

# Moderation as Empowerment: Creating and Managing Women-Only Digital Safe Spaces

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This paper explores the creation, management and moderation of women-only online groups as digital safe spaces. We interview eleven founders and moderators of six distinct, closed, women-only Facebook groups that predominantly cater to women in and from the Global South. The study provides insights into the motivations and mechanisms for creating and moderating these safe spaces, the affordances of social networking sites that enable or hinder the creation and moderation of such spaces and finally, and the deep impact moderating such spaces has on the women who manage them. Based on these findings we discuss suggestions for specific technological affordances to enable and support digital safe spaces for marginalized and vulnerable communities.

CCS Concepts: • **Human-centered computing** → **Human computer interaction (HCI)**.

Additional Key Words and Phrases: Facebook groups , safe space, empowerment, moderation

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## 1 INTRODUCTION

In 2012, the first "women-only" parks were created in Rawalpindi, the fourth largest city in Pakistan. The change came after a woman, Quratulain Fatima, rose to the position of city administrator. Following her appointment, women in the community felt more comfortable bringing forward their concerns about their inability to escape harassment in public spaces dominated by men [144], which led to the creation of the first women-only park in the city.

The idea of safe spaces itself is not new, and goes as far back as the second feminist wave in the United States. Safe spaces are defined as "small-scale settings within a community or movement that are removed from the direct control of dominant groups, are voluntarily participated in, and generate the cultural challenge that precedes or accompanies political mobilization" [103, P.1].

The creation of feminist sisterhoods and safe spaces (e.g., women only rap groups) is a central part of second and third wave feminism. Butler and other third wave scholars understood the important role "of democratized technologies, the media, sub-cultural movements and networks"

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in the formation of a feminist consciousness [56]. The fourth feminist wave has transpired through interactions on online communities [27]. Feminist activists rely on social media for information sharing, networking, organization and online petitioning (Cochrane [41] cited in [110, P.15]). These online communities can host ‘safe spaces’ where groups of marginalized individuals can socialize without fear of ostracization [54, P.182].

Moderation is central to the functioning of online communities [85] as moderators “protect people’s capacities to participate in publics” when conflicts arise. By doing so, moderators perform “the work of creating, maintaining, and defining ‘networked publics’.” This includes responding to harassment and harmful content using technical tools (e.g., post approval systems) as well as strict application of community guidelines [85, P.3].

This paper investigates the mechanisms and personal costs of creating and maintaining digital safe spaces for vulnerable and marginalized populations. We interview eleven female moderators from six women-only Facebook groups where all six groups are either primarily comprised of women in South Asia (Pakistan or Bangladesh) or part of the South Asian diaspora in North America. We asked our interviewees about their motivations when first creating the groups, the vetting mechanisms before approving new member requests, content moderation practices, and how their understanding of their own groups and their role as moderators has evolved over time.

Given the many challenges women in South Asia face (e.g.,[99]), we argue that, much like the women-only parks introduced earlier, women-only online communities provide a safe space for women when their existence in shared public spaces - both online and offline - is always threatened and contested through the local lens of patriarchy in South Asia [142]. Having a sense of disempowerment - lack of control over one’s own life - the founders and moderators of these Facebook groups are empowered through finding others facing similar challenges thus making better sense of their own identities as women in a patriarchal society. By engaging with more experienced women who can give advice and guidance, both moderators and group members access more resources by gaining knowledge from others experiences.

However, the moderation and creation of such digital spaces is also fraught in patriarchal contexts given the extreme consequences of data leakages which often result in abuse and violence meted out to the female members who post personal narratives and in extreme cases can result in honor killings [2, 7, 12]. Our work explores challenges moderators face in setting up and maintaining digital safe spaces in South Asia. We build on earlier work exploring how safe spaces are used by women in South Asia [142] and the design of technology to provide safe spaces for South Asian women living in low-resource environments [98] to study the motivations for moderators to create and manage women-only safe spaces, the challenges moderators face in keeping the space safe, and how those challenges affect them. We are also interested in learning how social media site affordances [73, 80] support or hinder the moderation of such spaces. Our study explores three distinct questions:

- (1) RQ1. What are the motivations and mechanisms for creating and moderating digital safe spaces?
- (2) RQ2. What are the impacts of creating and moderating digital spaces on moderators?
- (3) RQ3. What are the affordances of social network sites (SNS) that support or obstruct moderators in creating digital safe spaces?

We find that women founded Facebook groups or joined moderation teams when they felt isolated, depressed or otherwise disempowered (e.g., facing postpartum depression). These communities evolve as new members join and new topics are introduced. Moderators act as gatekeepers policing who joins the group. Through curating content, and managing member posts (deleting those that do not conform group norms), moderators strategically set the tone for group discussions. By gate

keeping membership and framing discussion, moderators create a safe space. This allows them to discuss otherwise stigmatizing topics (e.g., harassment), and to advocate for societal changes. However, we also find that moderators were limited in their capabilities to shift the tenor of discussions for some topics (e.g., religious minorities) or to eliminate leaks of sensitive posts from the group. We introduce design suggestions to support moderators of safe spaces.

Our work builds on earlier research on digital safe spaces in particularly constrictive, restrictive, and patriarchal contexts in South Asia. We explore the ways these places are kept safe by moderators. Our findings highlight the vital importance of these spaces for their members. We focus on the moderators and their changing roles in these spaces. Often moderators transition from being moderators-only to take on more activist roles. We also present specific ways to think about designing social networking sites to facilitate the moderation of digital safe spaces and especially to ease the burden of moderating these spaces. Finally, we introduce design suggestions to support moderators of safe spaces.

## 2 RELATED WORK

In this section, we review relevant literature in four parts. First, in subsection 2.1, we introduce earlier research on social network sites showing how self presentation conforms with established social norms. More importantly, we focus on how people can engage in confronting the status quo in their online interactions by finding more anonymous ways of posting online and creating digital safe spaces. We expand our focus on safe spaces, especially digital safe spaces in South Asia, in subsection 2.2. We review how safe spaces allow women to find peers and to discuss normatively stigmatizing questions like divorce while also gaining support from others who face similar challenges. These interactions between members of safe spaces can empower them to change the status quo. Empowerment is the process by which power is redistributed within communities. Focusing on South Asia, we introduce anti-colonial feminist empowerment literature in subsection 2.3. Empowerment through technology depends on the way members of the group are using it. A central role in the management of digital safe spaces are moderators. In subsection 2.4, we review literature about moderation. Specifically, we focus on how moderators set the boundaries of accepted discussions within a community and how they organize information shared within the community. Moderators also act as gatekeepers - defining who is considered a group member.

### 2.1 Social Network Sites and Identity Work

Social network sites are defined as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system [(e.g., a Facebook profile)], (2) articulate a list of other users with whom they share a connection [(e.g., Facebook friends)], and (3) view and traverse their list of connections [(e.g., Facebook friend posts)] and those made by others [(e.g., posts by friends of friends)] within the system.” [33] When presenting themselves on SNSs, people follow societally constructed stereotypes or “the part one is assigned to play” [116]. This is an extension of Goffman’s dramaturgical tradition [58] which proposes that people act differently on the “front stage” when they have to conform with the norms of self-presentation. These norms are “taken-for-granted” unquestioned truths that are accepted on a societal level [70, P.441] which Bourdieu defined as *doxa* [32]. To conform with these norms, users engage in “profile work” where they present as much of their authentic self without stepping out of the norms of self-presentation [134]. For example, Facebook users manage self-disclosure risks by regulating their Friend networks, targeting messages to specific users, or censoring themselves [136] by only posting content that would be appropriate for any Facebook Friend in their network to see [63]. They might also use different social media sites, or different accounts on the same social media site to interact with different social networks. For example, teenagers create fake Instagram or *finsta* accounts that allow

them to describe more of their authentic selves without adhering to self-presentation rules [44]. Parents might talk about their child on Facebook, but would discuss issues they see as sensitive (e.g., postpartum depression) on more anonymous social media sites like Reddit [15].

Limiting one's online interactions might limit users' opportunities to experience self-disclosure benefits, such as building strong ties and increasing social capital [49]. Building social capital is especially important for users with few social ties in a new setting (e.g., disadvantaged and first generation students [96]) or those experiencing low self-esteem [128]. One way to allow users to build their social networks while discussing what can be sensitive or stigmatizing topics is the use of Facebook Groups which can act as the "backstage spaces for unfiltered" self presentation [115].

*2.1.1 Facebook Groups.* By bringing together users who have similar ideals and aspirations, Facebook groups can provide a space for discourses around sensitive topics or those that counter normatively held views [53]. For example, patients and parents of children with special needs joined closed Facebook groups to discuss their personal experiences, collect information and access resources, and find others going through similar transitions [14, 115]. Similarly, Stay-at-home fathers (SAHFs) used closed Facebook groups that were exclusively for other fathers to discuss what they found to be anachronistic fatherhood norms and to connect with other SAHFs [15]. These groups are "policed by moderators" who restrict access to protect their group members [115]. For example, social workers who want to discuss work challenges without leaking information about their clients to the rest of their social networks created a Facebook Group where only those social workers in the group administrators' social network can be members [126]. While these Facebook Groups might provide a space to discuss personally sensitive experiences, they can also be sites of contentious discussions. For example, members might engage in "pain olympics" when articulating their experiences, which in some cases makes the discussion more problematic [17, 115]. Controlling access to the groups and managing the tenor of discussions on the groups are some of the moderator roles in managing Facebook Groups. Moderator roles are discussed in more detail in section 2.4.

*2.1.2 Online Self-presentation in Patriarchal Societies.* The norms limiting what users post online and whom they interact with are socially constructed. For example, in some conservative communities like the Arab Gulf, there is an expectation that women "be private" and maintain their family honor by being conservative in what they share on social media [4], especially when it comes to sharing pictures [5]. In fact, the sharing of any personal picture, even if it did not display any immodest clothing could be deemed inappropriate [135]. That is why women in these societal contexts share stock images instead of their personal images [101]. Prior work on gender and social media in South Asia showed that women shared "similar struggles [as those faced by women in other] patriarchal societies." [76, P.512]. For example, Karusala et al. find that while male members of the Indian family started freely creating their social media profiles, women had to ask their parents, brothers, or husbands for permission to create social media accounts [76, P.517]. Women faced a different problem as social media became more widely used. Specifically, social media provided yet another surveillance tool when they are followed by parents and members of the extended family. Some respondents indicated that after Facebook became so widely used, they considered it only as a "front" while their "real" online presence would be on different social media sites like Instagram [76, P.518]. Women are also expected to give their parents access to their social media accounts and their devices [114, P.131-132]. Moreover, smart phones and other devices are usually shared between members of a family [66] which means that women have limited privacy as other family members can access their devices.

When using social network sites for self presentation and identity management, people usually follow society's acceptable norms. Such norms can especially limit identity presentation and

exploration in patriarchal societies. However, social network site affordances, like the creation of closed and private Facebook groups, allow users to counter doxa by creating safe spaces for discourse and organizing. In the next subsection, we review literature on safe spaces.

## 2.2 Digital Safe Spaces for Communities with Shared Identities

With multiple religious, sectarian, ethnic, and cultural traditions [89], South Asian societies are stratified [94] with the compounding effect of interlocking identities and power structures [42] amplifying threats to marginalized communities [117]. To alleviate these threats, marginal communities build safe spaces which are conveniently located and safe to access [34] to afford them some protection from “physical, verbal, and emotional harm,” [53]. Safe spaces also function as counter publics [51] where members can exchange ideas that counter dominant norms in their societies. Historically, physical safe spaces emerged as a vital mechanism to empower women and as an important form of resistance to male control and power that denied women the right to participate in the public space [34, 40]. The cultivation of these women-only safe spaces has been critical in fostering opportunities for women to network, organize, and recognize their own agency [81].

**2.2.1 Digital Safe Spaces.** Digital safe spaces have emerged as an alternate to physical safe spaces affording access to support structures and mentoring. Scheuermann et al., documenting transgender individual’s experiences of safety and harm in online places defined safe spaces to “denote safety from any emotional harm or othering” [117] This and other work in HCI highlight the importance of digital safe spaces for affording conversations around information and knowledge sharing on a range of taboo topics, such as mental health [21, 142], sexual abuse [19, 98] and pregnancy loss [18], among others. Beyond information exchange, these safe spaces are vital for specific communities like LGBTQ communities [117] and feminist spaces [62, 98, 142] to advocate against dominant social norms.

Women only groups on Facebook have emerged as a vital mechanism to give women access to spaces where they can express their discontent with the misogyny they face in their everyday lives. An example is Girl Army, a group created with the initial purpose of coordinating meet ups for a group of women in Philadelphia which grew into a flourishing online platform. Its defined as a safe space in terms of providing safety from the misogyny of the outside internet, safety to share their experiences, and safety for all women wanting to join [40]. Similarly, a group of women in a European university used an online community as a means to discuss their frustrations and gather support from each other [28]. One important function of digital safe spaces is to find support from those with similar identities and experiences [141]. This is sometimes in the form of direct mentorship [125, 141], but often community members disclose sensitive accounts, such as an experience of sexual abuse, in order to gain community advice, or validation [20]. In these cases users want privacy even from other members in the community and it is usually achieved by the use of anonymous posting, anonymized profiles, and even throwaway accounts [19, 98].

**2.2.2 Gender and Digital Spaces in South Asia.** The power imbalance between men and women in South Asia leads to a “classed and gendered” public sphere in which women and minorities are excluded from the Habermasian public sphere [60] where “citizens gather as private persons to discuss matters of public concerns.” [12] The South Asian context is particularly fraught for women [74] whose physical mobility, social relations, and technology use are controlled and monitored [97, 113, 114] making access to physical safe spaces challenging. One key element to the reproduction of this form of *caste patriarchy* lies in the operations of the patrilocally extended household. Such patriarchal extended family systems, the implications of which are not only are remarkably uniform but also entail forms of control and subordination that cut across cultural and

religious boundaries, such as those of Hinduism, Confucianism, and Islam, further limit women's access to private, safe spaces even within their own homes [74].

In the absence of safe, private physical spaces, digital spaces are a valuable alternate for women to be heard and supported. In recent work, Younas et al. [142] explore the use of closed Facebook groups by women in Pakistan as important mechanisms for peer support and information seeking for stigmatized narratives like abortion, sexual harassment, rape, domestic abuse and issues relating to child-rearing and parenting. They reveal the lack of physical spaces and places for intimate conversations and disclosures for women in this context, and the importance of judgment-free digital places that allow for anonymous posting of personal narratives and seeking of support. Similar work by Naseem et al. [98] explores the design of technologies with low-literate women in Pakistan (who are unable to access closed women-only groups on Facebook) to create digital safe spaces for connectedness. They highlight privacy and anonymity as particular challenges for maintaining the safety of such digital spaces. Protecting the identity of women posting to closed groups is imperative [101] because they operate in contexts where "surveillance is the norm - and punishment for non-compliance to behavioral codes is severe." [7] While Younas et al. [142] study the way safe spaces are used by women in South Asia, and the study by Naseem et al. [98] focuses on designing technology to create safe spaces for women in low-resource contexts, neither focus on the mechanisms used by moderators to create and maintain a safe space, or the effects of this labor on moderators, specifically, are they empowered through this role?

Historically, physical safe spaces were central to the feminist movement. For women in South Asia whose physical mobility is surveilled at all times, digital safe spaces are particularly important. Online spaces empower members by providing alternatives at the discursive level, facilitating the imagining of different choices and realities [70, P.441]. This is critical to the emergence of a questioning consciousness allowing people to move from a position of uncritical acceptance of a social order to a critical perspective on it [118]. Empowerment needs to be a process in which women find a "time and space" [26, P.130] to collectively questioning doxa. Now that we have defined the time and space for such discussions, we will introduce dimensions of empowerment.

### 2.3 Empowerment in Different Contexts

Sen addressed gender inequality and freedom using a capability lens [122, P.8-9]. Capability is defined as "what people are actually able to do and to be" [100, P.33] and the freedom to live one's life in a way that allows one to achieve "those things that [one] has reason to value." [123, P.231-233] This "reflects the various combinations of functionings (doings and beings) she can achieve...and a person's freedom to choose between different ways of living" [121, P.44]. The range of one's capabilities is limited by one's agency to define goals and access resources that allows one to achieve their goals [70, P.437-439]. This agency is limited by *power over* - the control other members of society have over women [111, P.86]. In patriarchal societies, power is usually wielded by males - usually by a male relatives (father, brother, or husband) [111, P.86]. This *power* males have *over* women in South Asia manifests itself in forced marriages, spousal abuse, infanticide, and honor killings [8, 124]. When people's freedoms are curtailed, they can feel disempowered, no longer able to control their own outcomes [106]. Living in a cycle of disempowerment can lead to learned helplessness, where future outcomes continue to suffer because individuals no longer believe they can control and change their future and thus, stop trying [6].

Empowerment describes both the process and result of the process by which power is redistributed, whether it be between classes, races, or genders [26, P.130]. Kabeer defines empowerment as a "process by which those who have been denied the ability to make strategic life choices acquire" that ability [70] by accessing material, information, and ideological resources which in turn allows them to the redistribute power in their societies [26, P.129]. While the meanings associated with

empowerment have drifted over time from the view of empowerment in the context of community towards personal agency [38], Kabeer calls for more studies following the “procedural model of social change...which treats [empowerment] as [an] open-ended process premised on the unpredictability of human agency and on the diversity of circumstances under which such agency is exercised.” [70, P.442] Ibrahim and Alkire [65] and Galiè and Farnworth [55] build on the work introduced by Kabeer [71, 72] and Rowlands [111, 112] to present four dimensions of empowerment:

- (1) Empowerment as consciousness (*power within*): This is a transformation of individual consciousness which leads to a new self-confidence to act ([112] cited in [55]). Women’s empowerment addresses how women think of themselves. Self-efficacy refers to the perception of a person’s own ability to do the actions required to achieve a goal [23]. A greater sense of competency corresponds with the belief that other people have less control over oneself [138] and that one has the capacity to change their conditions [145].
- (2) Empowerment as choice (*power to*): While self-efficacy measures one’s belief in achieving their capabilities, *power to* represents the “power to act.” [55, P.13]. This dimension of empowerment involves women starting to access the resources they need to achieve their goals and use these resources to “bring about an outcome.” [55] Women would start “negotiat[ing] the nature of” relationships with family members (especially senior male relatives or household heads [71, P.501]) and decisions made within these relationships.
- (3) Empowerment in community (*power with*): this is power that “results from individuals organizing and acting as a group to address common concerns” [55, P.13-14]. As earlier design studies focusing on South Asia suggest, design can only empower women within their situated [61] societal contexts [130, P.536] - in effect, *empowering* them *within*, not against “the structures of their society.” A similar argument is made by Mohanty when she calls for studying the “shared struggles” and “common differences” that can allow for solidarity between different marginalized populations [91]. Kumar et al. build on this concept to “prioritize transferability of experiences over generalizability of outcomes.” [78, P.2]
- (4) Empowerment through community (*power through*): Galiè and Farnworth [55] argue that *power* can be mediated *through* significant members of one’s social networks (e.g., parents, siblings, or friends). In other words, as other members of one’s social network become empowered, one becomes empowered through them. However, this empowerment can be hampered by those with closer ties to women (specifically male family members) in patriarchal societies. Earlier work shows how women usually access technology in South Asia through male members of the family [66] and through shared devices that can be accessed by other members of the family [9].

Zimmerman argues that this process of empowerment “take[s] on a different form in different people and contexts.” [145]. This echoes the words of South Asian feminist Kamla Bhasin: “Feminism is like water. It’s everywhere but it takes the shape of the container into which it is poured. My feminism is different...because I live in India, because my patriarchy is different, my technology is different.” [29] Having reviewed literature studying the challenges women face in South Asia, we introduce literature studying how technology intersects with empowerment below.

**2.3.1 Empowerment in the Human-Computer Interaction Field.** Earlier work in HCI and CSCW studied how technology can be used to empower people [118]. Starting from a sense of powerlessness when people face new challenges as parents of children with special needs, Ammari and Schoenebeck [14] proposed networked empowerment as a concept to model empowerment in online communities.

Madge and O’Conner [82] argue that social media presents “virtual social support and alternative information sources” which provides women with a sense of empowerment as they transition to

motherhood. At the same time, they found that social media presented a paradox in that it also furthered more traditional views of motherhood. In other words, designers “working within the status quo” may “perpetuate regressive and harmful practices.” [24]

In her exploration of Feminist HCI, Bardzell [24] suggests that pluralist design, as opposed to universalist design foregrounds cultural differences and diversity. Participatory design (PD) principles are in line with this suggestion. PD calls for user engagement and designer reflexivity where designers “reflect on their own roles and on the ways in which they handle power.” [127, P.9] When it comes to technology and empowerment, Dillahunt et al. [45] showed how, through their engagement in the design process of a new jobs search tool, job seekers were empowered as they felt more ownership over the product and a deeper understanding of its features. Similarly, Shroff et al [124] argued that, by designing technology in close coordination with low-income women and local NGOs, new technology can be more effective in empowering women in their local contexts. All this is reflective of Freire’s theory of “conscientization” [52] which “stressed the need for participatory mechanisms in institutions and society in order to create a more equitable and nonexploitative system.” [26, P.128]

In patriarchal South Asian communities, males have disproportionate power over women. Empowerment is the process by which this power is redistributed between genders. This process includes four dimensions that allow one to (1) gain the self-efficacy that change is possible; (2) access the resources necessary to successfully engage in change; which is followed by (3) organizing with similar-minded people in order to (4) enact said change together as a community. Taking into account how technology design and deployment can better support members of the community is important to satisfy all the dimensions of empowerment. One of the most important community roles to consider when designing digital safe spaces that can empower women is the role of the moderator. Next, we introduce literature studying the role of moderation in social network sites.

## 2.4 Moderation

As online communities become easier to create with the introduction of platforms like Reddit and Facebook, the technology becomes more democratized [36]. However, this democratization does not lead to a flat social hierarchy, but an “implicit structure” [120] in which moderators have vastly more control over the norms and content of the online community when compared to other members of the community. The ways in which moderators set and police social norms have changed little since the creation of older online communities like Usenet [119]. On platforms like Reddit and Facebook, uncompensated volunteer moderator labor [85] is incentivized using “implicit feudalism.” [119, P.10] That however does not preclude the introduction of democratic practices in growing online communities [80, 119]. Additionally, affordances like polls, Karma scores on Reddit and likes/comments on Facebook give users a chance to vote on moderator posts (using likes/other emojis) and interact with moderators (using comments) [119, P2]. However, automated moderation tools like Reddit’s Automoderator [68] and Facebook’s False News detector increase the surveillance power of moderators [119, P.11]. While moderators exert top-down control over the content boundaries, other community members engage in bottom-up “activities that reshape and reinterpret” community norms [37].

*2.4.1 Moderators Setting Community Discussion Boundaries.* Edwards describes three crucial roles for moderators in online communities: (1) strategically shaping the boundaries of the discussion; (2) organizing and sharing information to enrich the discussion; (3) determining and applying the rules that the community would follow [48]. Much of the volunteer moderator labor is care work [143] where moderators placate and resolve disagreements between members, and take action on inappropriate content, whilst simultaneously managing the expectations of community members



[47, 67]. In so doing, moderators enforce the ever evolving and often unclear [69] norms [143] of a growing online community [22, 79]. While reducing barriers to contribution in the community (e.g., having less complex rules for acceptable posts) [137] might make introducing new entrants easier, new group members might still violate community norms [79, P.12]. Their continued engagement with the community rests on feedback from more experienced members and moderators [79]. Fairness is key to successful moderation [67, 139]. Moderators have to engage with group members to give explanations for their moderation decisions, and such explanations become more salient as the sanctions grow more serious (e.g., banning a community member as opposed to deleting their comment) [73]. This emotional labor [47] is essential for shaping the identity and values of a community [57] and it is more pronounced when creating “non-mainstream forums” for marginalized communities [47] which need stricter security and privacy measures [62].

*2.4.2 Moderators as Network Gatekeepers.* Women in South Asia face three social media abuse types: (1) cyberstalking with an abuser initiating unwanted contact; (2) impersonation by an abuser; and (3) personal content leakage where an abuser exposes community members’ online activity [113]. Additionally, female moderators face the added discomfort of wading through harassment and unwanted sexual advances [47, 50, 88, 102]. Given these unique challenges, we will analyze how moderators of Facebook Groups (see section 2.1.1) use platform affordances to act as network gatekeepers [25] to women-only safe spaces. Moderators can use profile signals (information provided on the user’s profile, pages they like etc.) to determine if they should be members of the community [73]. Facebook provides moderators with the capacity to delete or hide comments (when a comment is hidden, the poster and their network cannot see that it has been removed), remove and report posts, mute posters, and in more serious threats to the group, remove the user [73, P.334]. This would allow them to “maintain ongoing activities within [the community] boundaries without disturbances” [84] such as posts that do not conform to community norms and personal information being leaked from group discussions [115].

While online community members reshape the community through their posts and interactions, moderators have more control over the boundaries of acceptable discourse. They also act as gatekeepers by defining who is a member of the group, and who is not. Given online harassment and women’s privacy restrictions in South Asia, moderators have a central role in setting up and managing safe spaces.

### 3 POSITIONALITY

Two of the four authors identify as cis-women who live, work, and were educated in Pakistan. They have been part of some of the closed women-only groups discussed in this paper and have observed the functioning of these groups for approximately one year. Their implicit understanding over time of the efforts made by moderators of the groups, of the types of content posted, the evolution of the groups, and the vital importance of these spaces as women in Pakistan has informed this work. The authors long-term participation in these groups also facilitated interviews with moderators and helped identify some of the challenges moderators have faced over time in managing larger women-only groups. The other two authors are cis-men, one of whom was raised, educated, and worked in Pakistan. The other author was raised and educated in the Middle East. They have both researched the use of technology by members of marginalized groups in both the Global South and the Global North. All authors find research about the potential and shortfalls of technology as a tool for the empowerment of women in patriarchal communities to be vital to building more equitable societies.

## 4 METHODS

In this paper, we focus on Facebook because it is the biggest social media platform in South Asia (40 million Pakistani Facebook users 41 million Bangladeshi Facebook users) [1, 113]. We conducted eleven semi-structured interviews with *moderators* and *administrators* of six different female-only, closed Facebook-groups. Administrators or admins on Facebook groups have greater privileges than moderators. For instance, admins have the added ability to make other members admins/moderators, remove other admins/moderators, and they can control group settings like the display picture of the group, etc. In this paper, we refer to all our participants as moderators since all administrators have moderator privileges and routinely perform moderation activities on their groups. The interviews ranged from 30 – 90 minutes in length, and were conducted over a university-licensed Zoom. Some of our participants were mothers with no available childcare, and had to log off earlier than expected, attributing to the variance in interview length. After informed consent was obtained, the interviews were audio and video recorded on Zoom servers and later shifted to an encrypted, university-licensed cloud server. We obtained IRBs from all universities where the researchers are based, including a local IRB from a university in Pakistan. The IRB addressed the privacy concerns of our participants by ensuring anonymity of the data beyond the field researchers (participants were assigned numbers), storing the data in secure drives, obtaining verbal consent for recordings, anonymizing group names and participants were specifically asked if this data could be used to write up our paper.

We used convenience sampling to recruit participants for this study. Given the highly specialized nature of the intended audience – moderators of closed female-only Facebook groups - recruitment was challenging. The first step was to identify these groups. Because of their closed or secret status, we could not search for all these groups using the Facebook search feature. Two members of our research group were already members of one of the groups, and leveraged their connections to recruit from this group. Other groups were identified through recommendations by colleagues and friends. We were able to identify eleven such groups. Moderators from six of the eleven groups agreed to participate. We interviewed multiple moderators from the same group in instances where we felt they could give provide further insights. For example, interviewing both the administrator who had founded a group, and the moderator who joined the team years after the group was established.

Four of the groups were based in Pakistan, one was based in Bangladesh, and one was based in the US (created specifically for the South Asian expatriate community). All of our participants were between their early twenties and late thirties. Four participants were unmarried, while the other five were married and had children. All our participants except one had a bachelor's degree or higher, with the latter working on completing her bachelors degree. Apart from one participant who was a student, all other participants were financially independent – the sources of income varied, from earning money from running the group to having a full time job outside of running the group. Of our participants, nine were group *Administrators* and two were *Moderators*.

The interview protocol focused on (a) identifying the motivations behind participants creating their respective groups or becoming moderators; (b) moderation roles and activities; (c) community relations and how community rules came about/are enforced; and (d) participants' experiences with Facebook Group features. At the end of the interview, participants were sent a gift basket worth of \$15.

The coding process was broken into two phases. First, one of the authors used a deductive process to cluster data into the following eight categories: *Anonymous Posts, Aspirations, Content details, Facebook platform details, Group Details, Mental Health, Moderation, and Motivation*. We arrived at these codes after multiple conversations between the authors, two of whom had been

Table 1. Participant and Group Demographics \*Year Founded \*\*Privacy Classification (is the Facebook group hidden or just private): (1) P:Private but visible; (2) H:Hidden \*\*\*Participant

Group Pseudonym	Size	*	FB Group Type	**	Country	***	Group Role/ Professional Background
Unapologetically Feminist	31.5k	May 2016	Social Learning Group	H	Pakistan	Zainab	Co-founder/ Advocate
						Khadijah	Founder/ Small Business Owner
						Soha	Moderator/ Therapist-in-Training, Teacher
No Men, No Judgement	37.9k	Dec 2016	Parenting Group	P	Pakistan	Sara	Founder/ Blogger
Female Unity at University	2.5k	Jan 2019	-	H	Pakistan	Haniya	Founder/Financial analyst, small Business Owner
						Mahum	Admin/ Student
Corporation for the Needs of Desi Motherhood	70.7k	Sept 2018	Parenting Group	P	Pakistan	Aliya	Founder/Journalist, Business Owner
Women Entrepreneurs	27.9k	Dec 2014	General Group	P	Bangladesh	Sharmin	Founder / Blogger
Home Away from Home	17.5k	Jan 2015	-	P	US	Anusha	Moderator/Blogger, Small Business Owner
						Kashaf	Founder/Business Analyst
						Eman	Co-Founder/Doctor

members of some of the groups for over a year. Then, after reading through the data multiple times, three out of the four authors engaged in an inductive coding process that led to the creation of 45 sub-codes. We chose this approach as two of the authors had observational experience of some of the groups and had seen them evolve, and two of the authors had prior work experience with online safe-spaces in South Asia and had particular interests in exploring the mechanisms and motivations of the moderators when creating digital safe spaces. The authors met weekly via Zoom by specifying a comfortable time for researchers in the US and in Pakistan.

The 45 sub-codes were clustered in Microsoft Excel, and were collapsed into the themes highlighted in the findings section. For instance, data from the two categories (a) Anonymous posts (sub-codes: Anonymous posts: amount, Anonymous posts: feedback, Anonymous posts: procedure, Anonymous posts: themes); and (b) Content details (sub-codes: *Content: advertising*, *Content: amount*, *Content: curation*, *Content:member derived*) led to themes highlighted in Section 4.3 under Content: (i) expert and admin-curated content, (ii) anonymous content, (iii) member content and peer support, (iv) crowdfunding, (v) advertised content, (vi) Me Too movement, and (vii) member privacy.

## 5 FINDINGS

In this section, we start by describing the six private Facebook groups we studied. We then describe content moderation including expert content, anonymous content, crowdfunding, and advocacy. We also describe how moderators maintain group member privacy. Finally, we discuss how groups recruit new moderators.

### 5.1 Motivations and Mechanisms for Creating and Moderating Groups

In this subsection, we present a description of the development of each of the six groups we identified. For each group, we discuss how the administrators found a need and created the group to fill that particular need. The names of the groups have been changed, but the pseudonyms reflect the original names. Table 1 lists the groups, group member size, and other group properties. The table also shows the moderators we interviewed and their roles in each group.

*5.1.1 Unapologetically Feminist.* Unapologetically Feminist is a Pakistan based group and was created by Zainab and her sister Khadijah in 2016. Both Zainab and Khadijah considered themselves radical feminists. They were removed from other female-only groups because of what others perceived as western, liberal feminist views. Zainab and Khadijah wanted to create a space where they could talk about controversial views that might be perceived as anti-Islam, without fearing backlash or judgement, and use the space to empower women to live their lives for themselves. While the group focuses on reframing feminism in Pakistan through content curation, the moderators have strict rules about respecting other people's religious beliefs, sexualities, and personal choices. The administrators try to enforce respect for minority groups include LGBTQ and religious minorities (for example the Ahmadi minority Muslim sect).

Yes I would agree that Unapologetically Feminist only wants women to have a more holistic perspective to what humanity is. That is not driven from social cultural religious values. - Zainab

The group is run by four Facebook administrators and five Facebook moderators. Zainab and Khadijah are co-founders and administrators, whereas Soha is a moderator. Zainab is a development professional working in sexual and reproductive health, and is a part of activist organizations. Her self-reported role on the group is putting abuse survivors in contact with volunteer organizations when they ask for interventions. She is also a mother to a three-year-old. Khadijah is Zainab's younger sister, and is the founder of Unapologetically Feminist.

The group's name has the word "bitch" in it, which is a bold decision to use in a patriarchal context. Khadijah suggests that the use of this word was important to get other women to "stop caring about what society thinks." She wanted to reclaim this traditionally derogatory term:

Because I'm sick of people using it in a way that it makes you sound like you're supposed to be weak or you're supposed to be a certain way. And if you want to be confident and assertive...[that] doesn't make you a bitch...the first thing a man would tell you once you say no [is that you are] a bitch [who] won't do XY and Z...[in fact], it just means that we don't want to do something and we have all the right in the world to be a certain way without being criticized for that. - Khadijah

Soha is a teacher and a therapist-in-training. She joined Unapologetically Feminist as a moderator two years ago. Before becoming a moderator, she was known on the group as someone who posted anonymous posts for other members, and after becoming a moderator she still continues this role. Soha thinks people feel comfortable sending their stories to her to post because she's invested in their well-being and connects with them. Besides anonymous posting, Soha's other moderation activities are also mental-health related.

[I post] mostly mental health related content...Otherwise...I'm the go to person...you want to see a therapist or like something, you have mental health issues.

**5.1.2 No Men, No Judgement.** No Men, No Judgement is a Pakistan based group. It is an extension of a blog Sara created when she experienced postpartum depression. While the group started as a parenting group for mothers, it quickly evolved to predominantly be a space for women to seek support and discuss sensitive topics. Sara found that the common retort to any problems faced by a new Pakistani mother is “[people] have been having them for centuries,” but if a Pakistani mom was experiencing post-partum depression, then she would need “a safe space” to talk about her experience and to get support from others. She started the group with the aim of crowd-sourcing answers to common concerns and challenges raised by women who wrote to her through her blog. Sara runs No Men, No Judgement alongside one other moderator. This small admin team is interested in maintaining a group that is less focused on monetization and more focused on the needs of the members. In essence, Sara wants to reflect the saying “it takes a village.”

**5.1.3 Corporation For the Needs of Desi Motherhood.** As a mother of four, Aliya (based in Pakistan) noticed the lack of spaces for Desi mothers online. Desi is an Urdu term meaning ‘local.’ Members of the South Asian community often use the term to describe themselves. Since becoming a mother, Aliya created several city-specific chat groups using Whatsapp to connect with mothers of children who have children in the same age range. Discussions on these Whatsapp groups were not limited to online interactions. The online groups were used to plan in-person meetups between mothers. However, being the founder and most active member of these groups, Aliya noticed that activity on each would die down when she moved to a new location. Given the hyperlocal properties of the WhatsApp groups she created before, Aliya thought that she would create a Facebook group for mothers hoping that it would be less associated with her current domicile. The main theme of the Facebook group is focused on mothering practices. However, Aliya noticed that mothers wanted to talk not exclusively about parenting issues on the Facebook group. Therefore, she thought this group could be a space for the Pakistani mother to express her opinions.

I realized that the Pakistani mother doesn't have a space to talk at all. Like, where can she express her opinion? When she wasn't married...her father or her brothers would control the narrative. When she is married, her husband or her son controls the narrative...so now I allow a lot of posts where women just want to express themselves but by and large, our focus remains on helping Desi mothers, bring up the best children possible. - Aliya

The setup of the *Corporation For the Needs of Desi Motherhood* is different from the other online groups in this study. This group centers moderator-generated and moderator-curated content. This content ranges from Live Sessions to podcasts, posts, photographs, and group discussions. Aliya organized a comparatively large team of 10 admins and moderators to focus on content curation.

**5.1.4 Women Entrepreneurs.** *Women Entrepreneurs* was founded in 2014 by Sharmin, an entrepreneur, influencer, and blogger in Bangladesh. She had been part of other female-only groups but she felt that these groups did not focus on supporting and empowering women entrepreneurs. *Women Entrepreneurs* has a business-focused theme specifically cultivating a space for business networking. While women are allowed to have non-entrepreneurial discussions on the Facebook group, Sharmin stresses that this space is

a little different from other communities where women discuss their shopping and lifestyle and makeup. Basically in *Women Entrepreneurs* we talk about business...how to start it...how to grow it...how to get a job. - Sharmin

Sharmin tries to apply one rule to discussions on the group: no member should comment negatively on another member's post. Given that this is a group built to empower women, negative comments do not fit with its mission. Given the potential for political discourse to polarize and devolve into negative discussions, members are advised not to talk politics.

*5.1.5 Female Unity at University.* *Female Unity at University* is a Pakistan-based group created by Haniya because she felt the need for a female-only university online forum. Her university has a Facebook group for all students, but there were times where she needed to post something she only wanted her female peers to see. For example Haniya wanted to discuss intimate health concerns (menstruation or sexual health) with her peers. Haniya was a senior student at the time when she created the group in 2019. Mahum, a political sciences major in her final year, was added to the moderation team as an admin in the summer of 2020.

*5.1.6 Home Away From Home.* Kashaf created Home Away From Home when she faced a difficult time in her marriage after moving to the United States. Initially she tried to ask for advice on existing women's Facebook groups based in Pakistan, but she noticed that her posts did not get much traction. It seemed most of the women on those groups did not have any advice to offer. Kashaf believes that was mainly because she did not have an audience who could relate to facing a difficult time abroad, where all the usual social structures present back home are not available. Kashaf created the Home Away From Home Facebook Group primarily for South Asian expatriates in North America. Kashaf is employed as a business consultant. She runs the group alongside her sister Eman, and two other moderators. Eman is a doctor who also resides in the US. Anusha is a blogger and one of the moderators of Home Away From Home. She joined the team in 2020.

Despite the many different support groups and helplines available, emotional support from people who understand the South Asian context is missing. Anusha notes 'a common theme is a...cultural or a mental constraint. A lot of these women are...new immigrants [who are] not aware of their rights.' Specifically, many of them think that if they were to divorce their husbands, they would not be allowed to reside in the US on their own. Making things more complex is the fact they doubt having the support of their families in case of a divorce. Given these constraints, Kashaf stresses the importance of the support the group provides. Immigrant women are often away from family and completely dependant on their abusers who know that their wives are dependent on them "with little or no support" from anyone else.

## 5.2 Moderator Roles

The moderators of the groups perform some key activities that allow these spaces to serve the needs and aspirations of women in these contexts including vetting new members, content curation, vetting financial investments, managing anonymous posts, vetting member posts, crowdfunding, and activism. We discuss these roles below in detail.

*5.2.1 Vetting New Members.* The first step to creating a digital women-only community is being cognisant of the kind of people allowed in the space. The founders of the Facebook-groups we interviewed made an explicit decision to keep men out of their spaces. Each request to join one of these groups is accepted or denied by a human moderator who adjudicates whether the profile in question is (a) real; (b) belongs to someone who identifies as a woman; and (c) that the individual in question will uphold the rules of the group (e.g., respect for minority groups). The vetting process includes but is not limited to personally visiting the Facebook profile of the applicant, ensuring it is a real person, going through uploaded pictures, looking at the date of joining Facebook, and their presence in other groups.

However, moderators of these groups face certain challenges while trying to determine the gender identity of the applicants to their groups. Facebook has a feature that allows moderators to add a set of questions that prospective members have to answer as part of their request to join the group. While some moderators found it useful, others found it insufficient. Mahum noted that some new applicants to the group do not bother with answering the questions while Khadijah says that some men would “[select] the female [option] to gain access to the group.” Most of the moderators have come up with indicators of when a profile is fake, or belongs to a potentially disruptive individual for the group. One indicator commonly used among the moderators is to determine whether the new applicant was invited by, or is Facebook friends with, an existing group member. If so, moderators look at the posts or interactions of the mutual connection (person already in the group) as a sign of the type of content the new applicant might post. For example, if moderators want to have a more welcoming community, they might want to check earlier posts for content that might be prejudiced against minority groups (e.g., minority sects or LGBTQ). Generally, having a shared connection was enough to verify that the profile in question is not fake. Other indicators of a legitimate applicant to the group include: (1) having a profile picture: If a Facebook profile does not have an actual picture of a person and instead has flowers or a actor moderators will not accept this member request; and (2) the user’s tenure on Facebook: longer tenure on the site is a good sign for moderators. For example, Sara does not accept members whose profile was less than a year old.

Moderators in other groups decided to be even more selective when accepting the new members to the group. For example, Sharmin decided to limit new entrants to the group to those who receive invites. This allows Sharmin to maintain a more exclusive group based on the new members occupation and earlier experiences. While the vetting process might be intensive, Zainab argues that moderators examine “the kind of people they’re associated with, the kind of people their friends are, how many friends they have on the group, what do their friends post on the group, what do their profiles show, you know, sometimes like it just is a gut thing.”

**5.2.2 Content Curation.** All six groups presented a space for women to “hang out” and discuss lighthearted topics like movies and books with a community of like-minded people. However, they provided other services for their members: (1) expert and admin-curated content; (2) anonymous content; (3) member content and peer-support; (3) material support (e.g., crowdfunding for members in need); and (4) a space to organize and advocate for women’s rights.

There are two types of posts by administrators: (1) admin-curated resources, and (2) anonymous posts on behalf of other group members (covered in section 5.2.4). Within the groups that we studied, we found a diversity in terms of the amount of curated content the admins of the group post, with *Female Unity at University* having largely member driven content, versus *Corporation for the Needs of Desi Motherhood* having a dedicated team of 10 paid content curators posting a significant portion of content on the group.

Some admins create a list of resources that their members may find useful. These lists are generally posted as *pinned posts* that always appear at the top of the *Newsfeed*. For example, Kashaf and Eman are working on a collection of all the charitable organizations that help support immigrant women, including a list shelters, and pro bono immigrant lawyers.

Admin-curated content also includes *Facebook Live* sessions with experts (therapists, doctors, educators, etc.) or the admins themselves. Admins of the *Corporation For the Needs of Desi Motherhood* group pushed content “which might not be very popular but is important to us, because we feel it’s important for every mother.” Aliya continues by explaining that “the single national curriculum<sup>1</sup> is something that we’ve talked about all the time. And while it always gets [some] engagement, I think

<sup>1</sup>at the time of this interview, a government committee was mandated with creating a single curriculum that would be used in all schools in Pakistan

it's not like our most engaged topic...but is one of most important [issues] for a mother in Pakistan today." However, admins are not always successful in pushing content that they regard as important. Zainab wanted to host study circles using Facebook Live Sessions in the Unapologetically Feminist group. She was "hell-bent on posting studies, academic research, news, politics," but found that "no one would show up for" the live sessions. In other cases, the introduction of a topic that an admin considers important can result in receiving negative comments from group members. For example, Anusha belongs to a religious minority, and one of the reasons she joined the admin team of Home Away From Home was because she wanted more representation of her religious sect among South Asian communities. She posted about a "Shia [minority sect in Islam] holiday in Rabbi ul Awal [month in the lunar calendar]" and while "90% of the" responses were respectful and thankful for the knowledge introduced by the admin, one member responded rudely in the Facebook group. This rude response was followed by a private Facebook message saying in an accusatory fashion that the name of the group may as well be changed to "Shia sisters." However, other interactions between admins and group members can be positive. Sara suggested that these events provided a chance for admins not only to provide curated content but also to "interact directly with the community...[giving] a chance for a one-on-one [conversation] in real time...with your members."

**5.2.3 Vetting Financial Investments.** In some of the groups, admins are approached by local brands to post sponsored content on their behalf. As the founder, Khadijah is the face of the *Unapologetically Feminist* group. Brands approach her and she posts sponsored content on the group and works with brands to develop this content. Khadijah is careful to only accept sponsored content from those partners that are not exploitative, preferring educational campaigns.

When I did the Always<sup>2</sup> ad[vertisement] a lot of women got free pads out of it – not like our members – but like people who couldn't afford pads. So every time someone wrote something a free packet of pads went to them and it was a kind of like an educational campaign...We look into each company when we work with them and see if they align with what we believe in. - Khadijah

Similarly, Sara sponsors content on *No Men, No Judgement*. Sara said that she was "really confused about doing these ads. I felt like, it was like an ethical dilemma...I worked with Nido [a powdered milk company]...but my own kids don't drink it...my babies are breastfed...but I felt... I am transparent in that if someone asks me on a live [session] I do say it's [a brand] and I'm monetizing on it."

**5.2.4 Managing Anonymous Posts.** Anonymous posts make up a significant part of the posts on most groups and are one of the main features of the groups that make them a safe space. Aliya said that the Corporation for The Needs of Desi Motherhood "get[s] about 100 to 500-800 a day." To post anonymously a group member messages a group moderator, or another group member, to post on their behalf. These posts are usually sensitive and are tagged with an anonymous tag (#anonymous) or disclaimer when they are posted on the group. Anonymous posts were often about: abuse disclosure, relationship problems, and health problems as well as issues the poster had with in-laws. Zainab argues that, generally, anonymous posts are about what the original poster considered sensitive content that they are "uncomfortable posting as their own person." Some groups have developed rules of what can and cannot be posted anonymously. Topics like access to abortion services are considered stigmatizing in the conservative South Asian context, and thus a suitable use of anonymous accounts. If the post content is not considered sensitive, the moderator does not see it as something that needs to be posted anonymously. However, moderators sometimes make exceptions. According to Soha: "we want to keep...anonymous posts...for those people who genuinely need it. [However,] we make exception[s because sometimes the poster would tell us]

<sup>2</sup>feminine products company



my family will judge me if I even post about this, and we understand because we live in the same society.”

Posting anonymously often entails an elaborate feedback process where moderators coach the members on how to anonymize their posts. Sara explains that she has to “guide [anonymous posters in phrasing the post] so that they remain anonymous.” This might include removing de-anonymizing information from the post. Moderators might instruct the poster to remove some details about the anonymous author’s personal life or about the issue they are discussing which might point to their identity. For example, if a member wants to post asking about abortion, while her name might not be included in the post, there might be other identifying details included. If a screenshot of the anonymous post were to be leaked while including details that de-anonymize the poster, she might face harassment and/or physical violence.

The process of anonymous posting varies from group to group. Anonymous posters can contact group moderators using Facebook Messenger, Instagram Direct Message, or via email. The *Corporation for The Needs of Desi Motherhood* developed an app that takes the text of the post without including the poster’s name thus allowing the poster to remain anonymous.

During the data collection phase of our study, Facebook released a feature to allow anonymous posting for members of ‘Parenting Groups.’<sup>3</sup> We asked our moderators what they thought of this feature, and got mixed responses. While Sara and Aliya saw this as a positive development, Soha expressed concerns that it would take the human connection out of the anonymous posting process, which was very important for the person reaching out. Anusha raises another issue with the introduction of this new features. Specifically, Anusha notes that “sometimes there is a lack of empathy...sometimes they treat the anon [poster]...as somebody who is stupid, and...because it’s [an] anonymous [post], they get the freedom of saying whatever they want to them.” Anusha adds that she posts to other group members encouraging them to be more empathetic and respectful when responding to anonymous posts.

**5.2.5 Vetting Member Posts.** Member driven content on the groups we studied comprises of a variety of different topics: posts seeking advice related to child rearing, family dynamics, intimate sexual health, and relations with spouses and in-laws. Member content moderation took two main forms: (1) **after-posting moderation:** moderation of posts after they are added to the group (*Unapologetically Feminist, Female Unity at University, Women Entrepreneurs*); and (2) **before-posting moderation:** moderator approval is required before a member’s post becomes visible to other members on the group (*No Men, No Judgement, Corporation for the Needs of Desi Motherhood, Home Away from Home*).

These moderation tasks can be quite onerous for admins. Zainab estimates that “last time we checked on an average slow day we get around 1,500 to 2,000 posts. You know there is all sorts of content...[and] it’s a lot to go through for 24 hours then it becomes more the next day and becomes more than next day.” For before-posting moderation groups, a new Facebook feature allows moderators to pre-approve certain members of the group to post directly and bypass moderator approval. While this feature might be helpful, it can get tedious when moderating large groups. Sara, one of the moderators of *No Men, No Judgement* noted, “I tried to...pre-approved five members and then I was so sick and tired of it...I cannot add another tedious task.”

A number of posts in the six groups are centered around seeking advice, and the nature of the advice depends on the focus of the group. For the *Home Away from Home*, this is largely centered around starting a new life as an expatriate or immigrant in the US. Anusha states that the group “provides support to new immigrants in all walks of life.” This support includes resources to help members apply for a driving license, or finding local stores selling South Asian food. There are other

<sup>3</sup><https://www.facebook.com/community/whats-new/new-parenting-group-type/>

areas of conversation in our groups. For example, Aliya talks about “debates on [whether parents should focus on] religious education for the children. We’ve had debates on, should girls be wearing skirts and until what age.” Discourses about these topics can be contentious, but moderators try to maintain an environment of respect in their groups.

Given the nature of the contentious topics on the Facebook groups, member posts are sometimes removed by moderators if they do not conform to the group norms. Facebook lately started to flag troublesome profiles for moderators. Eman noticed that “if we were to let’s say remove a comment for you know, using explicit language or something, and we haven’t removed that person from the group; so when that person posts again, Facebook reminds us that some action was taken on this person’s activity some time ago, and it kind of gives...a warning symbol in front of the name of that person. That kind of tells me okay, you know, we’ve taken some action on this person’s profile before. So we need to watch out for the content that they are posting.” Another helpful feature allows moderators to view the complete history of posts for a particular user so moderators can decide whether a member’s offensive comment is a singular event or part of a pattern. This in turn allows moderators to make decisions about whether the member should be removed from the group or not.

Facebook also allows moderators to setup keywords to monitor in user posts, and flags these posts for review when a keyword is found. However, Zainab noted that another Facebook feature is less helpful. Facebook automatically flags certain content determined to be against the terms of service for removal. Facebook allows moderators to review these posts before they are removed from the group. Zainab was frustrated with this feature. When she tried to “see details’ [on the flagged posts] it says the content has expired so I think it only comes for like it the first day so. If I haven’t checked that post on that day, it’s lost. So I have no idea why people’s posts get deleted and then you know we’re answerable to this. Why was the post deleted?!”

Some group members tend to be more dedicated to the group, post more often, and engage meaningfully with other members. Sara singled out one such member:

We have this lady [who is a member of our] group. She’s 57 years old, we call her the group mom. She gives really good advice. And there’s young women who tag her specifically [in their posts]...they’re like ‘Auntie [name], please give me your feedback.’ She really takes the time, and I feel like there’s a sense of community. - Sara

**5.2.6 Crowdfunding.** Support on the women-only groups was not only focused on providing advice. We found that the groups provide tangible, material support, for members in need. In some cases, they also support women in need who might not be part of the group. One way of providing material support is through crowdfunding. Collecting money for people in need based on word of mouth is a common practice in South Asian communities. This extends to virtual communities as well. With the exception of the US-based group (Home Away from Home), all of the moderators we spoke to said that their groups engage in crowdfunding. Most groups have some formalized mechanism to support crowd-sourced funding requests. *Female Unity at University* is the only group that allows members to directly post about crowdfunding and directly collect funds from other members of the group. Other groups discourage members from posting directly, and will often remove posts about crowdfunding that are not moderator approved. Zainab suggested that “we do tend to delete a lot of fundraising posts that are not verified, or that did not come through us...because the problem becomes that if the money goes into the wrong places then were accused” of stealing or squandering the money. The formalized mechanisms for crowdfunding varies from group to group. However, generally, the money is collected by an individual (often one of the moderators), who takes on the responsibility to see that the money is used for its intended purpose. *Corporation for the Needs of Desi Motherhood* has “one moderator dedicated getting the

[crowdfunding] requests, [and] verifying them.” Aliya organized the fund created by the group and seasonal “crowdfunding for our Ramadan<sup>4</sup> campaign, our rashan [basic food necessities] campaign.” Sharmin and Kashaf want to expand crowdfunding efforts to create group funds, bring in charitable organizations and establish physical shelters. Sharmin elaborates “I want to establish a hub in every district and every corner of my country. And in that hub all the problems like mental health...Gynae health issues...domestic violence issues. Any problems, solutions will be in our hub. I want to establish this kind of hub.”

The US-based group currently does not collect money due to concerns about compliance with taxation regulations. As immigrants themselves, the moderators and admins are very nervous about violating any rules that could get them into trouble with the authorities. Anusha explains that “I think the reason for that is, it would be really hard for us to investigate if that is that [crowdfunding request] is a legit cause. And I was told by the admins that there is a way that Facebook flags that or notices that [post about crowdfunding], and there’s like some kind of tax ruling that is involved in that as well, which makes it really complicated for us to approve such posts.” However, Kashaf is working on methods to legally establish a 501C3 status so the group can legally collect money and distribute it to those who are in need

I want to eventually convert this [group] to a charitable platform where we can...provide resources for for woman [in the US] for example, shelter[s], resources for kids going to school or food, or [anything] that can benefit...woman...coming from Pakistan. - Kashaf

While most moderators feel the need to collect proof in the form of receipts, photographs, etc., there is also an acknowledgement that this may not be easy for the recipient. For example, Zainab tells us about “one girl that I had raised money for her education...she had very graciously shared fee vouchers (receipts) whenever she paid for her University education and I would share that with the group...but I think we have to trust...these people.”

**5.2.7 Activism.** During the summer of 2020, the *Female Unity at University* group experienced a *Me Too* movement that started with a wave of personal accounts of sexual abuse survivors. All this began when a member of the group started talking about her experience of sexual abuse by a male university peer. She found a lot of support by other members of the group. The comments on the post from other group members both expressed support for the victim and anger at how women were expected to ignore the culture of abuse and harassment on campus, and they urged other sexual assault survivors to come out with their stories. Most of the perpetrators named in the posts were students or alumni of the university. The goal of the first few posts was to name and shame the perpetrators, especially in cases where there were patterns of abuse with multiple victims and specifically where the perpetrator exploited their positions of power to shield themselves from any allegations. Previously, women had only come forward by sharing their stories in-person in small groups, or had taken them straight to the university harassment committee with varying results. However, after this post, group members urged others to break their silence. The initial idea was to compile a list of these “protected” men who had patterns of abusive behaviour, and who exploited positions of power such as teaching assistantships, freshman mentorships, and student council positions.

Survivor accounts were posted both anonymously and from identified survivors profiles, depending on the poster’s preference. After rallying support, these posts naming the perpetrators were then re-posted in the general university forum on Facebook, which included male and female student accounts. The perpetrators and those protecting them faced a severe online backlash. In some cases they posted apologies, in others they deactivated their online accounts. However, some

<sup>4</sup>Islamic month of fasting and prayer. It is also a season known for charity.

of the victims still did not feel safe in naming their perpetrators on the general forum. Often this was in cases where the victim had been in a relationship with the abuser, and that very fact getting out to the victim's family would cause horrible consequences for her. Somewhere around this time, the safety of *Female Unity at University* members became compromised. Men from outside the group, including the perpetrators, started receiving screenshots of posts in the group. In several instances, survivors began receiving threats from their harassers. In one case where a member shared a horrific account of a rape incident, the rapist threatened to send compromising photographs of the survivor to her family.

As the number of posts and the sensitivity of content on the group both increased throughout the summer months, the moderation needs of the group changed. Haniya said that the posts with “the most engagement were the posts about sexual harassment cases, and... [survivor] testimonies...They had like insane amounts of engagement rates...people were following that entire thing like crazy. There were like likes and comments in [the] thousands, so I think those posts [have] had the most engagement so far [on the group. As a comparison, other posts got] about 20-25 comments per post.” Mahum was invited to moderate the group in the summer of 2020 just as this movement was gaining steam. Mahum was responsible for posting anonymously on a survivor's behalf. Screenshots of sexual harassment posts being leaked from the group was one of the main problems she had to contend with as a new moderator. Since there was no technical solution, Mahum tried to explain other members of the group that the perpetrators named in the group were “very powerful and influential...everyone knows that and it was very, very hard for the victim to come out.” Still, screenshots continued to be leaked from the group. While these leaks resulted in more threats to other group members, Mahum noted that “[although the original poster] was shit scared...[but such events] provoked [other members of the group] - I love those women who get provoked by such stuff. Like, you know, women started coming out more and more, I got more [messages in my] inbox about the same [perpetrator]... everyone's like...he did this to me as well.”

Some of the perpetrators threatened to file defamation suits against both the victims and those who posted in their name (in the case of anonymous posting). Following these incidents, the group administration team reached out to lawyers to develop a protocol for anonymous posting that would protect posters on the group from legal repercussions. Haniya explained that the protocol dictated that when posting on behalf of other victims who wished to remain anonymous, the poster would add a disclaimer stating that “*the veracity of this content is not verified.*” Another protocol was setup to protect posters from being legally pursued. Mahum stated that they setup an “approval procedure” focusing on making sure that the posters followed detailed instructions to the letter. For example, when posting an accusation, the subjects name should be anonymized. This can be done using asterisks, ampersands and other characters instead of some letters in the perpetrator's name. This protected posters from legal repercussions but also achieved the purpose of naming and shaming the perpetrators. Mahum emphasized that this procedure “was not [about whether the] story is more believable,” but about safeguarding the group members from any legal repercussions. In some cases these defamation suits were still filed, and female law alumni volunteered to represent group members in these cases pro-bono. Members of *Female Unity at University* also started collecting funds for these defamation suits.

The *Me Too* and women's rights discourse spilled from the online group into advocacy on the organizational level at a major university in Pakistan. A group of female students demanded to have a voice in university administration efforts to address the exploitation of powerful positions that a lot of the abuse resulted from. These students also asked for a re-appraisal for the sexual harassment policy on campus - specifically - they wanted to negotiate the way sexual harassment cases were managed.

Discussions about harassment and abuse were not limited to the *Female Unity at University* group. Moderators tend to act as third-party links between anonymous posters and government or non-government organizations that can provide support or advice. For example, while discussions on *Women Entrepreneurs* were focused on the entrepreneurship, many of the posts on the group are about abuse and violence faced by women. Sharmin became involved in directly connecting posters to officials in the local cybercrimes department or other police authorities to ensure the safety and privacy of the victim. She is also “regularly in contact with the victim, so that if anything goes wrong, she can let me know.” Other women-only groups provided links for helplines, charitable organizations, and women’s shelters for their members.

Home Away from Home is in a unique situation because while the group is for South Asian women, it is based in a foreign country. In fact, the moderators themselves were immigrants. As such, they were wary of inadvertently breaking any laws. As opposed to moderators like Sharmin, moderators of the *Home Away from Home* group do not have contacts with law enforcement personnel in the states so they can connect women who disclose abuse or harassment to them.

### 5.3 Moderator Challenges and Coping Mechanisms

The two significant and on-going challenges moderators of these groups face are mental health concerns resulting from the amount and type of work they do and the complexity of ensuring their own and members privacy.

**5.3.1 Privacy Challenges.** A number of examples in sections 5.2.4 and 5.2.7 show the importance of protecting member privacy. Some of the anonymous posts can include sensitive content which if shared with the member’s family members could lead to potential severe repercussions for the poster. Similarly, posts by sexual abuse survivors (section 5.2.7), if released to those outside the group, can result in legal consequences and further harassment by perpetrators. Most of these leaks tend to be in the form of screenshots from posts on the group. At times, these screenshots were not shared with family members or abusers, but posted to public Facebook pages and circulated widely. As a result, these members received rape and death threats from people who saw these posts online.

Moderators are very aware of the risks of privacy breaches and try to take precautions against leaking screenshots or posts from their groups. As we saw in section 5.2.7, Mahum tried to “appeal to [the member’s] emotions...please don’t take screenshots...please let this be a safe space.” Mahum tried to explain the consequences of sharing screenshots out of the group. Moderators removed members from the the group if they suspected them of sharing content from the group. At times, this happened when members shared their Facebook account with a spouse or male relative because it is an invasion of other members’ privacy. As the size of the group increases, maintaining the privacy of its members becomes more complex. Khadijah explains that when one is moderating a group of “around 31,000 people, how do you control privacy?” She said that group members report screenshots taken by other users whom they know personally and who might be in their personal Facebook networks. The platform itself provides no good way to manage this task.

With all these concerns about screenshots leaked from their groups, moderators requested that Facebook add a feature to disable screenshots within their groups. Haniya says “if they can come up with a feature like in Snapchat where you know... [when] someone takes a screenshot [of a post]. It would be really good if I can be notified.” Khadijah was personally affected by leaked screenshots which included some of her posts. These screenshots were later used by a male influencer and Khadijah was being harassed by some of those who saw the influencer’s post. She tried to get Facebook to take down the the post made by the influencer by “messag[ing] Facebook, and I’ve

sent them the stuff people have said...report[ing] by [multiple women in our group]...and nothing, nothing really takes place because...anyone can screenshot anything and post it as a picture.”

**5.3.2 Mental Health Challenges.** The toll moderation work takes on the moderators’ mental health is not only restricted to reading accounts of abuse and violence – it also has to do with the personal responsibility these women feel to provide help. The moderators we spoke to have described a variety of coping mechanisms they’ve developed over time. One mechanism that Zainab, Aliya, and Khadijah have described is either consciously removing themselves emotionally from the situations they encounter, or having become already desensitized to these accounts because of dealing with them often. Anusha and Sara rely on friends and family, and Sharmin and Soha talked about also consulting therapists when they felt the need. Members of the moderation team support each other by providing a space to vent about the problems on the Facebook groups. Finally, by rotating responsibilities between members of the moderation team, each moderator can have some time off.

This means that most groups needed to maintain and manage their moderation teams as the group expanded. *Female Unity at University* needs to address the needs of students at the university. As moderators graduate from school, new moderators from the next class need to take on moderation responsibilities. Haniya explains the importance of having new moderators because the students in each class “have their own concerns.” To get moderators ready for their responsibility, they need to be introduced to “how the group has come along in the past two years so that [the group can] continue.” Haniya selected new moderators for *Female Unity at University* using a Facebook feature that measures a group member’s engagement with content. She selected Mahum by noticing that she is “[a] very regular and active poster...I just drop them a message like I’ve seen you interacting a lot in the group and helping here and there so if you’d be interested I can make you a moderator for the group.”

Aliya said she recruits new members of the moderation team in a distinctly different way – more like a “job hiring process.” New team members go through a provisional/trial period. They are provided with a job description and their progress measured. This more corporate method of on-boarding new moderators reflects Aliya’s view of “*The Corporation For the Needs of Desi Motherhood* [as] a lot more than a group. It’s a entire brand, with a website, a YouTube channel, Twitter, Instagram. A very definite consumer presence.”

## 6 DISCUSSION

In this section, we reflect on our findings and how they relate to earlier work in this space. First, we discuss the motivations and mechanisms used for creating and moderating digital safe spaces (RQ1). Next, we discuss how the creation and moderation of women-only Facebook groups impacted moderators and administrators (RQ2). Finally, we reflect on how the affordances of private Facebook groups supported or hindered the moderators and present specific guidelines for enabling moderators of closed-online communities catering to vulnerable populations (RQ3).

### 6.1 RQ1. What are the motivations and mechanisms for creating and moderating digital safe spaces?

In this subsection, we will answer RQ1. Specifically, we focus on the motivations for the creation of new women-only groups, or joining the moderation teams for said groups. We then describe the evolution of these Facebook groups. Finally, we shift our focus to the mechanisms moderators use to create and manage women-only safe spaces.

**6.1.1 Early Motivations and Evolution.** In all six closed Facebook groups, the founders and moderators felt dis-empowerment in a particular area of their lives. Disempowerment is the lack of

control over one's life [70, 106, 145]. When other members of society have *power over* women, it limits their capability [122] to achieve their goals [111].

Sara, feeling the isolation and pressure associated with postpartum depression and the general lack of maternal health in Pakistan felt disempowered as her feelings were not taken seriously. Postpartum depression is generally associated with lower self-esteem and disempowerment [95, 140], and this is more of a problem in South Asian societies where women feel the stigma of reporting their depression to their physicians or partners, and where they perceive themselves to have less power to make decisions about themselves and their infants in the extended family, especially in relation to in-laws [59]. The creator of *Desi Motherhood* had similar motivations. Echoing the use of closed Facebook groups the Gobar North [35], both of these groups reflect the need for support that new mothers have, especially as it relates to their identity outside of the mother role (e.g., women as wife, employee, sister etc.) [82]

The lack of support is not limited to mothers. For example, Haniya, a college student, wanted to find a space where she can safely discuss topics like menstruation which can be a particularly stigmatizing topic in the South Asian context [132]. While online interactions are central to supporting college students in Pakistan and the Bangladesh (e.g., [64, 105]), they can face online harassment [83] when engaging in discourse on public online communities. While not explicitly created for this purpose, *Female Unity at University* took center stage in a local #MeToo movement against harassment in a major Pakistani university (see sections 6.2.3 and 6.2.4).

*Home away from home* provided a safe space for South Asian women in diaspora. The group provides information that helps start one's life as an immigrant (applying for driver's licenses etc.) Immigrating South Asian women live with potential downward mobility (e.g., working at a gas station even though one might be trained as a doctor or engineer) [13, Ch.5], and lack of contact with other members of their society while losing social ties with their support network in South Asia [13, P.132-154] and are threatened by the vulnerable residence status as immigrants [75]. In fact, moderators noticed that many members did not know their rights as immigrants. However, the group support was limited (e.g., not raising funds) by the precarity of the moderators' position as immigrants themselves.

Moderators of *Unapologetically Feminist* felt constrained from sharing secular, feminist, non traditional views of women on other online communities and thought this new group can provide that space. Historically, women's rights activists in South Asia stepped out of the traditional domestic realm to advocate for new roles for women in a patriarchal society, and to protest violence against women [43]. However, change has not been linear. While women had more success in challenging patriarchal systems in the 1970's throughout Bhutto's presidency [43, P.203], his downfall shifted the focus of government and allied religious institutions to covering women's bodies by "introducing mandatory dress codes" and discriminatory laws (e.g., Hudood ordinances) [43, P.204-205]. Recently, allegations of blasphemy (a death sentence in Pakistan) were levelled at marching women [3]. Feminist activists are also harassed and targeted by anti-feminist social movements [11]. In a landscape like this, online moderation of women-only groups is a powerful way for women to take on the role of activists bypassing the constraints that exist in the physical world. Next, we discuss the mechanisms used by moderators to create and maintain these safe spaces.

**6.1.2 Moderators as Network Gatekeepers and Community Discussion Boundary Setters.** To create a safe space (section 2.2.1), moderators have to police an online community by controlling who enters the space (section 2.4.2), like a closed Facebook group (section 2.1.1), the discussions that are allowed in the safe space, and the norms specifying how these topics are to be discussed (section 2.4.1).

Our group moderators took on the role of network gatekeepers [25] (see section 2.4.2) by vetting any new members (see section 5.2.1). Because surveillance permeates South Asian societies, Facebook users attempt to reduce their identification on the platform. They might do so by using stock photos for profile pictures, “not using their full (legal) names, or using pseudonyms.” [101] In section 5.2, we explained how moderators diligently study the history of new users on the platform and prefer those whose Facebook friends are already members of the group the transition of new members to a community is aided by having ties in said community [22]), who have been on Facebook for a year or more and who have real pictures on their profiles (as opposed to stock photos). Moderators got some of their signals from the Facebook profile (e.g., user tenure on the site and their ties to other members of the group), but the process still required a “gut check.” While earlier work shows that profile cues (e.g., profile pictures, group memberships, and page likes) [73] gave moderators solid indicators of the propriety of a new member, the subdued identity cues on women’s Facebook profiles in the patriarchal societies makes the process more difficult for the moderators. We will discuss some design suggestions to counter this problem in section 6.3.

Another role taken on by the moderators is focused on strategically shaping the boundaries of the discussion by curating content and providing it in an easy format for users to access [48] (see section 5.2.2). However, moderators were not always successful. Zainab from *Unapologetically feminist* failed to engage members in academic and political content. Similarly, when Anusha tried to strategically commemorate festivities associated with her religious minority (Shia Islam), she received negative feedback from many of the members. While the Shia minority in Pakistan has been legally afforded freedoms as a minority group [107, P.268-269], over the years, it has been persecuted and targeted violently by fanatic anti-Shia groups in the country [11]. As the interlocking religious and gender identities [42] show, the moderator’s “multiple overlapping marginalizations” [117, P.2] limits their capacity to set the boundaries of the discussion in the women-only safe space. We did not find any suggestions of exclusion based on religious, sectarian, or other minority group (other than not being a woman). However, this incident and the fact that *Unapologetically Feminist* makes specific references to respecting minorities indicates that, much like the implicit exclusion of Lesbians because of the “heterosocial framing of most discussions” in the SAWnet community [54, P.182], other South Asian minority members might similarly have access to safe spaces, but not enjoy the same advantages as other members. We explore this further in section 7. In essence, while moderators have a lot of control over the content shared in the community, users have some weight in determining the tenor of community discussions [37]. Other limitations faced by moderators are the lack of transparency in automated Facebook tools and the lack of control over leaked community content. Both are discussed in detail in section 6.3.

Much like the women-only parks initiative in Rawalpindi (discussed in the Introduction), where the idea was brought to the attention of the first female city administrator, we argue that women-only groups, with women-only founders, moderators, and administrators can provide safe spaces where women can expand “[their] knowledge, information and interactions with others, they can allow a critical re-assessment of what was hitherto accepted as the natural order of things and open up the possibility of alternative ways of living that were hitherto inconceivable.” [70]

## 6.2 RQ2. What are the impacts of creating and moderating digital spaces on moderators?

In this section, we map our findings to four empowerment dimensions introduced in section 6.2. For each of the four dimensions, we share examples of how they manifested in the safe spaces we studied and compare them to earlier work. Finally, we describe how safe spaces can empower both the activists (in our case, moderators Facebook group founders) and individual members alike.



*6.2.1 Empowerment as consciousness (power-within): Moderators making sense of their identity as women in a patriarchal society.* Facebook group founders and administrators created closed Facebook groups to address a sense of disempowerment (see Section 6.1). When they found others facing similar constraints in a patriarchal society, women start to question the main tenets of their societies. This change in consciousness gives women a renewed sense of self-efficacy [23]. This in turn changes women's identities. For example, Mahum joined the moderation team for a university women's group to talk about everyday concerns of a female college student, but with the #MeToo movement that gained steam in 2020, she also started seeing herself as an advocate for women sharing their sexual harassment experiences.

*6.2.2 Empowerment as choice (Power to): Moderators accessing resources and gaining the power to act.* In this dimension, moderators will find new resources by gaining awareness and abilities to act towards their goals. For example, Sara and Khadijah monetized brands by sponsoring them on their groups. Aliya saw her group as a source of income, and viewed her role moderating the group as full-time employment. It is important to note that moderators felt that sponsorship was an "ethical dilemma." Sponsored products needed to be selected carefully. At the same time, many moderators saw this source of income as a way to supplement their incomes given the time and energy they spend on moderation. They focused on sponsoring brands that were not exploitative, especially if the sponsorship had an educational or charitable effect. For example, Khadijah discussed how her sponsorship of a feminine products company resulted in products being donated to those in need. Similar considerations were discussed by parents of children with special needs who managed Youtube channels [31]. Attaining basic control over basics of one's life as an immigrant (e.g., get a driver's license) through information shared on *Home Away from Home* also contributes to this dimension of empowerment for South Asian women in the diaspora. By employing her position as an influencer and the social capital she built by organizing *Women Entrepreneurs*, Sharmin, who has ties to law enforcement, became a conduit for the power to act in cases of sexual abuse. Earlier work by Ahmed et al. [10] showed that women want a connection to police through anti-harassment technology. Sharmin provides that connection in her role as moderator in this group. When moderators discovered the need for crowdfunding, with the lack of fundraising platforms in the Global South,<sup>5</sup> they created a local infrastructure for group-funding on their groups by keeping track of funds and sharing receipts for those who raised money (e.g., tuition receipts for women receiving education support). This in turn empowered moderators to advocate for change by funding causes they consider important for challenging the patriarchy. Examples include funding education for young women and legal costs of sexual abuse cases.

*6.2.3 Empowerment in community (Power with) :* Advocacy and calls for social change In this dimension, moderators will take action to achieve broader social outcomes. Specifically, moderators devise different ways for users to post sensitive topics anonymously. By doing so, the moderators empower members to discuss sensitive topics. They also empower themselves to critique the patriarchy. This became more pronounced when discussions focused on sexual abuse. When sharing legally sensitive experiences about sexual violence/harassment, moderators seek legal council to shield the group and members from legal repercussions (e.g., libel law suits) while still advocating for societal change and justice. The #MeToo movement that gained steam throughout the summer of 2020 on *Female Unity at University* was a major opportunity for advocacy at the University. This advocacy was not limited to sharing experiences online, but extended to demands from university administration. A similar dynamic is explored in [104] which describes a closed Facebook group for female professionals. While the group was not setup as an advocacy group, a

<sup>5</sup>GoFundMe is not supported in any non-OECD countries

#MeToo movement gained steam on the group after one of the members posted about her sexual harassment by an editor. After receiving support from other members of the group, she shared her experiences outside the group. This eventually led to ramifications for the editor who had to shutdown his “business due to negative publicity.” [104, P.1374]. While there are arguments that Slacktivism (e.g., “greening” the Twitter profile to support the Iranian elections or Black Lives Matter Blackout) has shown limited success in making policy changes (e.g., [86, 109]), we find that in this safe space, the experiences of early posters were elevated by moderators which allowed for a more sustained campaign. This collective storytelling “frames” [46] the discussion to challenge *doxa*, the way things are in a patriarchal society specifically when it comes to sexual harassment. Additionally, the group action did not stop at discussing the issue online, but spilled into organizational action at the University level.

*6.2.4 Empowerment through community members (Power through).* By engaging with more experienced women who can give advice and guidance, both moderators and group members access more resources by gaining knowledge from others experiences. We gave an example of veteran group members - group mom - who provide support and share their experiences in section 5.2.5. By engaging with these members, new entrants to the group will gain social capital [128] which might in turn change their consciousness or allow them to access new resources based on the information gleaned from more experienced members. A similar dynamic was described by Mahum as she tried to safeguard the privacy of survivors by trying to impress on other users the importance of not divulging personal details or taking screenshots (see section 6.3). Mahum noted that she herself was encouraged by the response of members of the group whose response to harassment against group members was not to reduce the pressure, but to continue. While the limits imposed by a patriarchal society can induce a lack of hope which reduces participation in the #MeToo movement [93], if women find support from others in a safe space, this might empower them to push against patriarchal norms. This echoes some of the findings in [10, P.2701] where “women wanted to get support, or see the offender punished through their action.” However, we have to take into account that our subjects are comparatively privileged (as students at university). Therefore, future work can focus on further limits imposed “on individuals living with marginalized intersectional identities (in terms of caste, class, gender, sexual orientation) that further weakens their efforts to push back” using their social media presence [92, P.3]. We will discuss this further in our *Limitations and Future Work* section.

*6.2.5 Empowerment as Spiral.* Tuli et al. [133, P.29] argue that “advocacy is only possible...when safe spaces [exist] for open communication to take place between [members of a group].” Taking the #MeToo campaign on *Female Unity at University* as an example, we see that both moderators and group members are empowered by being part of a safe space advocating for the rights of survivors under the constraints of a patriarchal society. First, there was a need for changing consciousness for moderators who started to see themselves as more than moderators of a Facebook group sharing information between university students. This led to planning for change by publicising survivor accounts. After backlash in the form of harassment against group members, new mechanisms were developed in coordination with legal professionals to introduce legal safeguards for both the group and the survivors. As group posts were leaked, moderators made attempts to change the norms of the groups by urging members not to leak content for fear of endangering other members. At the same time, the leaks and associated threats to group members, raised consciousness in other members who were now more involved in advocating for change, including institutional change at the university. This example mirrors the description of empowerment by Batliwala as a

“spiral, changing consciousness, identifying areas to target for change, planning strategies, acting for change, and analyzing actions and outcomes, which leads in turn to higher levels of consciousness and more finely honed and better executed strategies. The empowerment spiral affects everyone involved: the individual, the activist agent, the collective, and the community.” [26, P.132]

Given the centrality of moderators in the maintenance of safe spaces that allow for an empowerment spiral, we suggest some affordances that can support them next.

### 6.3 RQ3. What are the affordances of social network sites (SNS) that support or obstruct moderator challenges?

Creating and maintaining a safe space is a socio-technical problem that relies on the efforts of founders, moderators, and members, while also relying on platform affordances to protect the space. Some of the affordances currently available supported our moderators in their work. For example, flagging a user’s new comment if they have been flagged before helped moderators by focusing on more problematic users. In this section, we introduce five suggested affordances based on our interviews:

- (1) **Anonymous posting.** While Facebook provides anonymous posting as a feature on some Facebook group types (e.g., Parenting and Health), other groups, like many of our women-only groups, do not have access to it but might benefit from this feature. Currently, existing groups would need to change their central ‘identity’ to a parenting group to be able to access this feature. Additionally, Anusha suggests that personal support by moderators might be important to help users draft an anonymous post. This feedback process is not available in the current design of anonymous posting. Facebook could provide an option for users posting anonymously for the first time, allowing them to tag moderators for help crafting their anonymous post.
- (2) **Blocking screenshot leaks.** As reported by Sambasivan et al. [113], information leakage is one of the abuses women in South Asia face online. Given extreme forms of patriarchy prevalent in the communities where these Facebook groups operate, leaking the identity and content of sensitive posts on these groups could lead to physical harm. Honor killing is used as “disciplinary mechanism to keep women’s mobility and agency in check.” [7] One high-profile case of ‘honor killing’ is that of Qandeel Baloch, a model and social media celebrity who was murdered by her brother [7, 12, 30] when her legal name came to light [7, P85-86]. One affordance that might alleviate this threat is preventing screenshots from being taken on smart phones. Examples of such affordances can be seen in a beta version of a WhatsApp [131] and in this example shared by Nomtek [90]. Any screenshots taken would basically show as black images. In countries with a large increase in smartphone adoption like Pakistan [129] and Bangladesh [108], this might provide a good protection for members of these groups.
- (3) **Crowdfunding infrastructure.** As we discussed in section 6.2, crowdfunding is a time consuming and difficult task for moderators because of the lack of requisite infrastructure in Facebook groups and absence of crowdfunding services like GoFundMe in South Asia. Introducing affordances that increase transparency of the crowdfunding process could help the moderators [39]. For example, Choy and Schlagwein [39, P.19] suggest that trust, critical for the success of crowdfunding campaigns, can be built by sharing media that allow donors to assess the project. Pictures and videos provide “social proof” that the money is being used for the stated goals. Additionally, knowing more about the project creators helped solidify trust in the project. Future crowdfunding campaigns can provide easily presented pictures or

videos showing the effects of the funding. For example, they can show university grades for a semester, or a tuition receipt. When crowdfunding to cover legal costs for members of the group, updates from legal cases can be used to increase transparency.

- (4) **Evolving moderation algorithms.** Transparency is also important when moderators try to explain their decisions to members of the safe space [69]. Zainab suggested that when a post is flagged at platform level, she cannot always understand why the post has been deleted, and therefore, cannot explain the event to group members. Additionally, moderators in our sample have little understanding of how Facebook moderating algorithms are trained. They have some intuitive sense of the specific words it would find problematic. However, moderation algorithms did not govern specific types of problematic content in the women-only safe spaces. To reduce the burden of moderation of a safe space, it is important to allow moderators to contribute data to train algorithms that can aid them in monitoring their communities.
- (5) **New member screening.** Lower identity cues and unanswered forms make moderators job of gatekeeping safe spaces more difficult (see section 6.1.2 for details.) Additionally, new entrants did not always answer (truthfully) screening questions. Having a more robust application process might alleviate this problem. For example, Ammari et al. [16, P.23-24] note that some private subreddits require new users to fill out rather involved forms. One subreddit specifically demands: “If you want to join the ranks at r/BreakingDad, you need to prove your dadhood to us. To get access to BreakingDad, please post one of the following: (1) A link to a post you’ve made on reddit indicating you have children; (2) A picture of your username next to an item only a dad would have; (3) At the bare minimum, a sob story about who you are, why you want in, and why we should allow that to happen.”<sup>6</sup> While this might be a barrier to some of the new members, especially if they are using smart phones, different modalities of entering this information can be considered. For example, Naseem et al. devised voice-based self-disclosure systems for marginalized women [98]. Similarly, women can leave a short message (or more) explaining why they are seeking access to the group.

Building on earlier work by David Kaye [77], we call for decentralizing platform policies to smaller geographical areas (e.g., South Asia), whilst also taking into account the context of users setting up safe spaces for vulnerable groups. As Bardzell argues in [24], “feminist standpoint theory advocates for the use of women’s viewpoints” in the design process to “avoid one-sided accounts of social life.” Complimenting this argument, Mohanty [91] calls for a “feminism without borders” where lessons learned from one site of feminist struggle “can assist in another’s quest for empowerment.” [78, P.4] Taking the example of data leaks from screenshots we described above, we found a different site of struggle with a different technology that still revolves around information leakage. McKay and Miller described the threat of information leaking - specifically verbal recordings on shared smart devices (e.g., Amazon Alexa) to abusive partners. The solution they propose is to blur or otherwise filter (delete) any recording on the system so that information is not leaked [87]. Similarly, we propose filtering (not allowing) screenshots. While the marginalized populations are different, and the technologies are different, they are unified in shared struggles [78, P.18]. Therefore, the design solutions for one may inform the other.

## 7 LIMITATIONS AND FUTURE WORK

One limitation of this study is the focus on Facebook as the sole platform. Studying how other social media sites (e.g., Twitter) are used in advocacy for women and social change is an important area of future work. This study is a first exploration of the potential for such spaces in challenging contexts. Additionally, as our findings showed, overlapping marginalizations of members and moderators can

<sup>6</sup>[https://www.reddit.com/r/BrDaPublic/comments/48i4t1/how\\_to\\_join\\_rbreakingdad\\_an\\_idiots\\_guide/](https://www.reddit.com/r/BrDaPublic/comments/48i4t1/how_to_join_rbreakingdad_an_idiots_guide/)

complicate the management of safe spaces. Given the overlapping ethnic, religious, and sectarian, and caste identities in South Asia, future work can focus on the effects of interlocking identities on the functioning of safe spaces in the region for #MeToo and other feminist movements. Finally, our study is focused on women-only groups. There are other vulnerable communities that could benefit from digital safe spaces in both the Global South and the Global North. Future work could focus on understanding the needs of different vulnerable communities (transgender communities in much of South Asia are particularly vulnerable) in varied contexts to contextualize digital safe spaces and mechanisms for creating and moderating them.

## 8 CONCLUSION

In this study we explore the mechanisms of moderating and creating digital safe spaces. We explore the construct of what a ‘safe’ space entails and the specific ways and means by which moderators ensure the safety of their digital space but also the well-being of their members. In particular, we explore the burdens placed on moderators of vulnerable groups like women in patriarchal contexts and the deliberate ways in which they curate these online spaces to empower women. We also highlight ways in which digital technologies hinder the work of these moderator-activists and think through mechanisms that can be employed to support the moderators. We believe social networking spaces have great potential for catering to the needs of vulnerable and marginalized communities globally and this work is a first step in understanding the affordances technologies should incorporate to support the creation of digital safe spaces.

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## REFERENCES

- [1] [n.d.]. Facebook users by country 2021. <https://www.statista.com/statistics/268136/top-15-countries-based-on-number-of-facebook-users/>
- [2] 2019. Brother found guilty of ‘honor killing’ of Pakistan social media star. <https://www.reuters.com/article/us-pakistan-honourkillings-idUSKBN1WC0LU>. Accessed: 2021-07-04.
- [3] 2021. Pakistan: Women’s rights activists face new allegations of blasphemy. <https://www.dw.com/en/pakistan-womens-rights-activists-face-new-allegations-of-blasphemy/a-57108383>. Accessed: 2021-07-04.
- [4] Norah Abokhodair, Sofiane Abbar, Sarah Vieweg, and Yelena Mejova. [n.d.]. Privacy and twitter in qatar: traditional values in the digital world (WebSci ’16). Association for Computing Machinery, 66–77. <https://doi.org/10.1145/2908131.2908146>
- [5] Norah Abokhodair, Adam Hodges, and Sarah Vieweg. [n.d.]. Photo Sharing in the Arab Gulf: Expressing the Collective and Autonomous Selves (CSCW ’17). Association for Computing Machinery, 696–711. <https://doi.org/10.1145/2998181.2998338>
- [6] Lyn Y. Abramson, Martin E. Seligman, and John D. Teasdale. 1978. Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology* 87, 1 (1978), 49–74. <https://doi.org/10.1037/0021-843X.87.1.49> Place: US Publisher: American Psychological Association.
- [7] Farah Ahmad, Natasha Driver, Mary Jane McNally, and Donna E Stewart. 2009. “Why doesn’t she seek help for partner abuse?” An exploratory study with South Asian immigrant women. *Social science & medicine* 69, 4 (2009), 613–622.
- [8] Sarah Ahmed. 2019. The Honor Killing of Qandeel Baloch. In *Women’s Journey to Empowerment in the 21st Century: A Transnational Feminist Analysis of Women’s Lives in Modern Times*, Kristen Zaleski, Annalisa Enrile, Xiyang Wang, and Eugenia L. Weiss (Eds.). Oxford University Press, 135–146. Google-Books-ID: OmmtDwAAQBAJ.
- [9] Syed Ishtiaque Ahmed, Md. Romael Haque, Irtaza Haider, Jay Chen, and Nicola Dell. 2019. “Everyone Has Some Personal Stuff”: Designing to Support Digital Privacy with Shared Mobile Phone Use in Bangladesh. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI ’19)*. Association for Computing Machinery, New York, NY, USA, 1–13. <https://doi.org/10.1145/3290605.3300410>

- [10] Syed Ishtiaque Ahmed, Steven J. Jackson, Nova Ahmed, Hasan Shahid Ferdous, Md. Rashidujjaman Rifat, A.S.M Rizvi, Shamir Ahmed, and Rifat Sabbir Mansur. [n.d.]. *Protibadi*: A platform for fighting sexual harassment in urban Bangladesh (CHI '14). Association for Computing Machinery, 2695–2704. <https://doi.org/10.1145/2556288.2557376>
- [11] Zainab Alam. 2021. Violence against women in politics: The case of Pakistani women's activism. *Journal of Language Aggression and Conflict* 9, 1 (April 2021), 21–46. <https://doi.org/10.1075/jlac.00052.ala> Publisher: John Benjamins.
- [12] Zainab B. Alam. 2020. Do-it-Yourself Activism in Pakistan: The Fatal Celebrity of Qandeel Baloch. *Perspectives on Politics* 18, 1 (March 2020), 76–90. <https://doi.org/10.1017/S1537592719002408> Publisher: Cambridge University Press.
- [13] Lalaie Ameeriar. [n.d.]. *Downwardly Global: Women, Work, and Citizenship in the Pakistani Diaspora*. Duke University Press. <https://doi.org/10.1215/9780822373407> Accepted: 2017-03-09 23:55.
- [14] Tawfiq Ammari and Sarita Schoenebeck. 2015. Networked empowerment on Facebook groups for parents of children with special needs. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. 2805–2814.
- [15] Tawfiq Ammari and Sarita Schoenebeck. 2016. “Thanks for Your Interest in Our Facebook Group, but It’s Only for Dads”: Social Roles of Stay-at-Home Dads. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW '16)*. ACM, New York, NY, USA, 1363–1375. <https://doi.org/10.1145/2818048.2819927>
- [16] Tawfiq Ammari, Sarita Schoenebeck, and Daniel M. Romero. 2019. Self-declared throwaway accounts on Reddit: How platform affordances and shared norms enable parenting disclosure and support. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW (2019), 135:1–135:28. <http://doi.acm.org/10.1145/3134659>
- [17] Tawfiq Ammari, Sarita Yardi Schoenebeck, and Meredith Ringel Morris. [n.d.]. Accessing Social Support and Overcoming Judgment on Social Media among Parents of Children with Special Needs. In *Eighth International AAAI Conference on Weblogs and Social Media (2014-05)*. <https://www.aaai.org/ocs/index.php/ICWSM/ICWSM14/paper/view/8032>
- [18] Nazanin Andalibi and Andrea Forte. 2018. Announcing pregnancy loss on Facebook: A decision-making framework for stigmatized disclosures on identified social network sites. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. 1–14.
- [19] Nazanin Andalibi, Oliver L Haimson, Munmun De Choudhury, and Andrea Forte. 2018. Social support, reciprocity, and anonymity in responses to sexual abuse disclosures on social media. *ACM Transactions on Computer-Human Interaction (TOCHI)* 25, 5 (2018), 1–35.
- [20] Nazanin Andalibi, Oliver L Haimson, Munmun De Choudhury, and Andrea Forte. 2016. Understanding social media disclosures of sexual abuse through the lenses of support seeking and anonymity. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. ACM, 3906–3918.
- [21] Nazanin Andalibi, Pinar Ozturk, and Andrea Forte. 2017. Sensitive self-disclosures, responses, and social support on instagram: the case of# depression. In *Proceedings of the 2017 ACM conference on computer supported cooperative work and social computing*. ACM, 1485–1500.
- [22] Lars Backstrom, Dan Huttenlocher, Jon Kleinberg, and Xiangyang Lan. [n.d.]. Group formation in large social networks: membership, growth, and evolution (KDD '06). Association for Computing Machinery, 44–54. <https://doi.org/10.1145/1150402.1150412>
- [23] Albert Bandura and Richard H. Walters. 1977. *Social learning theory*. Vol. 1. Englewood cliffs Prentice Hall.
- [24] Shaowen Bardzell. 2010. Feminist HCI: taking stock and outlining an agenda for design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '10)*. Association for Computing Machinery, New York, NY, USA, 1301–1310. <https://doi.org/10.1145/1753326.1753521>
- [25] Karine Barzilai-Nahon. 2008. Toward a theory of network gatekeeping: A framework for exploring information control. *Journal of the American Society for Information Science and Technology* 59, 9 (2008), 1493–1512. <https://doi.org/10.1002/asi.20857> eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1002/asi.20857>.
- [26] Srilatha Batliwala. 1994. The Meaning of Women's Empowerment: New Concepts from Action. In *Population Policies Reconsidered: Health, Empowerment, and Rights*, Gita Sen and Adrienne Germain (Eds.). Harvard Center for Population and Development Studies. Google-Books-ID: ljjYAAAAIAAJ.
- [27] Jennifer Baumgardner. 2011. *F 'em! : Goo Goo, Gaga, and Some Thoughts on Balls*. Basic Books. Google-Books-ID: dPj1dOybrLEC.
- [28] Hannah Bayfield, Laura Colebrooke, Hannah Pitt, Rhiannon Pugh, and Natalia Stutter. 2020. Awesome women and bad feminists: the role of online social networks and peer support for feminist practice in academia. *cultural geographies* 27, 3 (2020), 415–435.
- [29] Kamla Bhasin and Nighat Said Khan. 1986. *Feminism and Its Relevance in South Asia*. Women Unlimited.
- [30] Jon Boone. 2017. ‘She feared no one’: the life and death of Qandeel Baloch. <http://www.theguardian.com/world/2017/sep/22/qandeel-baloch-feared-no-one-life-and-death> Section: World news.

- [31] Katya Borgos-Rodriguez, Kathryn E. Ringland, and Anne Marie Piper. 2019. MyAutosomeFamilyLife: Analyzing Parents of Children with Developmental Disabilities on YouTube. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (Nov. 2019), 94:1–94:26. <https://doi.org/10.1145/3359196>
- [32] Pierre Bourdieu. 1977. *Outline of a Theory of Practice*. Cambridge University Press, Cambridge. <https://doi.org/10.1017/CBO9780511812507>
- [33] danah m. boyd and Nicole B. Ellison. [n.d.]. Social Network Sites: Definition, History, and Scholarship. 13, 1 ([n. d.]), 210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
- [34] Martha Brady. 2005. Creating safe spaces and building social assets for young women in the developing world: A new role for sports. *Women's Studies Quarterly* 33, 1/2 (2005), 35–49.
- [35] Lauren Britton, Louise Barkhuus, and Bryan Semaan. 2019. "Mothers as Candy Wrappers": Critical Infrastructure Supporting the Transition into Motherhood. *Proceedings of the ACM on Human-Computer Interaction* 3, GROUP (Dec. 2019), 232:1–232:21. <https://doi.org/10.1145/3361113>
- [36] Jean Burgess. [n.d.]. Hearing Ordinary Voices: Cultural Studies, Vernacular Creativity and Digital Storytelling. 20, 2 ([n. d.]), 201–214. <https://doi.org/10.1080/10304310600641737> Publisher: Routledge \_eprint: <https://doi.org/10.1080/10304310600641737>.
- [37] Brian S. Butler and Xiaoqing Wang. 2012. The Cross-Purposes of Cross-Posting: Boundary Reshaping Behavior in Online Discussion Communities. *Information Systems Research* 23, 3-part-2 (Sept. 2012), 993–1010. <https://doi.org/10.1287/isre.1110.0378> Publisher: INFORMS.
- [38] Anne-Emmanuèle Calvès. 2009. Empowerment: The History of a Key Concept in Contemporary Development Discourse. *Revue Tiers Monde* No 200, 4 (2009), 735–749. [https://www.cairn-int.info/article-E\\_RTM\\_200\\_0735--empowerment-the-history-of-a-key-concept.htm](https://www.cairn-int.info/article-E_RTM_200_0735--empowerment-the-history-of-a-key-concept.htm) Publisher: Armand Colin.
- [39] Katherine Choy and Daniel Schlagwein. 2016. Crowdsourcing for a better world: On the relation between IT affordances and donor motivations in charitable crowdfunding. *Information Technology & People* 29, 1 (Jan. 2016), 221–247. <https://doi.org/10.1108/ITP-09-2014-0215> Publisher: Emerald Group Publishing Limited.
- [40] Rosemary Clark-Parsons. 2018. Building a digital Girl Army: The cultivation of feminist safe spaces online. *new media & society* 20, 6 (2018), 2125–2144.
- [41] Kira Cochrane. 2013. The fourth wave of feminism: meet the rebel women. <http://www.theguardian.com/world/2013/dec/10/fourth-wave-feminism-rebel-women> Section: World news.
- [42] Kimberle Crenshaw. [n.d.]. Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color. 43 ([n. d.]), 1241. <https://heionline.org/HOL/Page?handle=hein.journals/stflr43&id=1257&div=&collection=>
- [43] Filomena M. Critelli and Jennifer Willett. 2013. Struggle and Hope: Challenging Gender Violence in Pakistan. *Critical Sociology* 39, 2 (March 2013), 201–221. <https://doi.org/10.1177/0896920512438780> Publisher: SAGE Publications Ltd.
- [44] Sofia Dewar, Schinria Islam, Elizabeth Resor, and Niloufar Salehi. [n.d.]. Finsta: Creating "Fake" Spaces for Authentic Performance (CHI EA '19). Association for Computing Machinery, 1–6. <https://doi.org/10.1145/3290607.3313033>
- [45] Tawanna R. Dillahunt and Alex Lu. 2019. DreamGigs: Designing a Tool to Empower Low-Resource Job Seekers. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19)*. Association for Computing Machinery, New York, NY, USA, 1–14. <https://doi.org/10.1145/3290605.3300808>
- [46] Jill P. Dimond, Michaelanne Dye, Daphne Larose, and Amy S. Bruckman. 2013. Hollaback! the role of storytelling online in a social movement organization. In *Proceedings of the 2013 conference on Computer supported cooperative work (CSCW '13)*. Association for Computing Machinery, New York, NY, USA, 477–490. <https://doi.org/10.1145/2441776.2441831>
- [47] Bryan Dosono. 2018. AAPI Identity Work on Reddit: Toward Social Support and Collective Action (GROUP '18). Association for Computing Machinery, New York, NY, USA, 373–378. <https://doi.org/10.1145/3148330.3152697>
- [48] Arthur R. Edwards. 2002. The moderator as an emerging democratic intermediary: The role of the moderator in Internet discussions about public issues. *Information Polity* 7, 1 (Jan. 2002), 3–20.
- [49] Nicole B. Ellison, Jessica Vitak, Rebecca Gray, and Cliff Lampe. [n.d.]. Cultivating Social Resources on Social Network Sites: Facebook Relationship Maintenance Behaviors and Their Role in Social Capital Processes\*. 19, 4 ([n. d.]), 855–870. <https://doi.org/10.1111/jcc4.12078>
- [50] Andrea Forte, Nazanin Andalibi, and Rachel Greenstadt. [n.d.]. Privacy, Anonymity, and Perceived Risk in Open Collaboration: A Study of Tor Users and Wikipedians (CSCW '17). Association for Computing Machinery, 1800–1811. <https://doi.org/10.1145/2998181.2998273>
- [51] Nancy Fraser. [n.d.]. Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy. 25 ([n. d.]), 56–80. <https://doi.org/10.2307/466240> Publisher: Duke University Press.
- [52] Paulo Freire. 2014. *Pedagogy of the Oppressed: 30th Anniversary Edition*. Bloomsbury Publishing USA. Google-Books-ID: oKQMBAAAQBAJ.
- [53] James Ngetha Gachau. 2016. The Role of Social Media in Participatory Democracy: A Case Study of Facebook Groups. In *Proceedings of the 19th International Conference on Supporting Group Work (GROUP '16)*. Association

- for Computing Machinery, New York, NY, USA, 467–472. <https://doi.org/10.1145/2957276.2997020>
- [54] Radhika Gajjala. 2002. An Interrupted Postcolonial/Feminist Cyberethnography: Complicity and Resistance in the "Cyberfield". *Feminist Media Studies* 2, 2 (Jan. 2002), 177–193. <https://doi.org/10.1080/14680770220150854> Publisher: Routledge \_eprint: <https://doi.org/10.1080/14680770220150854>.
- [55] A. Galiè and C.R. Farnworth. 2019. Power through: A new concept in the empowerment discourse. *Global Food Security* 21 (June 2019), 13–17. <https://doi.org/10.1016/j.gfs.2019.07.001>
- [56] Ednie Kaeh Garrison. 2000. U.S. Feminism-Grrrl Style! Youth (Sub)Cultures and the Technologics of the Third Wave. *Feminist Studies* 26, 1 (2000), 141–170. <https://doi.org/10.2307/3178596> Publisher: Feminist Studies, Inc.
- [57] Tarleton Gillespie. 2018. *Custodians of the Internet: Platforms, Content Moderation, and the Hidden Decisions That Shape Social Media*. Yale University Press. <https://doi.org/10.12987/9780300235029> Publication Title: Custodians of the Internet.
- [58] Erving Goffman. [n.d.]. *The Presentation of Self in Everyday Life*. Anchor Books/Doubleday. Google-Books-ID: 1G89PgAACAAJ.
- [59] Salima S. Gulamani, Kiran Shaikh, and Jehanara Chagani. [n.d.]. Postpartum Depression in Pakistan. 17, 2 ([n. d.]), 147–152. <https://doi.org/10.1111/1751-486X.12024>
- [60] Jurgen Habermas and Jürgen Habermas. 1991. *The Structural Transformation of the Public Sphere: An Inquiry Into a Category of Bourgeois Society*. MIT Press. Google-Books-ID: e799caakIWoc.
- [61] Donna Haraway. [n.d.]. Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. 14, 3 ([n. d.]), 575–599. <https://doi.org/10.2307/3178066> Publisher: Feminist Studies, Inc.
- [62] Susan Herring, Kirk Job-Sluder, Rebecca Scheckler, and Sasha Barab. 2002. Searching for Safety Online: Managing "Trolling" in a Feminist Forum. *The Information Society* 18, 5 (2002), 371–384. <https://doi.org/10.1080/01972240290108186> arXiv:<https://doi.org/10.1080/01972240290108186>
- [63] Bernie Hogan. [n.d.]. The Presentation of Self in the Age of Social Media: Distinguishing Performances and Exhibitions Online. 30, 6 ([n. d.]), 377–386. <https://doi.org/10.1177/0270467610385893> Publisher: SAGE Publications Inc.
- [64] Samia Huq. [n.d.]. Seeking certainty, security and spirituality: religious conditioning and everyday aspirations amongst female university students in Bangladesh. 29, 2 ([n. d.]), 257–270. <https://doi.org/10.1080/09584935.2021.1915247> Publisher: Routledge \_eprint: <https://doi.org/10.1080/09584935.2021.1915247>.
- [65] SOLAVA IBRAHIM and SABINA ALKIRE. 2007. Agency and Empowerment: A Proposal for Internationally Comparable Indicators. *Oxford Development Studies* 35, 4 (Dec. 2007), 379–403. <https://doi.org/10.1080/13600810701701897> Publisher: Routledge \_eprint: <https://doi.org/10.1080/13600810701701897>.
- [66] Samia Ibtasam, Lubna Razaq, Maryam Ayub, Jennifer R. Webster, Syed Ishtiaque Ahmed, and Richard Anderson. 2019. "My cousin bought the phone for me. I never go to mobile shops": The Role of Family in Women's Technological Inclusion in Islamic Culture. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (Nov. 2019), 46:1–46:33. <https://doi.org/10.1145/3359148>
- [67] Shagun Jhaver, Darren Scott Appling, Eric Gilbert, and Amy Bruckman. [n.d.]. "Did You Suspect the Post Would be Removed?": Understanding User Reactions to Content Removals on Reddit. 3 ([n. d.]), 192:1–192:33. Issue CSCW. <https://doi.org/10.1145/3359294>
- [68] Shagun Jhaver, Iris Birman, Eric Gilbert, and Amy Bruckman. [n.d.]. Human-Machine Collaboration for Content Regulation: The Case of Reddit Automoderator. 26, 5 ([n. d.]), 31:1–31:35. <https://doi.org/10.1145/3338243>
- [69] Shagun Jhaver, Amy Bruckman, and Eric Gilbert. [n.d.]. Does Transparency in Moderation Really Matter? User Behavior After Content Removal Explanations on Reddit. 3 ([n. d.]), 150:1–150:27. Issue CSCW. <https://doi.org/10.1145/3359252>
- [70] Naila Kabeer. 1999. Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and Change* 30, 3 (1999), 435–464. <https://doi.org/10.1111/1467-7660.00125> \_eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/1467-7660.00125>.
- [71] Naila Kabeer. 2011. Between Affiliation and Autonomy: Navigating Pathways of Women's Empowerment and Gender Justice in Rural Bangladesh. *Development and Change* 42, 2 (2011), 499–528. <https://doi.org/10.1111/j.1467-7660.2011.01703.x> \_eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1467-7660.2011.01703.x>.
- [72] Naila Kabeer. 2016. Gender Equality, Economic Growth, and Women's Agency: the "Endless Variety" and "Monotonous Similarity" of Patriarchal Constraints. *Feminist Economics* 22, 1 (Jan. 2016), 295–321. <https://doi.org/10.1080/13545701.2015.1090009> Publisher: Routledge \_eprint: <https://doi.org/10.1080/13545701.2015.1090009>.
- [73] Bente Kalsnes and Karoline Andrea Ihlebæk. 2021. Hiding hate speech: political moderation on Facebook. *Media, Culture & Society* 43, 2 (March 2021), 326–342. <https://doi.org/10.1177/0163443720957562> Publisher: SAGE Publications Ltd.
- [74] Deniz Kandiyoti. 1988. Bargaining with patriarchy. *Gender & society* 2, 3 (1988), 274–290.
- [75] Neelu Kang. [n.d.]. Women Activists in Indian Diaspora: Making Interventions and Challenging Impediments. 26, 2 ([n. d.]), 145–164. <https://doi.org/10.1177/0267228006066489> Publisher: SAGE Publications India.



- [76] Naveena Karusala, Apoorva Bhalla, and Neha Kumar. [n.d.]. Privacy, Patriarchy, and Participation on Social Media (DIS '19). Association for Computing Machinery, 511–526. <https://doi.org/10.1145/3322276.3322355>
- [77] David Kaye. 2019. *Speech Police: The Global Struggle to Govern the Internet*. Columbia Global Reports. Google-Books-ID: ElwqwQEACAAJ.
- [78] Neha Kumar, Naveena Karusala, Azra Ismail, Marisol Wong-Villacres, and Aditya Vishwanath. [n.d.]. Engaging Feminist Solidarity for Comparative Research, Design, and Practice. 3 ([n. d.]), 167:1–167:24. Issue CSCW. <https://doi.org/10.1145/3359269>
- [79] Cliff Lampe and Erik Johnston. [n.d.]. Follow the (slash) dot: effects of feedback on new members in an online community (GROUPO '05). Association for Computing Machinery, 11–20. <https://doi.org/10.1145/1099203.1099206>
- [80] Cliff Lampe and Paul Resnick. [n.d.]. Slash(dot) and burn: distributed moderation in a large online conversation space (CHI '04). Association for Computing Machinery, 543–550. <https://doi.org/10.1145/985692.985761>
- [81] Ruth Lewis, Elizabeth Sharp, Jenni Remnant, and Rhiannon Redpath. 2015. 'Safe spaces': experiences of feminist women-only space. *Sociological Research Online* 20, 4 (2015), 105–118.
- [82] Clare Madge and Henrietta O'Connor. 2006. Parenting gone wired: empowerment of new mothers on the internet? *Social & Cultural Geography* 7, 2 (April 2006), 199–220. <https://doi.org/10.1080/14649360600600528> Publisher: Routledge\_eprint: <https://doi.org/10.1080/14649360600600528>.
- [83] Habibullah Magsi, Nadia Agha, and Inayatullah Magsi. [n.d.]. Understanding Cyber Bullying in Pakistani Context: Causes and Effects on Young Female University Students in Sindh Province. 11, 1 ([n. d.]).
- [84] Sanna Malinen. 2021. Boundary Control as Gatekeeping in Facebook Groups. *Media and Communication* 9, 4 (Oct. 2021), 73–81. <https://doi.org/10.17645/mac.v9i4.4238> Number: 4.
- [85] J. Nathan Matias. 2019. The Civic Labor of Volunteer Moderators Online. *Social Media + Society* 5, 2 (April 2019), 2056305119836778. <https://doi.org/10.1177/2056305119836778> Publisher: SAGE Publications Ltd.
- [86] Dennis McCafferty. [n.d.]. Activism vs. slacktivism. 54, 12 ([n. d.]), 17–19. <https://doi.org/10.1145/2043174.2043182>
- [87] Dana McKay and Charlynn Miller. 2021. Standing in the Way of Control: A Call to Action to Prevent Abuse through Better Design of Smart Technologies. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. Number 332. Association for Computing Machinery, New York, NY, USA, 1–14. <http://doi.org/10.1145/3411764.3445114>
- [88] Amanda Menking and Ingrid Erickson. 2015. The heart work of Wikipedia: Gendered, emotional labor in the world's largest online encyclopedia. In *Proceedings of the 33rd annual ACM conference on human factors in computing systems*. 207–210.
- [89] Kalyani Devaki Menon. 2013. South Asian Feminisms. *Asian Studies Review* 37, 3 (Sept. 2013), 405–407. <https://doi.org/10.1080/10357823.2013.823847> Publisher: Routledge\_eprint: <https://doi.org/10.1080/10357823.2013.823847>.
- [90] Michał Międlarz. 2019. ScreenShot preventing on mobile apps. <https://medium.com/nomtek/screenshot-preventing-on-mobile-apps-9e62f51643e9>
- [91] Chandra Mohanty. 1988. Under Western Eyes: Feminist Scholarship and Colonial Discourses. *Feminist Review* 30, 1 (Nov. 1988), 61–88. <https://doi.org/10.1057/fr.1988.42> Publisher: SAGE Publications.
- [92] Aparna Moitra, Syed Ishtiaque Ahmed, and Priyank Chandra. 2021. Parsing the 'Me' in #MeToo: Sexual Harassment, Social Media, and Justice Infrastructures. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (April 2021), 111:1–111:34. <https://doi.org/10.1145/3449185>
- [93] Aparna Moitra, Naeemul Hassan, Manash Kumar Mandal, Mansurul Bhuiyan, and Syed Ishtiaque Ahmed. [n.d.]. Understanding the Challenges for Bangladeshi Women to Participate in #MeToo Movement. 4 ([n. d.]), 15:1–15:25. Issue GROUPO. <https://doi.org/10.1145/3375195>
- [94] Aparna Moitra, Megh Marathe, Syed Ishtiaque Ahmed, and Priyank Chandra. 2021. Negotiating Intersectional Non-Normative Queer Identities in India. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (CHI EA '21)*. Association for Computing Machinery, New York, NY, USA, 1–6. <https://doi.org/10.1145/3411763.3451822>
- [95] Phyllis Montgomery, Sharolyn Mossey, Sara Adams, and Patricia H. Bailey. [n.d.]. Stories of women involved in a postpartum depression peer support group. 21, 6 ([n. d.]), 524–532. <https://doi.org/10.1111/j.1447-0349.2012.00828.x>\_eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1447-0349.2012.00828.x>.
- [96] Tsubasa Morioka, Nicole B. Ellison, and Michael Brown. [n.d.]. Identity Work on Social Media Sites: Disadvantaged Students' College Transition Processes (CSCW '16). Association for Computing Machinery, 848–859. <https://doi.org/10.1145/2818048.2819959>
- [97] Maryam Mustafa, Noor Mazhar, Ayesha Asghar, Maryem Zafar Usmani, Lubna Razaq, and Richard Anderson. 2019. Digital Financial Needs of Micro-entrepreneur Women in Pakistan: Is Mobile Money The Answer?. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. ACM, 260.
- [98] Mustafa Naseem, Fouzia Younas, and Maryam Mustafa. 2020. Designing Digital Safe Spaces for Peer Support and Connectivity in Patriarchal Contexts. *Proceedings of the ACM on Human-Computer Interaction* 4, CSCW2 (Oct.

- 2020), 146:1–146:24. <https://doi.org/10.1145/3415217>
- [99] U. Niaz. 2003. Violence against women in South Asian countries. *Archives of Women’s Mental Health* 6, 3 (Aug. 2003), 173–184. <https://doi.org/10.1007/s00737-003-0171-9>
- [100] Martha Nussbaum. 2003. CAPABILITIES AS FUNDAMENTAL ENTITLEMENTS: SEN AND SOCIAL JUSTICE. *Feminist Economics* 9, 2-3 (2003), 33–59. <https://doi.org/10.1080/1354570022000077926> arXiv:<https://doi.org/10.1080/1354570022000077926>
- [101] Katy E Pearce and Jessica Vitak. 2016. Performing honor online: The affordances of social media for surveillance and impression management in an honor culture. *New Media & Society* 18, 11 (Dec. 2016), 2595–2612. <https://doi.org/10.1177/1461444815600279> Publisher: SAGE Publications.
- [102] Sachin R Pendse, Faisal M Lalani, Munmun De Choudhury, Amit Sharma, and Neha Kumar. 2020. "Like Shock Absorbers": Understanding the Human Infrastructures of Technology-Mediated Mental Health Support. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–14.
- [103] Francesca Polletta. 1999. "Free Spaces" in Collective Action. *Theory and Society* 28, 1 (1999), 1–38. <https://www.jstor.org/stable/3108504> Publisher: Springer.
- [104] Urszula Pruchniewska. 2019. "A group that’s just women for women": Feminist affordances of private Facebook groups for professionals. *new media & society* 21, 6 (2019), 1362–1379. Publisher: SAGE Publications Sage UK: London, England.
- [105] Sadaf Rafiq, Abid Iqbal, Shafiq Ur Rehman, Muhammad Waqas, Muhammad Asif Naveed, and Shakeel Ahmad Khan. [n.d.]. Everyday Life Information Seeking Patterns of Resident Female University Students in Pakistan. 13, 7 ([n. d.]), 3884. <https://doi.org/10.3390/su13073884> Number: 7 Publisher: Multidisciplinary Digital Publishing Institute.
- [106] Julian Rappaport. 1995. Empowerment meets narrative: Listening to stories and creating settings. *American Journal of Community Psychology* 23, 5 (1995), 795–807. <https://doi.org/10.1007/BF02506992> \_eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1007/BF02506992>.
- [107] Andreas Rieck. 2001. The Struggle for Equal Rights as a Minority: Shia Communal Organizations in Pakistan, 1948-1968. *The Twelver Shia in Modern Times* (Jan. 2001), 268–283. [https://doi.org/10.1163/9789004492035\\_020](https://doi.org/10.1163/9789004492035_020) Publisher: Brill.
- [108] Mike Rogers. 2018. Country overview: Bangladesh Mobile industry driving growth and enabling digital inclusion. *London: GSM Association* (2018).
- [109] Dana Rotman, Sarah Vieweg, Sarita Yardi, Ed Chi, Jenny Preece, Ben Shneiderman, Peter Pirolli, and Tom Glaisyer. [n.d.]. From slacktivism to activism: participatory culture in the age of social media (CHI EA ’11). Association for Computing Machinery, 819–822. <https://doi.org/10.1145/1979742.1979543>
- [110] Kayla Roux. 2017. Safe space online: the construction of intersectional safety in a South African feminist Facebook group. (2017). [https://vital.seals.ac.za/vital/access/manager/Repository/vital:21338?site\\_name=GlobalView&exact=sm\\_creator%3A%22Roux%2C+Kayla%22&sort=sort\\_ss\\_title%2F](https://vital.seals.ac.za/vital/access/manager/Repository/vital:21338?site_name=GlobalView&exact=sm_creator%3A%22Roux%2C+Kayla%22&sort=sort_ss_title%2F) Publisher: Rhodes University; Faculty of Humanities, Journalism and Media Studies.
- [111] Jo Rowlands. 1995. Empowerment Examined ('Empowerment' à l'examen / Exame do controle do poder / Examinando el apoderamiento (empowerment)). *Development in Practice* 5, 2 (1995), 101–107. <https://www.jstor.org/stable/4028929> Publisher: [Taylor & Francis, Ltd., Oxfam GB].
- [112] Jo Rowlands. 1997. *Questioning Empowerment: Working with Women in Honduras*. Oxfam. Google-Books-ID: fXJKq2]QtyoC.
- [113] Nithya Sambasivan, Amna Batool, Nova Ahmed, Tara Matthews, Kurt Thomas, Laura Sanely Gaytán-Lugo, David Nemer, Elie Bursztein, Elizabeth Churchill, and Sunny Consolvo. 2019. "They Don’t Leave Us Alone Anywhere We Go": Gender and Digital Abuse in South Asia. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI ’19)*. Association for Computing Machinery, New York, NY, USA, 1–14. <https://doi.org/10.1145/3290605.3300232>
- [114] Nithya Sambasivan, Garen Checkley, Amna Batool, Nova Ahmed, David Nemer, Laura Sanely Gaytán-Lugo, Tara Matthews, Sunny Consolvo, and Elizabeth Churchill. 2018. "Privacy is not for me, it’s for those rich women": Performative Privacy Practices on Mobile Phones by Women in South Asia. In *Fourteenth Symposium on Usable Privacy and Security (SOUPS 2018)*. USENIX Association, Baltimore, MD, 127–142. <https://www.usenix.org/conference/soups2018/presentation/sambasivan>
- [115] Shruti Sannon, Elizabeth L. Murnane, Natalya N. Bazarova, and Geri Gay. 2019. "I was really, really nervous posting it": Communicating about Invisible Chronic Illnesses across Social Media Platforms. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–13. <https://doi.org/10.1145/3290605.3300583>
- [116] Theodore R. Sarbin. [n.d.]. Role Transition as Social Drama. In *Role Transitions: Explorations and Explanations*, Vernon L. Allen and Evert van de Vliert (Eds.). Springer US, 21–37. [https://doi.org/10.1007/978-1-4613-2697-7\\_2](https://doi.org/10.1007/978-1-4613-2697-7_2)

- [117] Morgan Klaus Scheuerman, Stacy M. Branham, and Foad Hamidi. 2018. Safe Spaces and Safe Places: Unpacking Technology-Mediated Experiences of Safety and Harm with Transgender People. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (Nov. 2018), 155:1–155:27. <https://doi.org/10.1145/3274424>
- [118] Hanna Schneider, Malin Eiband, Daniel Ullrich, and Andreas Butz. 2018. Empowerment in HCI - A Survey and Framework. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)*. Association for Computing Machinery, New York, NY, USA, 1–14. <https://doi.org/10.1145/3173574.3173818>
- [119] Nathan Schneider. [n.d.]. Admins, mods, and benevolent dictators for life: The implicit feudalism of online communities. ([n. d.]), 1461444820986553. <https://doi.org/10.1177/1461444820986553> Publisher: SAGE Publications.
- [120] Nathan Schneider. [n.d.]. The Tyranny of openness: what happened to peer production? 0, 0 ([n. d.]), 1–18. <https://doi.org/10.1080/14680777.2021.1890183> Publisher: Routledge\_eprint: <https://doi.org/10.1080/14680777.2021.1890183>.
- [121] Amartya Sen. 1990. Development as Capability Expansion. In *Human development and the international development strategy for the 1990s /*, Keith B. Griffin and John Knight (Eds.). Macmillan academic and Professional Ltd. in association with the United Nations,. <https://digitalibrary.un.org/record/157268>
- [122] Amartya Sen. 2002. *Rationality and Freedom*. Harvard University Press. Google-Books-ID: rwcUEAAQBAJ.
- [123] Amartya Kumar Sen and Lamont Professor of Economics and Philosophy Amartya Sen. 2009. *The Idea of Justice*. Harvard University Press. Google-Books-ID: enqMd\_ze6RMC.
- [124] Geeta Shroff and Matthew Kam. 2011. Towards a design model for women's empowerment in the developing world. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11)*. Association for Computing Machinery, New York, NY, USA, 2867–2876. <https://doi.org/10.1145/1978942.1979368>
- [125] Vandana Singh and William Brandon. 2019. Open source software community inclusion initiatives to support women participation. In *IFIP International Conference on Open Source Systems*. Springer, 68–79.
- [126] Deb Stanfield, Liz Beddoe, Neil Ballantyne, Simon Lowe, and Nicole Renata. [n.d.]. Critical conversations: Social workers' perceptions of the use of a closed facebook group as a participatory professional space. 29, 3 ([n. d.]), 42–54. <https://doi.org/10.3316/informit.335796166050743> Publisher: Aotearoa New Zealand Association of Social Workers.
- [127] Marc Steen. 2013. Virtues in Participatory Design: Cooperation, Curiosity, Creativity, Empowerment and Reflexivity. *Science and Engineering Ethics* 19, 3 (Sept. 2013), 945–962. <https://doi.org/10.1007/s11948-012-9380-9>
- [128] Charles Steinfield, Nicole B. Ellison, and Cliff Lampe. [n.d.]. Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. 29, 6 ([n. d.]), 434–445. <https://doi.org/10.1016/j.appdev.2008.07.002>
- [129] J. Stryjak and H. James. 2016. Country Overview: Pakistan-A Digital Future.
- [130] Sharifa Sultana, François Guimbretière, Phoebe Sengers, and Nicola Dell. 2018. Design Within a Patriarchal Society: Opportunities and Challenges in Designing for Rural Women in Bangladesh. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)*. Association for Computing Machinery, New York, NY, USA, 1–13. <https://doi.org/10.1145/3173574.3174110>
- [131] BS Web Team. 2019. WhatsApp's new fingerprint feature may stop users from taking screenshots. *Business Standard India* (April 2019). [https://www.business-standard.com/article/companies/whatsapp-new-fingerprint-feature-may-stop-users-from-taking-screenshots-119042400146\\_1.html](https://www.business-standard.com/article/companies/whatsapp-new-fingerprint-feature-may-stop-users-from-taking-screenshots-119042400146_1.html)
- [132] Anupriya Tuli, Shaan Chopra, Pushpendra Singh, and Neha Kumar. [n.d.]. Menstrual (Im)Mobilities and Safe Spaces (CHI '20). Association for Computing Machinery, 1–15. <https://doi.org/10.1145/3313831.3376653>
- [133] Anupriya Tuli, Shruti Dalvi, Neha Kumar, and Pushpendra Singh. [n.d.]. "It's a girl thing": Examining Challenges and Opportunities around Menstrual Health Education in India. 26, 5 ([n. d.]), 29:1–29:24. <https://doi.org/10.1145/3325282>
- [134] Suvi Uski and Airi Lampinen. [n.d.]. Social norms and self-presentation on social network sites: Profile work in action. 18, 3 ([n. d.]), 447–464. <https://doi.org/10.1177/1461444814543164> Publisher: SAGE Publications.
- [135] Sarah Vieweg and Adam Hodges. [n.d.]. Surveillance & Modesty on Social Media: How Qataris Navigate Modernity and Maintain Tradition (CSCW '16). Association for Computing Machinery, 527–538. <https://doi.org/10.1145/2818048.2819966>
- [136] Jessica Vitak and Jinyoung Kim. [n.d.]. "You can't block people offline": examining how facebook's affordances shape the disclosure process (CSCW '14). Association for Computing Machinery, 461–474. <https://doi.org/10.1145/2531602.2531672>
- [137] Georg von Krogh, Sebastian Spaeth, and Karim R Lakhani. [n.d.]. Community, joining, and specialization in open source software innovation: a case study. 32, 7 ([n. d.]), 1217–1241. [https://doi.org/10.1016/S0048-7333\(03\)00050-7](https://doi.org/10.1016/S0048-7333(03)00050-7)
- [138] K. A. Wallston. 1997. Perceived control and health behaviour. *Cambridge handbook of psychology, health and medicine*.
- [139] Sarah Myers West. 2017. Raging Against the Machine: Network Gatekeeping and Collective Action on Social Media Platforms. *Media and Communication* 5, 3 (Sept. 2017), 28–36. <https://doi.org/10.17645/mac.v5i3.989> Number: 3.
- [140] Anaise Williams, Malabika Sarker, and Syeda Tahmina Ferdous. [n.d.]. Cultural Attitudes toward Postpartum Depression in Dhaka, Bangladesh. 37, 3 ([n. d.]), 194–205. <https://doi.org/10.1080/01459740.2017.1318875> Publisher: Routledge\_eprint: <https://doi.org/10.1080/01459740.2017.1318875>.

- [141] Debra Winter and Chuck Huff. 1996. Adapting the Internet: Comments from a women-only electronic forum. The American Sociologist 27, 1 (1996), 30–54.
- [142] Fouzia Younas, Mustafa Naseem, and Maryam Mustafa. 2020. Patriarchy and social media: Women only facebook groups as safe spaces for support seeking in Pakistan. In Proceedings of the 2020 International Conference on Information and Communication Technologies and Development. 1–11.
- [143] Bingjie Yu, Joseph Seering, Katta Spiel, and Leon Watts. 2020. " Taking Care of a Fruit Tree": Nurturing as a Layer of Concern in Online Community Moderation. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems. 1–9.
- [144] Rafia Zakaria. 2019. No safe spaces for women. <https://www.dawn.com/news/1520346>
- [145] M. Zimmerman. 2000. Empowerment theory: Psychological, organizational and community levels of analysis. Handbook of Community Psychology (01 2000), 43–64.

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