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REVIEW ARTICLE

Challenges in the sociocultural milieu of South Asia: a systematic review of community health workers

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ABSTRACT:

Introduction: Community health workers (CHWs) connect patients in rural and remote communities to health service organizations. This diverse group of healthcare workers has helped improve healthcare access and outcomes and enhance the quality of life for people in hard-to-reach communities. However, CHWs face numerous challenges rooted in the sociocultural milieu of the region and country in which they reside.

Methods: This systematic review and qualitative meta-synthesis of 38 studies examines the sociocultural challenges that CHWs experience; it focuses on the unique history, geography, and sociocultural milieu of South Asia.

Results: This study found the following challenges that CHWs regularly face when working in communities: religious and cultural norms and practices, gender and biological sex, caste, and generation. All challenges in some way relate to one another and stem from the unique sociocultural milieu of South Asia, and the various subcultures that exist in this diverse region.

Conclusion: This article presents important guidance for program planning and CHW deployment that reflects the sociocultural realities of practice. The findings of this investigation may serve as an essential resource for program planners and decision-makers in improving the effectiveness and reach of CHW programs.

Keywords:

community health, community health workers, lay health workers, qualitative research, South Asia, systematic review.

FULL ARTICLE:

Introduction

Community health workers (CHWs) are an important mechanism for connecting patients with health service organizations. CHWs have served as a vital resource for improving the accessibility and reach of health care in hard-to-reach communities worldwide. Evidence has consistently shown how CHWs can improve healthcare access and outcomes, strengthen healthcare teams, and enhance the quality of life for people in underserved communities[1]. CHWs also play an essential role in delivering culturally sensitive health services to diverse communities[2]. However, CHWs face numerous social and cultural challenges that influence the quality and accessibility of their services. These challenges depend on the sociocultural milieu of the region and country in which they reside. There is a need for research that examines these challenges for the purposes of formulating interventions designed at reducing their impact on the quality and accessibility of community health care. For example, a synthesis of systematic reviews on CHW programs found that community embeddedness, defined by the authors as community members having a sense of ownership and positive relationships with CHWs, was among the most important factors that contribute to CHW success[3]. However, community embeddedness is wrought with numerous challenges rooted in the sociocultural and economic contexts of regions and countries. Scott and colleagues (2018) suggested the need to develop tailored evidence that appropriately informs policy and practice that reflects regional and cultural differences[3].

This article focuses on South Asia, which consists of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. While there are thousands of distinct cultures and ethnicities in the region, South Asians can be considered a pan-ethnic group with similar characteristics and a shared history that has contributed to South Asia's present-day social, cultural, and political environments. In South Asia, CHWs have played important roles in health promotion, pregnancy, delivery (childbirth), and family planning services. Recent estimates show that for every 1000 residents, India has 0.6 CHWs, Pakistan has 0.5 CHWs, and Bangladesh has 0.1 CHWs[4]. Unfortunately, CHWs face numerous challenges that complicate the quality and accessibility of the health services they provide. Many of these challenges are social, cultural, or political in nature, and there have been few attempts to investigate these influences. As such, this article examines the social and cultural challenges that CHWs face in South Asia that complicate the quality and accessibility of health services they provide. This article will not only analyze potential barriers to practice and cultural acceptance, but also outline the strategies implemented to address, alleviate, or modify these challenges. To the authors' knowledge, there is no published literature that has systematically and comprehensively categorized the social and cultural influences that CHWs face in South Asia, while there has been a sizable amount of research in this area. By better understanding the role of CHWs in South Asia, more can be learnt about specific strategies that promote CHWs across a milieu of social, cultural, and political considerations. This insight would enable the formulation of tailored guidance on the design, administration, and monitoring of CHWs in the region.

Methods

Eligibility

This study was most interested in primary empirical articles of any study design that discussed the cultural and social challenges faced by CHWs in South Asia. CHWs were defined broadly as those who work as licensed or unlicensed healthcare workers in South Asian communities. CHWs included 'lady health workers' and traditional birth attendants, but not midwives or nurses unless their role was primarily situated in a community context. This study looked for studies where CHWs served as participants and described the challenges they faced, or where the authors analyzed the patients' and people's perspectives of CHWs in their communities. The full list of eligibility criteria is shown in Table 1.

Search strategy and screening

A systematic database search was conducted on 29 January 2020 in MEDLINE, Embase, Global Health, and PsychINFO. The search

strategy was developed iteratively by using previously published reviews on CHWs and discussion among the research team. The research team conducted both title and abstract and full-text screening in pairs with verification using the Covidence software (Veritas Health Innovation; http://www.covidence.org), a review screening software available online through institutional access. All conflicts were resolved by a third screener at both stages.

Data extraction and analysis

The following study and participant characteristics were extracted from included studies: author, year of publication, title of study, research objectives, country, study design, data collection methods, and number and type of participants. The descriptive analysis and the descriptions of each study can be found in Appendix I.

This study employed thematic analysis and constant comparison to categorize the findings of all studies[5]. All researchers first read through the same five articles and developed an analytic memo indicating their findings in relation to the research questions. The research team then discussed their reflections and developed a taxonomy of themes and subthemes. This taxonomy served as a guide for a second round of pilot coding where another set of five articles was reviewed as a team and the preliminary taxonomy of themes and subthemes was refined. Once the team was comfortable with the taxonomy, they analyzed the remaining articles in pairs, iteratively refining the taxonomy with emergent themes, subthemes, and concepts. Once all articles were coded, each researcher developed a narrative summary of the themes. The lead researcher reviewed these summaries and integrated them into a findings section. All researchers then reviewed the findings section to ensure its accuracy and comprehensiveness.

Table 1: Eligibility criteria

Inclusion	Exclusion
• Primary, empirical, qualitative, quantitative (ie survey studies), or mixed-methods studies only • The social or cultural challenges faced by licensed or unlicensed CHWs (including other similar terms such as 'lady health workers' and 'midwives') • CHWs as participants of study or as primary topics (ie perceptions of participants towards CHWs) • Strategies implemented to address, alleviate, or modify these challenges • Studies conducted in South Asian countries, or at least the location of the first author is a South Asian country: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka • Studies published from 2010 onwards to be consistent with the sociocultural challenges that CHWs face today	• Not peer-reviewed or published in an academic journal, ie commentaries, editorials, theses, books • Studies that are testing the effectiveness of a particular CHW intervention (eg training program) • Studies focusing on challenges faced by CHWs that are not social or cultural in nature • Studies on organizational, team, or professional culture of CHWs • Nurses and physicians delivering health services in communities

CHW, community health worker.

Results

Search results

After the removal of 5624 duplicates, title and abstract screening was performed on 4879 articles; 4702 were excluded because they did not meet the eligibility criteria. Full-text screening was conducted on 177 articles and a further 139 studies were excluded for the various reasons outlined in Figure 1. A total of 38 studies were analyzed in this review[6-43].

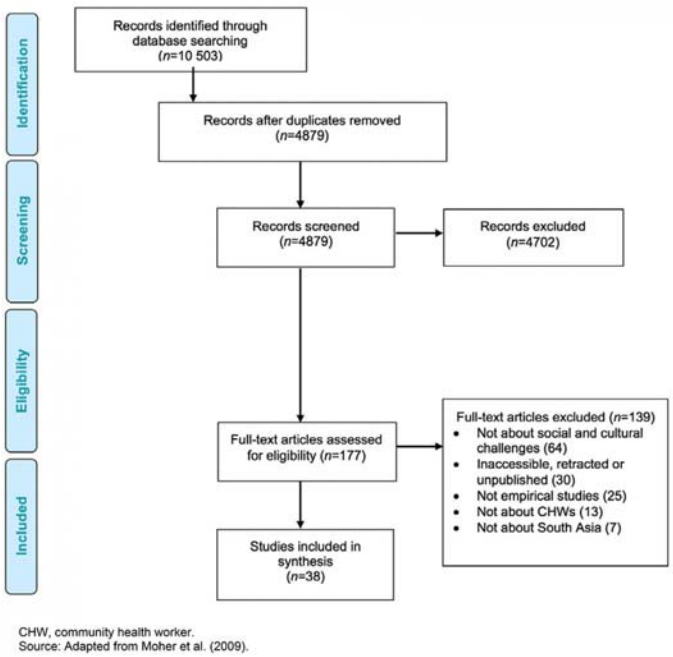

Figure 1: Screening and selection

Religious and cultural norms

Out of 38 articles, 16 articles mentioned religious and cultural norms as they pertained to CHWs. In this section, these issues are highlighted.

Disrespect, disapproval, and physical challenges: CHWs faced disrespect from the communities they served, which was often rooted in cultural norms pertaining to the role of young females in families and communities. For example, in one study in Pakistan, young unmarried CHWs expressed how their community viewed them as 'immoral women' because of their interactions with men, which conflicted with cultural norms that circumscribed male–female interactions in the community[23]. Specifically, unmarried females were required to sit with men and discuss health topics, such as sexual health, as part of their CHW responsibilities; these discussions were considered to be taboo. CHWs reported a number of challenges when trying to discuss family planning with men; these challenges were pronounced when receiving training by male staff on how to have family planning discussions because of cultural norms that guide male–female interactions[23]. In some cases, interactions between unmarried CHWs and males in the community over time led to CHWs being considered by the community as 'unmarriageable'. To prevent negative cultural attitudes towards them, CHWs refrained from carrying materials with the CHW program logo to avoid association with disseminating contraceptives and 'spreading immortality'. Similarly, Bahar and colleagues noted how CHWs had to manage Pakistani community misperceptions about polio vaccines[13]. Cultural mores and norms led to negative attitudes that ultimately limited the quality and reach of their health services in the community[10].

Blum et al detailed how religious beliefs and practices in Bangladesh moderated the relationship between CHWs and the communities they serve[15]. The authors explained how the birthing environment in traditional Hindu households – a temporary, separate room referred to as *aus ghor* – was particularly problematic. Typically, the room barely had adequate space for the mother and baby, forcing the CHW to position herself partially outside the structure when assisting the delivery. Furthermore, the CHW was unprotected from rain during monsoon seasons. Additionally, due to the association of blood and fluids with pollution, the structure was typically constructed in a 'dirty' area. Communities also subscribed to *choa-chuee*, a belief system that anything an 'impure' person touches is also impure, and therefore must be avoided. As a result, during delivery, family members would refuse to provide assistance or materials to the CHW because they were regarded as 'impure'. Furthermore, the CHWs were required to pump the tube well for water herself, or somebody from the family would pour water into her cupped hands, invariably maintaining a distance while doing so. These practices caused frustration for CHWs, who expected and appreciated cooperation during the birthing process.

CHWs reported how cultural norms impeded their ability to provide care to women in their communities. For example, Blum et al noted that in Bangladeshi village settings, families typically allocated a dirty, private corner of the house to serve as a place for delivery[15]. In addition, as families placed a strong emphasis on removing women from the prey of evil spirits, a dark area was preferred. The lighting was generally poor, as most rural households did not have electricity. When the delivery occurred at night, there was only the light from a kerosene lamp, which was insufficient, especially if an episiotomy was needed. Delivery bed materials had to be discarded after the birth because childbirth was traditionally considered to be polluted by low-caste community members. Hence, an old blanket or jute sack was placed on the floor, covered by a plastic sheet. CHWs found it arduous to deliver on the floor, which they felt compromised their

skills.

Gopalakrishnan et al also noted a number of sociocultural barriers in India that were alleviated by digital health interventions[21]. Specifically, CHWs noted that sociocultural and gender norms prevented young newly married women from stepping out of their home or being seen in public, which limited the CHWs' ability to provide them services by mobile health. In certain cases, cultural norms also restricted women from leaving their homes after giving birth for more than a month after delivery, which prevented women from accessing essential postnatal health services.

CHWs reported cultural and religious norms that inhibited their clients' freedom to make decisions about their health, which made it difficult for CHWs to carry out work such as linking women with antenatal care and institutional delivery[36]. CHWs reported difficulty in registering women early in their pregnancy partly because of cultural norms that preferred sons over daughters. Couples with a female child were reluctant to disclose second pregnancies because of taboos around expectations of a male child. Verma and Acharya also detailed that CHWs in India did not hold any power to influence community social structures, even if they wanted to, because they feared retribution by community members[42]. In particular, these CHWs were restricted from visiting the houses of lower-caste clients and were bound to visit affluent houses because of their influence and resources within the community.

Cultural perceptions of family planning and contraceptives: Some CHWs highlighted that the health services they provided, such as family planning, were perceived negatively by community members. For example, Khan et al described how a Muslim community in Pakistan held the perception that family planning was a 'sin' against Islamic principles and promoted a Western agenda to control the population of low-income countries[24]. However, Baha et al noted that in some Pakistani Muslim communities, religious leaders would publicly preach the importance of CHWs, which contributed to community acceptance of CHW health services[13].

Cultural preference for home delivery: CHWs reported how cultural and religious norms contributed to women preferring home delivery rather than institutional delivery. For example, Blum et al noted that CHWs in Bangladesh were expected to deliver at home, regardless of their client's condition[15]. Similarly, Sarin and Lunsford detailed that there were strong cultural preferences in India for home deliveries, coupled with religious proscriptions against immunization, birth spacing, and contraception[36]. Additionally, cultural, and religious norms also affected CHWs' self-efficacy; CHWs had to convince women to use health services, and often cultural norms in Nepal inhibited women's agency in making decisions about their own health[36]. Shah et al also noted that sociocultural norms affected women's choice to deliver institutionally, specifying that women chose traditional care during birth and the postpartum period where they received support from their family and neighbors, and chose to deliver in a healthcare facility only if there were complications[39].

Personal biases of CHWs: Some articles reported that CHWs displayed bias stemming from their own cultural and religious beliefs, which affected the quality of care they provided. The following biases were found to be particularly important: between Hindus and Muslims, between higher and lower castes, and between older and younger generations. First, Sarin and Lunsford reported how, in India, CHWs' beliefs affected how they treated their clients[36]. For example, Hindu CHWs refused to enter or eat or drink at the homes of their Muslim clients, which limited interactions, decreased the quality and reach of their health services, reinforced stereotypes, and impeded the promotion of birth spacing methods. Additionally, CHWs in India displayed their biases by showing a tacit preference for sons being born[36]. As a result, clients refrained from disclosing a second pregnancy because of community expectations of a male child.

Second, Abbott and Luke noted that the quality of care provided by CHWs in India correlated with the client's caste[6]. For example, one CHW was noted to approach the homes of her upper-caste clients and often accepted a seat on one of the *charpoys* (woven cots) in front of their houses, expressing familiarity with them through gestures and physical cues. Meanwhile, the same CHW would remain standing at the perimeter of the cluster of lower-caste houses while speaking with her clients, often using a harsher and more instructional tone of voice. Lower-caste women were also observed to be apprehensive of the CHWs, suggesting that they were unaccustomed to such visits and had not developed a rapport.

Finally, Abbott and Luke also described how the age of the CHWs in India contributed to low-quality health care[6]. Specifically, the CHW they interviewed enjoyed a high status within the family and community as a married woman with sons. The CHW followed a set of norms regarding how she could interact with girls and women of lower generational status. For example, it was considered taboo for parents to talk to their children about sexuality. When asked why sisters-in-law were allowed to talk to adolescents about sex but mothers were not, the CHW answered: 'Mothers consider themselves to be an elder of the family and they feel embarrassed talking about these things', thus contributing to the lack of awareness of sexual health among youth. Additionally, in one study from Pakistan, CHW perspectives on contraceptive use among youth emphasized a lack of awareness about important contraceptive issues, as well as a lack of understanding of contraception[33]. Therefore, religious and sociocultural beliefs about different contraceptive methods among CHWs could be potential determinants of low contraceptive use[33].

Cultural and religious practices and misconceptions: Some CHWs discussed the intersection between cultural practices and health, specifically when it related to women's health. For example, Dykes et al described how women in Pakistan may be given local herb solutions over what is recommended by allopathic medicine for breastfeeding[18]. Similarly, Bhattacharya et al highlighted that CHWs in India who delivered neonates tended to avoid cutting the umbilical cord because of a sociocultural stigma that cutting the cord is considered impure or polluting, irrespective of their formal training[14]. Religious practices also seeped into maternal health care. For example, Bhattacharya et al noted that some Hindu

communities believed in *sutak* (ie pollution confinement), where the mothers and neonates were considered unclean or polluted and therefore were socially and physically segregated from the community. The authors compared this with a similar practice of ritual baths that occurs in the Muslim faith.

It was also noted that the community's overall lack of information, compounded by cultural and religious beliefs, led to misconceptions about maternal and child health care. For example, Bhattacharya et al reported that there was a lack of knowledge in India about the importance of birth weight, with a higher prevalence of home births leading to reduced opportunities of weighing newborns at birth[14]. There was an additional layer of superstition and belief that knowing the birth weight led to the child's sickness through the 'evil eye'. However, the authors reported no apparent familial resistance towards recording birth weight and that men were more likely to support this practice.

Gender and sex

Thirteen studies discussed barriers related to the gender and sex of CHWs[6,10,11,15-19,23,24,31,35,36]. Challenges associated with gender and sex included difficulty balancing work with family and home-life expectations, barriers specific to being a female worker, barriers to working with female clients, and security concerns. Specifically, Khan et al speaks to the 'lack of education, excessive domestic work, family pressure, husband resistance and limited mobility' as being gender- and sex-related challenges for CHWs in Pakistan[24].

Managing domestic and CHW responsibilities: Difficulty balancing professional work with personal lives and children was a recurring theme across the literature[17]. Because of societal norms and cultural expectations, women often lived within extended family systems and had significant household responsibilities that posed a challenge to pursuing a career as a CHW[18]. CHWs also reported that their CHW responsibilities had a persistent impact on their ability to fulfill their domestic, household responsibilities, leading to family disapproval over time[23]. Dykes et al outlined further challenges associated with women and the reality of their home life as 'although they prepare meals, male and elderly members of the household eat first and women last. This means that in a culture where, due to poverty, most people's diet is already suboptimal, women are likely to receive an even poorer nutrient intake'[18]. Alam et al highlighted that 11% of female CHWs in their study in Bangladesh left their work because of disapproval from their husbands or families, speaking further to the challenge gender plays not only in the work of CHWs in South Asia, but also in their retainment[11].

Household responsibilities were culturally considered to be the reponsibility of females even if they were working as CHWs, so maintaining a work–life balance was challenging without family support[10]. CHW retention rates were heavily affected by these household expectations[10]. In addition, lack of family support or disapproval from family increased dropout from the CHW program, and contributed to demotivation for those CHWs who remained[10]. However, while many CHWs in this study reported that they struggled to manage both expected household responsibilities and CHW duties, the majority expressed confidence in their ability to manage both[10].

Gender- and sex-related barriers when interacting with clients and community members: In addition to facing disapproval at home, female CHWs faced challenging interactions with clients because of their gender and sex[35]. Hanif and colleagues highlighted that unmarried female CHWs in Pakistan faced greater behavioral restrictions than married women faced around men, which created barriers to providing health services that adequately addressed their clients' needs[23]. Female CHWs also shared being alienated from decision-making in their communities and being unable to attend village meetings because of their sex[31,35].

A case study in Northern India discussed a specific challenge faced by women in health care called *purdah*. *Purdah* is 'a cultural institution that strictly regulates interactions between men and women, especially married women, to protect the honor of the family'[6]. Due to *purdah*, female CHWs were limited in the interactions they could have with men outside their homes, which led them to refrain from providing health education to men on taboo topics such as contraception[6]. Although *purdah*'s intent is to 'protect the status of a woman', it impeded CHWs' ability to provide information, education, and communication to the community on various health topics, all rooted in their sex and/or gender. Efforts to transform the strict norms of *purdah*, enforced by the communities, were also resisted by communities[6].

Not only did gender and sex pose a challenge for female workers interacting with male clients, but the same challenge was faced if their clients were female. Women tended to react in a different manner when their husbands were home, changing the dynamic and limiting topics and questions they felt comfortable discussing or inquiring about[23]. Generally, in certain cultures in South Asia, men were viewed as the gatekeepers of women receiving care; so, CHWs who felt uncomfortable with their interactions with men would in turn have trouble providing health services[23]. Additionally, when it came to topics specifically related to family planning, women would often have to ask their husbands' permission, thus making it difficult for CHWs to promote family planning in various communities[24]. Because of this notion of men being gatekeepers of women, CHWs found it best to advise women who approached them for contraceptives to first speak with their husbands to avoid conflict[36].

Security and safety concerns: Many female CHWs living alone in the communities they served feared being harassed by men[16]. They also found it dangerous to travel alone at night; for example, to deliver medication and resources to clients[19]. Within clients' homes, CHWs experienced disrespect and even abuse from men[23]. These security challenges faced by CHWs translated to poor health outcomes and even mortality of their clients. For example, one CHW feared that they would be kidnapped in the community, and therefore decided against seeing a client, which resulted in the client's death[15].

Caste

Seven included studies discussed the barriers that CHWs faced related to caste and status in communities[6,7,14,15,17,28,42]. The role of caste in South Asia is all-pervasive, touching all aspects of life, and this has implications for CHWs. Despite an intention to minimize the social distance between the CHWs and lower-caste clients, class hierarchies were reinforced by the way CHWs provided their services and communicated with community members[6]. Such power dynamics were evident when the quality, tone, and extent of interactions between CHWs and clients depended on the caste of both[6,28]. These power structures were also accepted, and potentially upheld, by some lower-caste women, making it difficult for CHWs to reach all populations[6]. For example, conflicts or tensions arising from caste differences led to diminished communication and provision of inadequate healthcare information and services[6]. Some care seekers reported that they were asked for their caste when they visited healthcare facilities, with the quality of their treatment depending on the answer[42].

According to one study, the roles assigned to CHWs were based on their social status, which was partly determined by caste differences[14]. CHWs of lower castes, including *Dais* (ie traditional birth attendants in rural India), had different roles and responsibilities than those of higher castes[42]. Traditionally seen as the serving class, *Dalits* (ie the lowest caste in India, deemed the 'untouchables') were often met with societal resistance if they sought to increase their status and reputation[42]. Some care seekers may also hold biases against *Dalit* CHWs[42]. For example, clients in one study generally maintained their identity when interacting with CHWs, even if this meant that higher-caste patients refused or belittled care from lower-caste CHWs[42]. As a result, CHW autonomy may be circumscribed by a social obligation that emphasizes prioritizing service provision to the higher-caste elite[42]. For example, communities often viewed midwifery as 'polluting' or impure work[42]. For this reason, *Dais* were often expected to dispose of the placenta and bathe 'polluted' newborns. This expectation stemmed from the belief of pollution confinement, where *Dais* interacted with the mother and neonate because *Dais* were already considered 'polluted' due to their lower caste[14]. This expectation was reinforced in CHW training schemes that taught an array of skills according to caste, where more 'polluting' work was allocated to lower-caste CHWs[14].

Caste-based discrimination was also seen in care provided by CHWs of higher castes[42]. For example, higher-caste CHWs demanded greater respect from lower-caste clients[42]. At the same time, some CHWs from higher castes showed disrespect to clients and their families of lower castes[15]. In fact, some upper-caste CHWs scolded and humiliated clients in an attempt to reinforce their 'higher caste'[15]. Some CHWs also disrespected or harassed lower-caste clients because of a perceived lack of competency[7]. Other CHWs refrained from entering the houses of lower-caste clients[42]. This reinforced a tacit conflict between local norms of segregation by caste – both spatial and social – and CHW duties[42].

Generation

Four studies identified that CHWs in South Asia faced unique generational barriers, which often intersected with other structural challenges[6,23,36,39]. Status and interpersonal relationships were generally governed by generational hierarchies, where older generations were typically responsible for decision-making that affected all family members[6,36]. For example, some elder family members, such as mothers-in-law, advanced their cultural preferences for home deliveries; in many cases, this was coupled with a religious proscription against immunization, birth spacing, and contraception[36]. The dominance of elder family members in decision-making served as a common challenge for CHWs in carrying out health promotion activities[36].

Other forms of social stigma related to generational differences existed when CHWs interacted with children and adolescents. Health promotion efforts were affected by taboos that meant refraining from discussing sexuality with children[6]. The social rules that prevented parents from engaging in such discussions with their children determined which health information was delivered and how, which hindered CHWs' abilities to carry out professional responsibilities[6]. Although trained to provide health care to adolescents, some CHWs limited their interactions and educational efforts with younger clients, to maintain their clients' perceived purity and innocence[6].

One study found that a generational hierarchy existed in societies where decision-making was dominated by men[39]. Social norms and the patriarchal power structures in Nepal pressured women into a more passive decision-making role[39]. In India, a woman's status was often associated with her age, marital status, and if she bore sons or daughters[6]. This translated to the unique struggles of female CHWs where young female workers faced greater behavioral restrictions around men, such as limited direct interaction if at all, while older and married women did not face the same barriers[23].

Discussion

Summary of findings

In this systematic review of 38 studies, it was found that CHWs face a number of sociocultural challenges when working in South Asian communities, including religious and cultural norms and practices, gender and biological sex, caste, and generation. Although an attempt has been made to outline how each type of challenge differs, the authors would like to emphasize the interconnectedness of the challenges. All challenges in some way relate to one another and stem from the unique sociocultural milieu of South Asia, and the various subcultures that exist in this diverse region. The findings of this investigation may serve as an essential resource for program planners and decision-makers considering how to improve the effectiveness and reach of CHW programs. The following section will continue the examination of these challenges in light of extant literature.

Importance of considering the sociocultural milieu

It was found that the sociocultural milieu of South Asian communities has unique effects on the attitudes, behaviors, and practices of community members, which ultimately affects CHWs' scope of practice. The professional autonomy of CHWs is

important to consider because it can contribute to high-quality and immediate health care for rural and remote communities where health care is inaccessible. For example, a number of studies have promoted the notion of expanding CHW scope of practice as important CHW competencies[44,45]. In this view, the CHW scope of practice is not rigid, but is evolving and expanding with time to create CHWs who have the skills to provide an array of health services that meet the needs of their communities. However, the value and belief systems present in South Asian communities permeate in a variety of ways that can both promote and circumscribe the capabilities of CHWs to provide high-quality, immediate, and accessible health care.

In this review of primary studies, multiple instances were found where barriers stemming from the caste, age, or biological sex of CHWs led to low-quality care or the death of patients in emergency care situations. These barriers reflect long-standing community perceptions towards a group of people and their characteristics. These perceptions can have long-lasting impacts on CHWs, which ultimately affect healthcare access in rural and remote communities where CHWs provide most of their services. The sociocultural milieu where CHWs work has seldom been considered[46], at least compared to program and financial considerations[1,9]. Negative community perceptions may be difficult to tackle or reduce once they have taken root in community value systems. Community perceptions of CHWs are also essential to consider because, as has been shown in this review, they have unique impacts on the daily lives of CHWs beyond their professional roles and responsibilities. For example, because CHWs were tasked with educating men on taboo topics, some communities considered them unmarriageable because of the *purdah* value system[23]. Furthermore, CHWs who primarily provided birthing services were permanently associated with pollution confinement because of the perception that birthing and delivery is a 'dirty' process[15].

Overall, a number of self-reinforcing characteristics were found that contributed to the further stigmatization and marginalization of minority communities. Lower-caste CHWs, for example, were more likely to provide care to lower-caste clients and be tasked with specific activities – such as birthing – that contributed to negative community perceptions of them. This example emphasizes how the sociocultural milieu affects the lives of CHWs in ways that serve to compound this misfortune, depending on the social locations of CHWs in their communities. This is in line with other literature on this topic; a comprehensive review of CHWs found that although CHWs provide essential health care, they are viewed as 'second-class, temporary solutions'[47]. In this current investigation, the various self-reinforcing characteristics have been elaborated on. The multiple barriers that circumscribe the role of CHWs in rural and remote communities, that limit the extent to which they can provide high-quality and accessible care, have been described. The authors believe that the value and belief systems of South Asian communities often become among the biggest implementation barriers for meeting the goals intended by CHW deployment in rural communities. It is essential to prepare current and new CHWs in South Asia to identify and address priority challenges that arise from their community's unique sociocultural milieu[48]. This skill will aid in creating deeper and more positive relationships with communities and other healthcare providers, which will ultimately contribute to a higher quality and access of care.

Conclusion

These findings recommend that CHW programs incorporate tailored and specific cultural learning as a core component of CHW practice. Cultural learning has been identified by previous research as an important program component; but there is still a need to introduce greater opportunities to receive relevant and tailored learning to the unique sociocultural characteristics of communities[45,49]. Certain characteristics of cultural learning are essential. First, it is important for CHW programs to explicitly recognize the importance of the effect of cultural values and beliefs on CHW practice. This recognition entails preparing CHWs to build a positive rapport with community members as well as explaining to CHWs that their rapport with their community will have long-lasting impacts on their lives beyond their work as a CHW.

Second, it is important for CHW program planners to recognize that CHWs are members of communities they serve, so they may hold and express the same values. This may introduce challenges to their professional responsibilities. This study found multiple biases in CHWs that circumscribed the equitable provision of health services in communities: between religions, between castes, and between generations. Although there is a considerable amount of guidance on developing CHW programs[50], little tailored guidance was found on preparing CHWs for some of these sociocultural realities.

Finally, CHWs work in intricate and fragmented healthcare systems that require frequent cooperation with community leaders and healthcare providers. Developing positive community and healthcare provider perceptions of CHWs is essential. Some research from the USA shows that healthcare providers with greater cultural competency were more likely to hold positive views of CHWs and as a result engage them as integral members of the healthcare team at primary care clinics[51]. Thus, CHW program planners need to equitably engage representatives from communities and different healthcare provider groups that provide health services.

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APPENDIX I:

Search strategy, and study and methodological characteristics

Search strategy
1/ Community Health Workers/
2/ Community Health Nursing/
3/ health auxiliary.tw.
4/ frontline health worker$.tw.
5/ midwife.tw.
6/ midwives.tw.
7/ Midwifery.ti,ab.
8/ Birth Attendant.tw.
9/ outreach worker$.tw.
10/ lay health worker$.tw.
11/ village health worker$.tw.
12/ volunteer health worker$.tw.
13/ voluntary health worker$.tw.
14/ community health agent$.tw.
15/ health promoter$.tw.
16/ community health aide$.tw.
17/ community health nurse$.tw.
18/ community health officer$.tw.
19/ community health volunteer$.tw.
20/ community health distributor$.tw.
21/ community health surveyor$.tw.
22/ community health assistant$.tw.
23/ community health promoter$.tw.
24/ community IMCI.tw.
25/ community volunteer$.tw.
26/ health extension worker$.tw.
27/ village health volunteer$.tw.
28/ close-to-community provider$.tw.
29/ community-based practitioner$.tw.
30/ lady Health worker$.tw.
31/ barefoot doctor$.tw.
32/ Community Practitioner$.tw.
33/ community-based practitioner$.tw.
34/ rural health auxiliar*.tw.
35/ traditional birth attendant$.tw.
36/ Anganwadi.tw.
37/ Animatrice.tw.
38/ Barangay health worker$.tw.
39/ Basic health worker$.tw.
40/ Community drug distributor$.tw.
41/ Community health representative$.tw.
42/ Community resource person$.tw.
43/ Female multipurpose health worker$.tw.
44/ Kader.tw.
45/ Monitora.tw.
46/ Mother coordinator$.tw.
47/ Outreach educator$.tw.
48/ Shastho shebika.tw.
49/ Shastho karmis.tw.
50/ Sevika.tw.
51/ Village health helper$.tw.
52/ Village drug-kit manager$.tw.
53/ Accredited Social Health Activist$.tw.
54/ Auxiliary Nurse$.tw.
55/ Auxiliary Nurse-midwife.tw.
56/ Bridge-to-Health Team$.tw.
57/ Behvarz.tw.
58/ Care Group$.tw.
59/ Care Group Volunteer$.tw.
60/ Community Case Management Worker$.tw.
61/ Community Health Care Provider$.tw.
62/ Community Health Extension Worker$.tw.
63/ Community Surveillance Volunteer$.tw.
64/ Family Health Worker$.tw.
65/ Family Planning Agent$.tw.
66/ Family Welfare Assistant$.tw.
67/ Female Community Health Volunteer$.tw.
68/ Health Agent$.tw.
69/ Health Assistant$.tw.
70/ Health Surveillance Assistant$.tw.
71/ Lead Mother$.tw.
72/ Malaria Agent$.tw.
73/ Maternal.mp. and Child Health Worker$.tw.
74/ Mobile Clinic Team$.tw.
75/ Nutrition Agent$.tw.
76/ Nutrition Counselor$.tw.
77/ Peer Educator$.tw.
78/ exp Asian Continental Ancestry Group/ or Asian continental.mp.
79/ exp INDIA/ or india*.mp.
80/ exp BANGLADESH/ or bangladesh*.mp.
81/ exp NEPAL/ or nepal*.mp.
82/ exp PAKISTAN/ or pakistan*.mp.
83/ exp Sri Lanka/ or sri lanka*.mp.
84/ bengali*.mp.
85/ indo asian.mp.
86/ or/1-77
87/ or/78-85
88/ 86 and 87 [2930]

Table A1: Study characteristics

Author (year)	Title of Study	Research Objectives	Country of Publication
Abbott (2011)	Local Hierarchies and Distributor (Non) Compliance: A Case Study of Community-Based Distribution in Rural North India	Uncover the conflicting expectations that many Community based distributors experience: to comply with project objectives without violating local social norms that limit interactions across status boundaries	India
Abdel-All (2019)	What do Accredited Social Health Activists need to provide comprehensive care that incorporates non-communicable diseases? Findings from a qualitative study in Andhra Pradesh, India	Understand the current capacity and challenges faced by ASHAs, since they are being deployed to provide NCD care on top of their regular work for the first time. The Indian National Program for Cardiovascular Disease, Diabetes, Cancer and Stroke (NPCDCS) was introduced to provide non-communicable disease (NCD) care through primary healthcare teams including Accredited Social Health Activists (ASHAs)	India
Afsar (2005)	Recommendations to strengthen the role of lady health workers in the national program for family planning and primary health care in Pakistan: the health workers perspective	Assess the strengths and weakness of the National Program for Family Planning and Primary from the Lady Health Workers (LHW) perspective	Pakistan
Alam (2012)	Performance of female volunteer community health workers in Dhaka urban slums	Understand the relative importance of factors affecting female volunteer community health workers active participation and to recommend strategies for improving their participation	Bangladesh
Alam (2012)	Retention of female volunteer community health workers in Dhaka urban slums: a case-control study	Understand factors associated with female volunteer community health workers retention, and consequently recommend strategies for increasing their retention	Bangladesh
Alam (2014)	Retention of female volunteer community health workers in Dhaka urban slums: a prospective cohort study	Understand the factors associated with retention of volunteer CHWs once the project was more mature	Bangladesh
Aijaz (2014)	Assessment of services provided by Lady Health Workers' (LHWs) at primary health centers at district Quetta, Balochistan.	Find the factors affecting the services of LHWs and to give recommendations to enhance the access and coverage of primary health care services at District Quetta, Balochistan	Pakistan
Bahar (2017)	Challenges and experiences of lady health workers working in polio campaigns in district Nowshera, Khyber Pakhtunkhwa, Pakistan	Identify challenges that LHWs face in performing their duties in door-to-door visits for polio vaccination and explore the perceptions of program officials about what kind of complaints or issues they received from LHWs and the actions they have taken to solve the issues	Pakistan
Battacharya (2008)	'To weigh or not to weigh?' Socio-cultural practices affecting weighing at birth in Vidisha, India	Explore the socio-cultural practices affecting weighing at birth in the community in Vidisha district, Central India	India
Blum (2006)	Attending Home vs. Clinic-Based Deliveries: Perspectives of Skilled Birth Attendants in Matlab, Bangladesh	Examine the feasibility of home vs. facility-based delivery from the perspective of 13 skilled birth attendants	Bangladesh
Brahmbhatt (2017)	Focused Group Discussion of urban ASHA workers regarding their work related issues	Identify work related problems faced by urban ASHA workers and to seek suggestions for their work-related issues	India
Closser (2015)	Pakistan's lady health worker labor movement and the moral economy of heroism	Contextualise and theorizes the concept of target LHVs	Pakistan
Dykes (2012)	Exploring and optimising maternal and infant nutrition in North West Pakistan	Explore and contextualise meanings, beliefs and practices surrounding maternal and infant nutrition in North West Pakistan and to use the findings to inform the development of a nutritional improvement programme adapted to local needs	Pakistan
Fotso (2015)	Male engagement as a strategy to improve utilization and community-based delivery of maternal, newborn and child health services: evidence from an intervention in Odisha, India	Describe the influence of a male engagement project on the utilization and community-based delivery of MNCH care in a rural district of the country	India
Glenton (2010)	The female community health volunteer programme in Nepal: Decision makers' perceptions of volunteerism, payment and other incentives	Explore the views of stakeholders who have participated in the design and implementation of the Female Community Health Volunteer regarding Volunteer motivation and appropriate incentives, and to compare these views with the views and expectations of Volunteers	Nepal
Gopalakrishnan (2020)	Using mHealth to improve health care delivery in India: A qualitative examination of the perspectives of community health workers and beneficiaries	Seek perspectives of CHWs and beneficiaries on the uptake of CAS, changes in CHW-beneficiary interactions since the introduction of CAS and potential barriers faced by CHWs in use of CAS	India
Hafeez (2011)	Lady health workers programme in Pakistan: challenges, achievements and the way forward	Review the Lady Health Workers programme and critically explore various aspects of the process to extract tangible implications for other similar situations.	Pakistan
Hanif (2012)	Pride, respect, risk: Gender-based barriers faced by LHWs in primary health care provision in Quetta, Pakistan	Study the perceptions of LHWs on the gender based barriers faced in service provision	Pakistan
Khan (2012)	Perceived individual and community barriers in the provision of family planning services by lady health workers in Tehsil Gujar Khan	Identify contextual barriers (social, cultural, geographic and economic), faced by Lady Health Workers (LHWs) and to assess their strategies at different levels (individual, community and system) in the provision of family planning services to their clients in Tehsil Gujar Khan	Pakistan
Lehnertz (2013)	Local understandings and current barriers to optimal birth intervals among recently delivered women in Sylhet District, Bangladesh	Explore how to integrate the promotion of healthy fertility practices into a package of maternal and neonatal care interventions	Bangladesh
Malhotra (2003)	Of Dais and Midwives: 'Middle-class' Interventions in the Management of Women's Reproductive Health; A Study from Colonial Punjab	Explore with the politics behind the introduction of 'scientific' midwifery practices by the colonial state in Punjab and the manner in which the emerging Punjabi elite responded to this change	India
Mendenhall (2014)	Acceptability and feasibility of using non-specialist health workers to deliver mental health care: Stakeholder perceptions from the PRIME district sites in Ethiopia, India, Nepal, South Africa, and Uganda	Investigate the acceptability and feasibility of task-sharing mental health care in LMICs by examining perceptions of primary care service providers (physicians, nurses, and community health workers), community members, and service users in one district in each of the five countries participating in the Programme for Improving Mental healthcare (PRIME): Ethiopia, India, Nepal, South Africa, and Uganda; developing district level plans to integrate mental health care into primary care	Multiple - India and Nepal
Mishra (2014)	'Trust and teamwork matter': Community health workers' experiences in integrated service delivery in India	Discuss community health workers' experiences in integrated service delivery through village-level outreach sessions within the NRHM (National Rural Health Mission)	India
Mohapatra (2017)	Barriers Encountered by Accredited Social Health Activists (ASHA) in Arthritis Rehabilitation: A Qualitative Study	Explore the experiences of ASHAs while delivering arthritis education program	India
Mumtaz (2012)	Gender and social geography: Impact on Lady Health Workers Mobility in Pakistan	Understand how these cultural norms affect CHWs' home-visit rates and the quality of services delivered; to get an insight into how the CHW program policies and operations can improve working conditions to facilitate the work of female staff in order to ultimately provide high-quality services	Pakistan
Nandi (2014)	Addressing the social determinants of health: a case study from the Mitanin (community health worker) programme in India	Document how and why the Mitanins have been able to act on the social determinants of health, describing the catalysts and processes involved and the enabling programmatic and organizational factors	India
Nisar (2016)	Qualitative exploration of facilitating factors and barriers to use of antenatal care services by pregnant women in urban and rural settings in Pakistan	Explore facilitators and barriers to use of antenatal care services in rural and urban communities of two selected districts in Pakistan	Pakistan
Nishtar (2013)	Determinants of Contraceptives Use amongst Youth: An Exploratory Study with Family Planning Service Providers in Karachi Pakistan	Explore family planning service providers' perceptions regarding use of different contraceptive methods and to identify factors that are influencing their use amongst currently married youth aged 18-24 years in slum areas of Karachi	Pakistan
Puett (2015)	'Sometimes they fail to keep their faith in us': community health worker perceptions of structural	Describe the results of qualitative investigations into CHW perceptions of barriers to quality of care among two groups of	Bangladesh

	barriers to quality of care and community utilisation of services in Bangladesh	workers implementing community case management of acute respiratory infection, diarrhoea and severe acute malnutrition in southern Bangladesh. We explored systemic barriers to service delivery, pertaining to communities and health systems, which limited the usefulness and effectiveness of CHW services	
Saprii (2015)	Community health workers in rural India: Analysing the opportunities and challenges Accredited Social Health Activists (ASHAs) face in realising their multiple roles	Explore stakeholders 'perceptions and experiences of the ASHA scheme in strengthening maternal health and uncover the opportunities and challenges ASHAs face in realising their multiple roles in rural Manipur, India	India
Sarin (2017)	How female community health workers navigate work challenges and why there are still gaps in their performance: a look at female community health workers in maternal and child health in two Indian districts through a reciprocal determinism framework	Examine the social, cultural, and institutional influences that either facilitate or impede ASHAs' abilities to deliver services effectively through the lens of the reciprocal determinism framework of social cognitive theory	India
Sarkar (2018)	Factors influencing the place of delivery in rural Meghalaya, India: A qualitative study	Find out the factors influencing the choice of the place of delivery in rural women	India
Scott (2010)	Tying their hands? Institutional obstacles to the success of the ASHA community health worker programme in rural north India	Contribute to the growing literature on how best to design and support community health worker (CHW) programmes to maximize their positive impact	India
Shah (2018)	Barriers and facilitators to institutional delivery in rural areas of Chitwan district, Nepal: a qualitative study	Explore socio-cultural and health service-related barriers to and facilitators of institutional delivery	Nepal
Shahabuddin (2019)	Maternal health care-seeking behaviour of married adolescent girls: A prospective qualitative study in Banke District, Nepal	Explore married Nepali adolescent girls' healthcare-seeking behaviour throughout their pregnancies, during their delivery and postpartum	Nepal
Suryavanshi (2018)	Challenges and opportunities for outreach workers in the Prevention of Mother to Child Transmission of HIV (PMTCT) program in India	Understand the challenges faced by ORWs, and their perceptions of opportunities for program improvement	India
Verma (2018)	Social identity and perceptions about health care service provisioning by and for the Dalits in India	Explore perceptions of the women healthcare providers (Auxiliary Nurse Midwives and Accredited Social Health Activist) and seekers on the basis of their social identity	India
Wahlstrom (2019)	The professional role of skilled birth attendants' in Nepal – A phenomenographic study	Describe the Nepali Skilled Birth Attendants' (SBAs) perceptions of their professional role	Nepal

Table A2: Methodological characteristics

Author (year)	Study Design	Data Collection Method(s)	Number and Type of Participants
Abbott (2011)	Primary qualitative	Observation	111 community based distributors
Abdel-All (2019)	Primary Qualitative; Evidence synthesis	Semi-structured interviews and document analysis	180 ASHAs and 47 community members
Afsar (2005)	Primary qualitative	Semi-structured interview	20 Lady Health Workers
Alam (2012)	Primary mixed methods	Survey and focus groups	542 current and 146 dropout CHWs
Alam (2012)	Primary mixed methods	Survey and focus groups	542 current and 146 dropout CHWs
Alam (2014)	Primary quantitative	Survey	542 CHWs
Aijaz (2014)	Primary quantitative	Survey	209 lady health workers
Bahar (2017)	Primary qualitative	Semi-structured interviews and focus groups	31 lady health workers
Battacharya (2008)	Primary qualitative	Focus groups	NR
Blum (2006)	primary qualitative	Semi-structured interviews and focus groups	13 skilled birth attendants
Brahmbhatt (2017)	primary qualitative	Focus groups	8 ASHAs
Closser (2015)	Primary qualitative	NR	NR
Dykes (2012)	Primary qualitative	Focus groups	16 local lady health workers
Fotso (2015)	Primary qualitative	Semi-structured interview	11 ASHAs, 4 Anganwadi Workers, 2 auxiliary nurse midwives, 11 women, 7 husbands
Glenton (2010)	Primary qualitative	Semi-structured Interviews (19)	19 policy makers and programme managers.
Gopalakrishnan (2020)	Primary qualitative	Semi-structured interview	32 CHWs and 55 patients
Hafeez (2011)	Primary mixed-methods	Document analysis	Project documents, interaction with relevant stakeholders, performance validation and extensive feedback from the community were collected. The data so obtained was analyzed and evaluated against predetermined benchmarks
Hanif (2012)	Primary qualitative	Qualitative survey	18
Khan (2012)	Primary mixed-methods	Survey, semi-structured interviews, and focus groups	111 LHWs
Lehnertz (2013)	Primary qualitative	Semi-structured interviews and focus groups	NR
Malhotra (2003)	Primary qualitative	NR	NR
Mendenhall (2014)	Primary qualitative	Semi-structured interviews and focus groups	77 CHWs, 110 community members, 39 specialists and policy makers, 113 primary health care workers, 80 service users and caregivers
Mishra (2014)	Primary qualitative	Semi-structured interviews and observation	12 CHW
Mohapatra (2017)	Primary qualitative	Semi-structured interviews and focus groups	8 ASHAs, Hiriyadka (n=6) and Athradi (n=2) Primary Health Centers
Mumtaz (2012)	Primary mixed-methods	Semi-structured interviews and observation	20 CHWs + 25 community members
Nandi (2014)	Primary qualitative	Semi-structured interviews and focus groups	20 CHWs (Mitanin), 4 CHW program administrators, 3 community women
Nisar (2016)	Primary qualitative	Semi-structured interviews and focus groups	4 physicians, 5 pregnant women, 3 LHWs
Nishtar (2013)	Primary qualitative	Semi-structured interview	2 physicians, 4 Lady Health Visitors, 2 Lady Health Workers and 2 medical store drug providers
Puett (2015)	Primary qualitative	Focus groups	83 CHWs
Saprii (2015)	Primary qualitative	Semi-structured interviews and focus groups	36 ASHAs
Sarin (2017)	Primary qualitative	Semi-structured interview	49 ASHAs, 49 family members
Sarkar (2018)	Primary qualitative	Semi-structured interviews and focus groups	NR
Scott (2010)	Primary qualitative	Semi-structured interviews, focus groups, and observation	9 ASHAs, 4 local government members, 4 local people, two pharmacists, three physicians, 2 Anganwadi centre staff, 1 male health worker
Shah (2018)	Primary qualitative	Semi-structured interviews and focus groups	NR
Shahabuddin (2019)	Primary qualitative	Semi-structured interviews and focus groups	27 married adolescent girls, 7 CHWs, 1 government health officer, 1 in charge of health post, 1 physician
Suryavanshi (2018)	Primary qualitative	Focus groups	60 ORW
Verma (2018)	Primary qualitative	Semi-structured interview	120 ANMs, ASHAS, Care seekers (non-Dalit)
Wahlstrom (2019)	Primary qualitative	Semi-structured interview	15 SBAs