTAL	78%	8%	14%
<i>8. A WOMAN WHO HAS AN ABORTION BRINGS SHAME TO HER COMMUNITY.</i>			
ASHA	77%	15%	8%
ANM	66%	11%	23%
PHARMACIST	55%	24%	21%
ITEM TOTAL	66%	17%	17%

<i>SUBSCALE 1</i>	64%	14%	22%
<i>TOTAL:</i>			
<i>SUBSCALE 2: EXCLUSION AND DISCRIMINATION</i>			
<i>9. A WOMAN WHO HAS HAD AN ABORTION SHOULD BE PROHIBITED FROM GOING TO RELIGIOUS SERVICES.</i>			
ASHA	62%	16%	22%
ANM	69%	14%	29%
PHARMACIST	76%	11%	13%
ITEM TOTAL	69%	14%	17%
<i>10. I WOULD TEASE A WOMAN WHO HAS HAD AN ABORTION SO THAT SHE WILL BE ASHAMED ABOUT HER DECISION.</i>			
ASHA	77%	8%	15%
ANM	80%	9%	12%
PHARMACIST	84%	5%	11%
ITEM TOTAL	80%	7%	13%
<i>11. I WOULD TRY TO DISGRACE A WOMAN WHO HAS HAD AN ABORTION BECAUSE SHE MAY NOT BE ABLE TO BEAR CHILDREN.</i>			
ASHA	85%	8%	8%
ANM	83%	6%	12%
PHARMACIST	84%	5%	11%
ITEM TOTAL	84%	6%	10%
<i>12. A MAN SHOULD NOT MARRY A WOMAN WHO HAS HAD AN ABORTION BECAUSE SHE MAY NOT BE ABLE TO BEAR CHILDREN.</i>			
ASHA	64%	13%	23%
ANM	80%	14%	6%
PHARMACIST	76%	16%	7%
ITEM TOTAL	73%	14%	13%
<i>13. I WOULD STOP BEING FRIENDS WITH SOMEONE IF I FOUND OUT THAT SHE HAD AN ABORTION.</i>			
ASHA	77%	13%	10%
ANM	86%	6%	9%
PHARMACIST	68%	21%	11%
ITEM TOTAL	77%	13%	10%
<i>14. I WOULD POINT MY FINGERS AT A WOMAN WHO HAD AN ABORTION SO THAT OTHER PEOPLE WOULD KNOW WHAT SHE HAS DONE.</i>			
ASHA	80%	13%	8%
ANM	92%	3%	6%
PHARMACIST	92%	3%	5%
ITEM TOTAL	88%	6%	6%
<i>15. A WOMAN WHO HAS AN ABORTION SHOULD BE TREATED THE SAME AS EVERYONE ELSE</i>			
ASHA	62%	7%	28%
ANM	94%	3%	3%
PHARMACIST	87%	8%	5%
ITEM TOTAL	80%	7%	13%
<i>SUBSCALE 2</i>	79%	9%	12%
<i>TOTAL:</i>			

293

294 Higher stigma levels were reported in subscale 1 (negative stereotyping) than in subscale 2

295 (exclusion and discrimination). Items in subscale 1 are underpinned by abortion stigma. A

296 quarter of respondents- similarly distributed by cadre - agreed/strongly agreed that ‘a woman

297 who has an abortion is committing a sin'. Respondents- particularly 55% of pharmacists-
298 reported believing that abortion affects a woman's health (item 5). There are noticeable
299 differences in cadre responses- pharmacists report more negative stereotyping than ASHAs or
300 ANMs.

301

302 Low levels of reported stigma (12%) in subscale 2- items predominantly about exclusionary
303 actions or behaviours- are explained by CHIs' training around respectful care and
304 confidentiality. There is some difference between cadres in this subscale- ANMs consistently
305 scored lower than ASHAs and pharmacists. This may be due to regular interactions with
306 formal health systems or more specialised healthcare training.

307

308 The "unsure" category may reflect respondents' reluctance to accurately report their views.
309 Sub-scale one shows more unsure responses (14%) than subscale two (9%), which may also
310 be due to the construction of the questionnaire. This response- three points- may explain the
311 higher overall stigma score distribution.

312

313 ***5.1. Knowledge as facilitator or barrier***

314 CHIs had poor knowledge of Indian abortion laws and were unaware of current abortion
315 legislation. Their first responses were about sex-selection. Some respondents mentioned
316 foetal abnormality but could not confirm legality.

317

318 **I:** *What do you know about the MTP law in India?*

319 **R:** [hesitates] *About law? When there is a girl child, people do this thing to get*
320 *aborted- such things shouldn't happen.*

321 **I:** *And what else?*

322 **R:** *What else? That's all.*

323 -Bhagyashree, 40-year-old ASHA

324

325 *If the baby hasn't developed or if there is a problem with the baby, for only that*
326 *reason the MTP is allowed.*

327 -Anupriya, 49-year-old ANM

328

329 Conflation of sex-selection and abortion laws underscores lack of abortion knowledge and
330 investment in training. As Gandhi (2014) cautions, it risks further entrenching the idea of *all*
331 abortions as illegal.

332

333 42% of all respondents- and over half of pharmacists- believed abortion had a negative
334 impact on women's health. Respondents- across all cadres- mentioned "weakness"- a
335 prolonged malaise, suggesting it affects future fertility. Many reported warning women about
336 adverse consequences of abortion.

337 *Our advice to that lady [...]in your future life, it will be a problem.*

338 -Mahesh, 38-year-old male pharmacist

339

340 Current guidelines mandate abortion-related training. However, ASHAs and ANMs reported
341 training did not cover abortion-specific topics. Qualified pharmacists- public and private-
342 also did not receive abortion-specific training. Where they lacked information, ASHAs and
343 ANMs drew on previous experiences and information shared by medical officers or peers to
344 navigate their roles. They turned to "contact knowledge"- experiential learning- to understand
345 abortion and provide advice.

346 *We have seen their [women's] family situation, we have seen their relationships- we*
347 *know what state they're in. Seeing all that, there is experience. This is more*
348 *[important] than what our training tells us.*

349 -Anupriya, 49-year-old ANM

350

351 This contact knowledge is contextualised and rooted in women's lives, suggesting intimacy
352 and empathy in their understandings. ASHAs and ANMs placed more value on experiential
353 knowledge implying it grounds their reactions to women, tempering attitudes and influencing
354 actions.

355

356 ASHAs, ANMs, and public pharmacists shared that medical officers (MO) direct information
357 flow, including on abortion, shaping what information they have access to and are able to
358 share. They perceive MOs as possessing superior knowledge- clinical and otherwise.

359

360 *I feel I need to listen to higher authority [MO]. More than my knowledge, I think their*
361 *knowledge is more.*

362 -Chandralekha, 26-year-old ASHA

363

364 *[MO] will tell us in meeting about what to do or say- we do that only.*

365 -Vinod, 45-year-old male pharmacist

366

367 All three cadres, including private pharmacists, suggest women go to a doctor when
368 approached about abortion. They may suggest women go to the local PHC for a referral but
369 rarely volunteer information about specific doctors. ASHAs and ANMs were emphatic about
370 not referring women to private clinics, seeing it as a violation of their contracts with the

371 public health system. They would, if aware the PHC did not provide abortion
372 services/referrals, suggest women go to the district hospital. For some private pharmacists, it
373 functioned as a directive and a refusal to sell MA pills, rather than as a referral. They reported
374 telling women to seek care from clinics, without specifying who or where to go. They were
375 reluctant to suggest clinics or doctors in case it could be traced back to them.

376

377 ASHAs and ANMs, equipped with pregnancy tests, are often present for pregnancy
378 confirmation- a crucial moment in women's trajectories. Some ASHAs and ANMs
379 considered it their responsibility to inform the MO about women considering abortion.

380

381 *If there is some sort of mistake committed [unwanted pregnancy], that has to be told*
382 *to Madam [MO]. [...] we cannot just sit with the information. [...] then Madam will*
383 *say "Get the one who has committed mistake" and we bring her.*

384 -Shubhashini, 38-year-old ASHA

385 Women's trajectories are shaped by disclosure and having their decision-making
386 circumvented can have repercussions for women's lives, especially when managing difficult
387 dynamics with partners or family members. Such arbitrary mandates can undercut women's
388 trust in CHIs, making it difficult to provide services for similarly "sensitive" issues.

389

390 Lack of payment for abortion-related care highlights a discrepancy in task-setting and may
391 shape how CHIs understand and carry out their own roles. ASHAs and ANMs had mixed
392 responses to escorting women to clinics for abortion-related care. Some felt obliged to
393 support women through their abortions, in case there were future repercussions (e.g. being
394 ignored during the next pregnancy). Additionally, they reflected that unlike antenatal care or
395 delivery, there are no associated government payments or incentives.

396 *For abortion we don't go along, there is no payment for that.*

397 -Rajashri, 42-year-old ASHA

398

399 Perceived to possess superior knowledge, doctors' abortion attitudes can influence CHIs'
400 advice or support. This can heighten the lack of accurate abortion information and strengthen
401 misconceptions such as an adverse impact on women's health or affecting women's future
402 pregnancies, especially when information flows are controlled. Interventions focusing solely
403 on CHIs' technical aptitude overlook how hierarchies and unequal power relations can shape
404 CHIs' roles and behaviours in abortion access and information provision.

405

406 ***5.2. Abortion attitudes enable or restrict access***

407 CHIs are present at different points in women's abortion trajectories. Their knowledge of
408 abortion, tempered by their attitudes, can shape the quality of care women experience.

409 All cadres dissuaded women from considering an abortion or explicitly advised against it,
410 reflecting the value placed on pregnancy and motherhood. They drew on entrenched beliefs
411 like the importance of carrying the first pregnancy to term and motherhood as natural role
412 fulfilment. They suggested abortions negatively affect future fertility and conception,
413 positioning it as punishment or a consequence of abortion. These demonstrate anti-abortion
414 sentiments: acts deserving punishment or stigmatising abortion as dangerous (Beynon-Jones,
415 2017).

416 *"First child should not be ended"- such things become fixed in our minds, that small*
417 *children shouldn't be removed like that.*

418 -Parvathamma, 32-year old ASHA

419

420 Evoking morality, some CHIs portrayed pregnancy as a “gift” and abortion as “killing a life
421 force”; underscoring the fertility norms and social value placed on motherhood and
422 reproduction. 56% of respondents disagreed that abortion was a sin, in contrast to the 25%
423 that agreed. Yet, irrespective of their SABAS response, they described abortion as a moral sin
424 or wrongdoing. By depicting abortion as a deliberate denial of life and a rejection of the
425 “essential nature” of womanhood (Cockrill and Nack, 2013), they evoke Goffman’s (1963)
426 construction of stigma as a character blemish and as tribal (i.e. abortion marks you as
427 “spoilt”, part of the “bad” tribe) . CHIs used negative framings of abortion- bad, harmful, and
428 sinful- when providing advice. Abortion stigma shapes reproductive decision-making whilst
429 also regulating and reproducing norms of good or bad mother- and woman-hood.

430 *Isn't that a sinful act? A baby- whatever it is, it's a life force. [...] if it's killed there*
431 *itself [in the womb], there is no use.*

432 -Padmakalyani, 40-year-old ASHA

433

434 *By delivering the baby, if it is good for her, she should be told no for abortion. If there*
435 *is some pressure on her because of that it is better to get it done. Even then, foeticide*
436 *[abortion] shouldn't be done, it is a sin, right, for that at least [...] she should continue,*
437 *in my opinion.*

438 -Chandralekha, 27-year-old ANM

439 Abortion stigma as a norm-regulating mechanism is also present in CHIs’ framing of
440 contraceptive use versus abortion. All three cadres framed abortion- an irresponsible choice-
441 as a consequence of women’s irresponsible lack of (effective) contraception use or sexual
442 abstinence. While understandings of (ir)responsibility are contextual, they inform/are
443 informed by constructions of good/bad mother- and woman-hood.

444 In delineating between “valid” reasons, CHIs believed women don’t have an abortion “just
445 like that”. They reflect a hierarchy of “good” abortion reasons- foetal abnormalities or threat
446 to a woman’s life. Abortions due to poor socio-economic conditions were also
447 understandable but tempered by frustrations around poor contraceptive use or ineffective
448 family planning. ASHA and ANMs’ frustrations, seen in the context of incentivised family
449 planning goals, highlight competing programmatic pressures (Pulla, 2014).

450

451 *It [abortion] shouldn’t be used for bad things- for these unmarried [women] and all. If*
452 *you have young babies at home, or if the growth isn’t there [foetal anomalies], only*
453 *for those it should be used.*

454 - Abhiruchi, 53-year-old ANM

455 *Few people are very adamant and say “No, I don’t want this at all. Let this go*
456 *[abortion] and we will see next year”, so to such people we scold them, “What is this?*
457 *If you had all these things why didn’t you get some pills or condom to use, at least you*
458 *should have taken an injection?”*

459 - Parvathamma, 33-year-old ASHA

460

461 Abortions for birth spacing, birth limiting or to maintain family size were seen as less
462 acceptable. Multiple abortions (Hoggart et al., 2016) caused concern. Only 16% of
463 questionnaire respondents believed women would make it a habit. Yet, interviewees worried
464 that after an abortion, women would control fertility using abortion instead of contraceptive.
465 CHIs linked multiple abortions with future ill-health, impacting future pregnancies. They
466 frame it as a “bad” abortion, tied to notions of irresponsible and selfish women, where ill or
467 “disabled” children are deserved punishment.

468

469 *[...] from these repeated pregnancies if you will go for MTP then next kids won't be*
470 *healthy, that is why kids are born like that [ill or disabled], we tell them that.*

471 -Abhiruchi, 53-year-old ANM

472

473 A spectrum of good/bad abortions emerges- ones that are valid (foetal abnormality, threat to
474 health/life, socio-economic conditions), less valid (contraceptive failure), and invalid (on
475 request, multiple abortions, markers of pre-marital sexual activity).

476

477 Abortions outside of marriage are characterised by secrecy, shame and stigma, as pregnancy
478 is a marker of pre-marital sexual activity. All cadres described unmarried women's
479 pregnancies as contravening social norms surrounding pre-marital sexual activity-
480 "mistakes", reiterating ideas of good/bad woman-hood. Some used colloquial descriptors
481 like "illegal pregnancies".

482

483 *If she is married [...] it's their personal [business]- her husband, in laws, it's their*
484 *personal [business]. If she is unmarried, gotten pregnant, and tried taking something,*
485 *then we look at her somewhat [judgementally].*

486 -Shubhashini, 38-year-old ASHA

487

488 Identifying as elders or well-wishers, cadres urged unmarried women to divulge their
489 partner's name in order to arrange marriage and restore "honour".

490 *I used to give [MA pills]. I used to ask first "Why, why do you want to do it now? Why*
491 *do you want to go and get it washed [aborted]?" Now, if they are unmarried why should*

492 *it be done like this, [they should] get married then.*

493 -Vinod, 44-year-old pharmacist

494 Marriage bestows respectability and legitimacy in the community, upholding social norms of
495 femininity, marriage, and motherhood. Through marriage, unmarried women's sexualities are
496 brought back under family and community control and under the umbrella of sanctioned
497 behaviour (Krishnaswamy et al., 2016) . If marriage is not a viable option, abortion becomes
498 the last opportunity to save a woman's dignity and respect. Abortions are a "lesser shame"
499 than pregnancy out of wedlock (Johnson-Hanks, 2002).

500 ***5.3. Behaviours as enablers or barriers***

501 ASHAs and ANMs liken their relationships with women to "mother-daughter" or "friends"..
502 They are privy to important milestones in women's lives, where their advice is valued and
503 sought. They describe some of their own gendered experiences- moving to the village after
504 marriage, pregnancy, childrearing- to draw parallels and kinship between their lives. They
505 suggest that "trust" between women is easier to build, as they face similar challenges and
506 experiences. This gendered understanding and relationship may influence interactions.

507 *Here they keep the mother-daughter relationship with us. [...] because we as woman,*
508 *when we get married and come to our home [move to husband's village], there is no*
509 *other relationship. We tell her, ours is a mother-daughter relation. You keep such thing*
510 *[in mind] and [speak to us] without any hide and seek.*

511 -Mumtaz, 30-year-old ANM

512 They report women ask for advice and rely on their knowledge of health systems to inform
513 and guide decision-making, which can ease or create barriers in abortion trajectories.

514 *If they say we don't want [to continue the pregnancy], I say don't get it done. If there*
515 *is someone at home to take care of the kids, then let this one happen! Later, you can*
516 *get operated [sterilised]... Generally, we don't let them go for abortion.*

517 -Purnima, 30-year-old ASHA

518

519 Acting as an elder or well-wisher shifts the ASHA or ANM from health worker to
520 community member, allowing them to draw on and enforce community norms and ideals.
521 They constantly traverse these two identities. It is present in their care-provision, as they
522 describe scolding women - having unprotected sex resulting in a pregnancy or wanting an
523 abortion.

524 Scolding is well-documented in maternal health and in SRH services (Grant et al., 2018), as
525 have its negative impacts on women and adolescents (Wood and Jewkes, 2006). While
526 ASHA and ANMs' questionnaire responses reported low stigma for subscale two, interview
527 respondents engaged in some exclusionary and discriminatory behaviour- scolding or
528 threatening women with disclosure. They explain scolding as care-taking to ensure women
529 understand the consequences of their (in)actions and deter from similar "mistakes" in the
530 future. They describe their scolding as part of their "mother-daughter" or "well-wisher"
531 relationships, and an intrinsic part of the care they provide.

532 Positioning themselves as elders and well-wishers draws on social practices that anoints them
533 as authority figures in their communities, in addition to their roles as CHIs. It highlights the
534 power differentials between CHIs and abortion-seekers, and its potential impact on women's
535 abortion trajectories. One way that CHIs wield this power is by insisting on spousal or family
536 consent for abortions, invalidating women's autonomies and "self-decisions".

537 In India, collective decision-making remains the norm for healthcare and other household
538 matters, with male family members often the final decision-makers (Raman et al., 2016).
539 Collective responsibility for women's reproduction can influence women's decision-making,
540 superseding her own desires (Heitmeyer and Unnithan, 2015; Paul et al., 2017). All cadres
541 were reluctant to support women's abortion decision-making without first ensuring her
542 family's or husband's consent. Spousal or family consent is framed as institutionally-
543 mandated but the MTP does not require this for adult women. Shaped by contextual decision-
544 making norms, CHIs insistence on collective approval can curtail women's options or create
545 additional barriers in abortion-care access. Related concerns around risk and blame also
546 compel CHIs to require collective consent.

547 *Sometimes, because of an abortion, there's excessive bleeding- and if she's anaemic or*
548 *weak, there might be problems. That's why the doctor asks for the family's permission.*
549 *Doctors- and we- don't want to take any risks.*
550 -Mumtaz, 30-year-old ANM

551 Despite their roles as norm enforcers, CHIs sometimes ignore and overlook their reservations
552 when confronted by the realities of women's lives.

553 *Husbands will be drunkards, and they will say no. When women say, 'No, two kids*
554 *are enough', but their husbands don't wear anything [use condoms]. You know how it*
555 *is to be a woman- how can I say no?*
556 -Parvathamma, 32-year-old ASHA

557
558 ASHAs and ANMs move between health worker and community member identities, drawing
559 on knowledge of women's lived experiences when offering advice or support. They reference
560 women's relative lack of agency around reproductive decision-making, tempering their

561 attitudes and nuancing reactions. In some cases, they draw on own personal experiences to
562 frame it as an act of empathy- another gendered dimension in their roles. These attitudinal
563 shifts, however, remain underpinned by polarisations of good/bad abortions, and woman-and
564 mother-hood.

565 ASHAs and ANMs described instances of directly supporting women’s access to abortion by
566 circumventing institutional and legal mandates. In cases they considered valid, they procured
567 MA or directed women to specific personnel.

568 Bhagyashree, a 40-year-old ASHA, advised women seeking abortions to avoid a corrupt
569 doctor, instead directing them to a staff nurse.

570 *R: She gets it [pills] from outside and gives it herself.*

571 *I: She gets it from outside and gives it? Doctor doesn’t know?*

572 *R: The doctor won’t know.*

573

574 In some PHCs, an informal network of CHIs collaborated to provide an affordable abortion
575 for some women- economically constrained or meeting other “good” criteria. They described
576 this as providing a safer alternative instead of pushing women to desperate measures or
577 seeking care from “quacks” (i.e. unqualified traditional providers using herbs or implements).
578 They discounted access to other clinical services because of women’s financial constraints.
579 Private pharmacists also provided medical abortion pills without a prescription when they
580 empathised with women.

581 *Sometimes I am compelled to help her; her condition [poverty] is such- how can I*
582 *send her away? What might she do if I don’t?*

583 -Arshad, 41-year-old pharmacist

584 *I know her finances- everyone knows. Her husband doesn't work, her family is no help.*
585 *At least someone should try...*

586 -Mumtaz, 30-year-old ANM

587 CHIs' willingness to help is influenced by how women fare against notions of good/bad
588 abortions, good/bad mother- and woman-hood. There is an affective element in some
589 responses, where willingness to subvert authority is influenced by empathy or other
590 emotions. As responses reflect, their attitudes and behaviours are not shaped by transactional
591 processes and contextual norms alone, but their interactions too (Kok et al., 2017). CHIs
592 traverse individual, community, institutional and framing discourses (Kumar et al., 2009)
593 when navigating roles within abortion-related care. Individuals' abortion attitudes shift based
594 on who they are interacting with, their relationship, and on their affective response. These
595 shifts and affective responses can influence CHIs' actions and behaviours, potentially
596 influencing abortion care-provision.

597 CHIs distinguish between good/bad abortions and mother- and woman-hood based on moral
598 and normative constructs of abortion and femininity. They enact abortion stigma through
599 actions and behaviour, treating women differently based on perceptions of where she falls on
600 the good/bad dichotomy. Enacted abortion stigma is a mechanism for social norms and
601 behaviours, regulating who deserves access to abortion care and under which conditions.
602 CHIs circumventing or subverting mandates to enable access, however, offer another
603 dimension of the interactional nature of abortion stigma. Despite stated objections to abortion
604 or negative stereotyping, respondents drew on personal relationships with abortion-seekers,
605 contextualising experiences and needs. They describe these using emotive language- as
606 Arshad and Parvathamma did- reflecting an affective encounter. It offers an additional
607 dimension for conceptualisations and measurement of abortion stigma: the affective. By

608 understanding abortion-related care as an emotional task for CHIs, and its effect on access to
609 abortion care, offers additional considerations for training and programmes on abortion
610 access.

611 **6. Conclusion**

612 Findings offer insights into the potential of CHIs in abortion task-sharing, relevant for the
613 Indian context as well as other countries like South Africa and Nepal who are currently
614 considering or expanding task-sharing programmes (Dawson et al., 2014; Glenton et al.,
615 2017; Puri et al., 2015).

616 CHIs are present at multiple points in women’s care-seeking trajectories. Further research on
617 their different roles can highlight potential intervention points for abortion provision and
618 improve overall quality of care (Benson et al., 2017). However, their abortion attitudes are
619 underpinned by stigma and they demonstrate poor knowledge of abortion and laws,
620 sometimes providing inaccurate information. Embedding abortion-related modules into
621 existing SRH or family planning trainings may create more robust programmes, tackling
622 knowledge gaps. Addressing entrenched notions of good/bad abortions, and mother- and
623 woman-hood, may also help tackle abortion stigma and improve (perceived/actual) quality of
624 care.

625 CHIs traverse multiple identities in carrying out their tasks and can face entrenched
626 inequalities. Addressing these power differentials are essential for supporting a vital health
627 force, especially when handling “sensitive” issues like abortion (Schaaf et al., 2018).

628 Abortion attitudes cannot be disconnected from CHIs’ social contexts and interactions,
629 influencing them to enact barriers or facilitate access. They draw on normative binaries when
630 enacting abortion stigma which can create access barriers. In some cases, they respond

631 empathetically and subvert regulations to enable access. As abortion remains a highly
632 stigmatised procedure, the attitudes and behaviours of singular actors can play pivotal roles in
633 care-seeking. Considering the role of affect can help re-conceptualise dimensions of abortion
634 stigma. Accounting for these complexities and manifestations of abortion stigma can support
635 task-sharing efforts.

636

637 Findings offer insights into women's MA self-use, contributing to current debates (Gerdt et
638 al., 2017; Iyengar et al., 2015). While CHIs can play crucial roles in enabling self-use, they
639 can also play gatekeeping roles; making it harder to access care, raising questions about the
640 function and conceptualisations of CHIs in abortion provision (WHO, 2015).

641

642 **7. References**

643 Ahmad, J., Bhatnagar, I., Khan, M.E., 2012. Increasing access to family planning and
644 reproductive health services through community work: a case study of a dual cadre
645 model in India.

646 Basak, S.C., Mil, J.W.F., Sathyanarayana, D., 2009. The changing roles of pharmacists in
647 community pharmacies: perception of reality in India. *Pharmacy World & Science* 31,
648 612–618. <https://doi.org/10.1007/s11096-009-9307-y>

649 Benson, J., Healy, J., Dijkerman, S., Andersen, K., 2017. Improving health worker
650 performance of abortion services: an assessment of post-training support to providers in
651 India, Nepal and Nigeria. *Reproductive Health* 14, 154. [https://doi.org/10.1186/s12978-](https://doi.org/10.1186/s12978-017-0416-0)
652 [017-0416-0](https://doi.org/10.1186/s12978-017-0416-0)

653 Beynon-Jones, S.M., 2017. Untroubling abortion: A discourse analysis of women's accounts.
654 *Feminism & Psychology* 27, 225–242. <https://doi.org/10.1177/0959353517696515>

655 Bland, J.M., Altman, D.G., 1997. Statistics notes: Cronbach's alpha. *BMJ* 314, 572–572.

656 <https://doi.org/10.1136/bmj.314.7080.572>

657 Boler, T., Marston, C., Corby, N., Gardiner, E., 2009. Medical Abortion in India: A Model
658 for the Rest of the World? London.

659 Coast, E., Murray, S., 2014. Pregnancy termination trajectories in Zambia. International
660 Seminar on Decision-making regarding abortion-determinants and consequences.

661 Coast, E., Murray, S.F., 2016. “These things are dangerous”: Understanding induced abortion
662 trajectories in urban Zambia. *Social Science & Medicine* 153, 201–209.
663 <https://doi.org/10.1016/j.socscimed.2016.02.025>

664 Coast, E., Norris, A.H., Moore, A.M., Freeman, E., 2018. Trajectories of women’s abortion-
665 related care: A conceptual framework. *Social Science & Medicine* 200, 199–210.
666 <https://doi.org/10.1016/j.socscimed.2018.01.035>

667 Cockrill, K., Nack, A., 2013. “I’m Not That Type of Person”: Managing the Stigma of
668 Having an Abortion. *Deviant Behavior* 34, 973–990.
669 <https://doi.org/10.1080/01639625.2013.800423>

670 Collins, D., 2003. Pretesting survey instruments: An overview of cognitive methods. *Quality*
671 *of Life Research* 12, 229–238. <https://doi.org/10.1023/A:1023254226592>

672 Crigler, L., Glenton, C., Hodgins, S., LeBan, K., Lewin, S., Perry, H., 2014. Developing and
673 Strengthening Community Health Worker Programs at Scale A Reference Guide and
674 Case Studies for Program Managers and Policymakers.

675 Das, J., Holla, A., Das, V., Mohanan, M., Tabak, D., Brian, C., Chan, B., 2012. In Urban And
676 Rural India, A Standardized Patient Study Showed Low Levels Of Provider Training
677 And Huge Quality Gaps. *Health Affairs* 31, 2774–2784.
678 <https://doi.org/10.1377/hlthaff.2011.1356>

679 Dasgupta, J., Velankar, J., Borah, P., Hazarika Nath, G., 2017. The safety of women health
680 workers at the frontlines. *Indian Journal of Medical Ethics*.

681 Dawson, A.J., Buchan, J., Duffield, C., Homer, C.S.E., Wijewardena, K., 2014. Task shifting
682 and sharing in maternal and reproductive health in low-income countries: a narrative
683 synthesis of current evidence. *Health Policy and Planning* 29, 396–408.
684 <https://doi.org/10.1093/heapol/czt026>

685 Fereday, J., Muir-Cochrane, E., Fereday Rgn, J., Dip, G., Ed, A., 2006. Demonstrating Rigor
686 Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and
687 Theme Development. *International Journal of Qualitative Methods* 5.

688 Frymus, D., Kok, M., De Koning, K., Quain, E., 2013. Knowledge gaps and a need based
689 Global Research agenda by 2015. Geneva, Switzerland.

690 Ganatra, B., Kalyanwala, S., Elul, B., Coyaji, K., Tewari, S., 2010. Understanding women’s
691 experiences with medical abortion: In-depth interviews with women in two Indian
692 clinics. *Global Public Health* 5, 335–347. <https://doi.org/10.1080/17441690802551340>

693 Gandhi, M., 2014. Making Abortion Safer [WWW Document]. In *Plainspeak*. URL
694 <http://www.tarshi.net/inplainspeak/issue-in-focus-making-abortion-safer/> (accessed
695 3.27.16).

696 Gerdts, C., Raifman, S., Daskilewicz, K., Momberg, M., Roberts, S., Harries, J., 2017.
697 Women’s experiences seeking informal sector abortion services in Cape Town, South
698 Africa: a descriptive study. *BMC Women’s Health* 17, 95.
699 <https://doi.org/10.1186/s12905-017-0443-6>

700 Glenton, C., Sorhaindo, A.M., Ganatra, B., Lewin, S., 2017. Implementation considerations
701 when expanding health worker roles to include safe abortion care: a five-country case
702 study synthesis. *BMC Public Health* 17, 730. <https://doi.org/10.1186/s12889-017-4764-z>

703 Goffman, E., 1963. *Stigma : notes on the management of spoiled identity*. Harmondsworth :
704 Penguin, Harmondsworth.

705 Government of India (GoI), 2003. *The Medical Termination of Pregnancy Rules*

706 (Amendment), 2003.

707 Government of India (GoI), 1994. Pre-Natal Diagnostic Techniques (Regulation and
708 Prevention of Misuse) Act, No. 57.

709 Government of India (GoI), 1971. The Medical Termination of Pregnancy Act, No. 34.

710 Grant, C., Nawal, D., Guntur, S.M., Kumar, M., Chaudhuri, I., Galavotti, C., Mahapatra, T.,
711 Ranjan, K., Kumar, G., Mohanty, S., Alam, M.A., Das, A., Jiwani, S., 2018. “We pledge
712 to improve the health of our entire community”: Improving health worker motivation
713 and performance in Bihar, India through teamwork, recognition, and non-financial
714 incentives. PLOS ONE 13, e0203265. <https://doi.org/10.1371/journal.pone.0203265>

715 Gupta, P., Iyengar, S.D., Ganatra, B., Johnston, H.B., Iyengar, K., 2017. Can community
716 health workers play a greater role in increasing access to medical abortion services? A
717 qualitative study. BMC Women’s Health 17, 37. [https://doi.org/10.1186/s12905-017-](https://doi.org/10.1186/s12905-017-0391-1)
718 0391-1

719 Guttmacher Institute, 2018. Abortion incidence and related services in six Indian States,
720 2015. New York.

721 Heitmeyer, C., Unnithan, M., 2015. Bodily rights and collective claims: the work of legal
722 activists in interpreting reproductive and maternal rights in India. Journal of the Royal
723 Anthropological Institute 21, 374–390. <https://doi.org/10.1111/1467-9655.12211>

724 Hoggart, L., Newton, V.L., Bury, L., 2016. “Repeat abortion”, a phrase to be avoided?
725 Qualitative insights into labelling and stigma. The journal of family planning and
726 reproductive health care jfprhc-2016-101487. [https://doi.org/10.1136/jfprhc-2016-](https://doi.org/10.1136/jfprhc-2016-101487)
727 101487

728 Holcombe, S.J., Burrowes, S., Hailu, D., Scott, R., Berhe, A., 2018. Professional Pragmatism
729 and Abortion Stigma: Assessing the Performance of the Stigmatizing Attitudes, Beliefs
730 and Actions Scale (SABAS) among Ethiopian Midwives. African Journal of

731 Reproductive Health 22, 26–39. <https://doi.org/10.29063/ajrh2018/v22i2.3>

732 IBM SPSS Statistics for Windows, 2012. NoSPSS Inc.

733 Ipas, 2015. The Stigmatising Attitudes, Behaviours, and Actions Scale (SABAS).

734 Ipas Development Foundation, 2017. Mapping the Indian scenario with reference to the
735 WHO guidance on “Health worker roles in providing safe abortion care and post-
736 abortion contraception.”

737 Ivankova, N. V, Creswell, J.W., Stick, S.L., 2006. Using Mixed-Methods Sequential
738 Explanatory Design: From Theory to Practice. *Field Methods* 18, 3–20.
739 <https://doi.org/10.1177/1525822X05282260>

740 Iyengar, K., Paul, M., Iyengar, S.D., Klingberg-Allvin, M., Essén, B., Bring, J., Soni, S.,
741 Gemzell-Danielsson, K., 2015. Self-assessment of the outcome of early medical
742 abortion versus clinic follow-up in India: a randomised, controlled, non-inferiority trial.
743 *The Lancet Global Health* 3, e537–e545. [https://doi.org/10.1016/S2214-
744 109X\(15\)00150-3](https://doi.org/10.1016/S2214-109X(15)00150-3)

745 Jejeebhoy, S.J., Francis Xavier, A., Acharya, R., Kalyanwala, S., Xavier, A.. F., Acharya, R.,
746 Kalyanvala, S., 2011. Increasing access to safe abortion in rural Rajasthan: Outcomes of
747 a Comprehensive Abortion Care model.

748 Johnson-Hanks, J., 2002. The lesser shame: abortion among educated women in southern
749 Cameroon. *Social Science & Medicine* 55, 1337–1349. [https://doi.org/10.1016/S0277-
750 9536\(01\)00276-3](https://doi.org/10.1016/S0277-9536(01)00276-3)

751 Kalyanvala, S., Xavier, A.. F., Jejeebhoy, S.J., Kumar, R., 2010. Abortion Experiences of
752 Unmarried Young Women In India: Evidence from a Facility-Based Study in Bihar and
753 Jharkhand. *International Perspectives on Sexual and Reproductive Health* 36.

754 Kok, M.C., Broerse, J.E.W., Theobald, S., Ormel, H., Dieleman, M., Taegtmeier, M., 2017.
755 Performance of community health workers: situating their intermediary position within

756 complex adaptive health systems. *Human Resources for Health* 15, 59.
757 <https://doi.org/10.1186/s12960-017-0234-z>

758 Krishnaswamy, P.H., Prabhu, S., Shetty, A., 2016. Study of Factors Related to Stress Among
759 Women Undergoing Termination of Pregnancy in Collectivist Culture. *Journal of*
760 *Evidence Based Medicine and Healthcare* 3, 61–65.

761 Kumar, A., Hessini, L., Mitchell, E.M.H., 2009. Conceptualising abortion stigma. *Culture,*
762 *Health & Sexuality* 11, 625–639. <https://doi.org/10.1080/13691050902842741>

763 Mishra, A., 2014. ‘Trust and teamwork matter’: Community health workers’ experiences in
764 integrated service delivery in India. *Global Public Health* 9, 960–974.
765 <https://doi.org/10.1080/17441692.2014.934877>

766 National Rural Health Mission, 2015. Notes for ASHA Trainers Notes for ASHA Trainers.

767 Noble, H., Smith, J., 2015. Issues of validity and reliability in qualitative research. *Evidence-*
768 *Based Nursing* 18, 34–35. <https://doi.org/10.1136/eb-2015-102054>

769 Paul, M., Essén, B., Sariola, S., Iyengar, S., Soni, S., Klingberg Allvin, M., Essén, B.,
770 Sariola, S., Iyengar, S., Soni, S., Klingberg Allvin, M., Essén, B., Sariola, S., Iyengar,
771 S., Soni, S., Klingberg Allvin, M., 2017. Negotiating Collective and Individual Agency.
772 *Qualitative Health Research* 27, 311–324. <https://doi.org/10.1177/1049732315613038>

773 Pezalla, A.E., Pettigrew, J., Miller-Day, M., 2012. Researching the researcher-as-instrument:
774 An exercise in interviewer self-reflexivity. *Qualitative Research* 12, 165–185.
775 <https://doi.org/10.1177/1468794111422107>

776 Potdar, P., Barua, A., Dalvie, S., Pawar, A., 2015. “If a woman has even one daughter, I
777 refuse to perform the abortion”: Sex determination and safe abortion in India.
778 *Reproductive health matters* 23, 114–125.
779 <https://doi.org/http://dx.doi.org/10.1016/j.rhm.2015.06.003>

780 Pulla, P., 2014. Why are women dying in India’s sterilisation camps? *BMJ* 349, g7509–

781 g7509. <https://doi.org/10.1136/bmj.g7509>

782 Puri, M., Tamang, A., Shrestha, P., Joshi, D., 2015. The role of auxiliary nurse-midwives and
783 community health volunteers in expanding access to medical abortion in rural Nepal.
784 *Reproductive Health Matters* 22, 94–103.
785 [https://doi.org/http://dx.doi.org/10.1016/S0968-8080\(14\)43784-4](https://doi.org/http://dx.doi.org/10.1016/S0968-8080(14)43784-4)

786 Rajaretnam, T., Bhargava, P.K., Hallad, J.S., Satihal, D.G., Hiremath, G.M., 2004.
787 *Understanding Abortion Related Beliefs and Practices, Married Women, Abortion*
788 *Acceptors, and Abortion Service Providers*. New Delhi.

789 Raman, S., Srinivasan, K., Kurpad, A., Ritchie, J., Razee, H., 2016. “We have to ask and only
790 then do”: Unpacking agency and autonomy in women’s reproductive health in urban
791 India. *Health Care for Women International*.

792 Renner, R.-M., Brahmi, D., Kapp, N., 2013. Who can provide effective and safe termination
793 of pregnancy care? A systematic review*. *BJOG: An International Journal of Obstetrics*
794 *& Gynaecology* 120, 23–31. <https://doi.org/10.1111/j.1471-0528.2012.03464.x>

795 Schaaf, M., Fox, J., Topp, S.M., Warthin, C., Freedman, L.P., Robinson, R.S., Thiagarajan,
796 S., Scott, K., Maboe, T., Zanchetta, M., Ruano, A.L., Kok, M., Closser, S., 2018.
797 *Community health workers and accountability: reflections from an international “think-*
798 *in.” International Journal for Equity in Health* 17, 66. [https://doi.org/10.1186/s12939-](https://doi.org/10.1186/s12939-018-0781-5)
799 [018-0781-5](https://doi.org/10.1186/s12939-018-0781-5)

800 Scott, K., George, A.S., Ved, R.R., 2019. Taking stock of 10 years of published research on
801 the ASHA programme: Examining India’s national community health worker
802 programme from a health systems perspective. *Health Research Policy and Systems* 17,
803 1–18. <https://doi.org/10.1186/s12961-019-0427-0>

804 Scott, K., Shanker, S., 2010. Tying their hands? Institutional obstacles to the success of the
805 ASHA community health worker programme in rural north India. *AIDS Care* -

806 Psychological and Socio-Medical Aspects of AIDS/HIV 22, 1606–1612.
807 <https://doi.org/10.1080/09540121.2010.507751>

808 Shellenberg, K.M., Hessini, L., Levandowski, B.A., 2014. Developing a Scale to Measure
809 Stigmatizing Attitudes and Beliefs About Women Who Have Abortions: Results from
810 Ghana and Zambia. *Women & Health* 54, 599–616.
811 <https://doi.org/10.1080/03630242.2014.919982>

812 Singh, S., Hussain, R., Shekhar, C., Acharya, R., Moore, A.M., Stillman, M., Pradhan, M.R.,
813 Frost, J.J., Sahoo, H., Alagarajan, M., Sundaram, A., Kalyanwala, S., Ball, H., 2018a.
814 Abortion and Unintended Pregnancy in Six Indian States: Findings and Implications for
815 Policies and Programs. New York. <https://doi.org/10.1363/2018.30009>

816 Singh, S., Shekhar, C., Acharya, R., Moore, A.M., Stillman, M., Pradhan, M.R., Frost, J.J.,
817 Sahoo, H., Alagarajan, M., Hussain, R., Sundaram, A., Vlassoff, M., Kalyanwala, S.,
818 Browne, A., 2018b. The incidence of abortion and unintended pregnancy in India, 2015.
819 *The Lancet Global Health* 6, e111–e120. [https://doi.org/10.1016/S2214-](https://doi.org/10.1016/S2214-109X(17)30453-9)
820 [109X\(17\)30453-9](https://doi.org/10.1016/S2214-109X(17)30453-9)

821 Sowmini, C. V., 2013. Delay in termination of pregnancy among unmarried adolescents and
822 young women attending a tertiary hospital abortion clinic in Trivandrum, Kerala, India.
823 *Reproductive Health Matters* 21, 243–250.
824 [https://doi.org/http://dx.doi.org/10.1016/S0968-8080\(13\)41700-7](https://doi.org/http://dx.doi.org/10.1016/S0968-8080(13)41700-7)

825 Stillman, M., Frost, J.J., Singh, S., Moore, A.M., Kalyanwala, S., 2014. Abortion in India: A
826 Literature Review. New York.

827 Unnithan, M., 2019. Fertility, health and reproductive politics: re-imagining rights in India,
828 Routledge contemporary South Asia series ; 132. Routledge, Oxon & New York.

829 Wardale, D., Cameron, R., Li, J., 2015. Considerations for Multidisciplinary , Culturally
830 Sensitive , *Mixed Methods Research* 13, 37–48.

831 Wood, K., Jewkes, R., 2006. Blood Blockages and Scolding Nurses: Barriers to Adolescent
832 Contraceptive Use in South Africa. *Reproductive Health Matters* 14, 109–118.
833 [https://doi.org/10.1016/S0968-8080\(06\)27231-8](https://doi.org/10.1016/S0968-8080(06)27231-8)
834 World Health Organization, 2015. Expanding health worker roles to help improve access to
835 safe abortion and post-abortion care. World Health Organization, Geneva.
836 World Health Organization (WHO), 2018. *Medical Management of Abortion*. Geneva,
837 Switzerland.
838