IT for Change

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# Women in Healthcare: ASHA Workers and the Contradiction of Digital Transformation in Kashmir

Sadaf Masoodi

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393, 17th Main Road,
35th Cross Rd, 4th Block,
Jayanagar, Bengaluru,
Karnataka, India-560041
www.itforchange.net

### About the National Gender Fellowship

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### About the Author

Sadaf Masoodi is a doctoral candidate at the University of Kashmir, researching the social construction of health in cinema. Her forthcoming chapter on Kashmiri fisherwomen's narrations on health during Covid-19 will appear in the Routledge Handbook of Health Communication in South Asia. In 2025, she received the Laadli Media Award for reporting on mental healthcare inaccessibility among nomadic Kashmiri women. She has previously worked with ActionAid on women's livelihoods, social security, gender-responsive public services, and reproductive health rights, and continues to write as a freelance journalist.

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# Abstract

In India, frontline health workers–ASHAs (Accredited Social Health Activists) are central to delivering basic health facilities to the last mile in rural areas and many urban centers. A critical look into the workings of ASHAs in the region of Kashmir shows them at an intersection of militarization, state surveillance, societal policing, digital exploitation, and gendered labor. The government has devoted substantial resources to digitizing health records. I bring narratives of ASHA workers from Kashmir valley as co-creators of knowledge, through a participatory methodology rooted in feminist and decolonial thought–challenging extractive approaches to research. The interviews reveal how communication blackouts, mobility restrictions, and digital attendance mechanisms intensify the precarity of these workers rendering them hyper-visible to the state and society while simultaneously invisiblizing their embodied labor. Narratives that capture their exploitative-frontlining during COVID-19 and elections, technological breakdowns, digitization of health records, and devaluation of care labor are used to theorize the structural violence embedded within this digitization of healthcare.

Despite the frustration and exhaustion they experience in their work, they voice resistance through solidarities, formal associations and everyday acts of mutual support. ASHAs resist marginalization, forging a praxis of feminist solidarity and care.

I categorize the findings in the following sections: i) State, Society and Gendered Fear ii) Exploitative-frontlining and Community Suspicion iii) Devalued Labor, Burden of Digital Inclusion and Technological Breakdown iv) Surveillance, Constant Availability and Solidarity.

The paper contributes to the feminist digital labor scholarship by foregrounding the intersection of militarization, gender, and technology. It also lays a path for rethinking digital health policies through frameworks that include complex realities of conflicted regions like Kashmir.



### Keywords:

ASHA Workers, Health Workers, Digital Healthcare, Digital Labor, Feminized Care work, Conflict and Healthcare, Platform Capitalism.

# Contents

# Introduction

The healthcare industry in India has experienced transformations driven by technology (Subramaniam, 2023) that have offered the potential to reshape healthcare delivery (Mumtaz et al., 2023). The Indian government's ambitious Ayushman Bharat Mission (ABM) initiative seeks to digitize the healthcare ecosystem (Kharbanda et al., 2024). Under this initiative, the responsibility of providing primary healthcare for women and children has shifted towards digitizing women's health records whereby the data is tracked on an online portal and entered by primary frontline officials that include women health volunteers—Accredited Social Health Activists (ASHAs) (Krishnan, 2023).

Growing digitalization has been associated with furthering inequality as transnational digital corporations "adversely impact the autonomy and well-being of marginalized women in the Global South". Further entrenched by a "democratic governance deficit" in the digital economy (Gurumurthy, et al., 2019), a critical look into the work of ASHAs exposes the fault lines of digitization as they navigate heightened vulnerability, like increased labor demands and systemic inequities.

Established in 2005, ASHAs in India comprise nearly one million female community healthcare workers in almost every village and across many urban centers. They are recognized as being central to achieving better neonatal, maternal, child, and adolescent health and development outcomes (Kalne & Kalne, 2023), while they facilitate health system connections and deliver basic health education and services (Ved et al., 2019). They are integrated into healthcare delivery systems in tasks such as vaccinations and health promotion (Scott & Shanker, 2010) and are therefore viewed as 'critical resources' in providing services to underserved populations, enhancing healthcare systems delivery to the last mile, and addressing financial and personal constraints in resource-limited settings (WHO, 2008).

ASHAs are increasingly adopting newer technologies in their work as governments devote substantial resources to facilitate the digital transformation, particularly post the COVID-19 pandemic (Ismail et al., 2022). Like the rest of the population, ASHAs "are now included in the digital system of some kind" (Heeks, 2022).

During the COVID-19 pandemic, the responsibility of conducting syndromic and disease surveillance, data reporting, public health messaging, and the distribution of food and ration was placed on the community health workers, alongside their routine duties (Rao & Dutta, 2021).

In the Union Territory of Jammu and Kashmir, 13,500 ASHA workers were engaged in hazardous work during COVID-19, to serve their communities (Raina, 2021), while reeling from internet restrictions for months before the pandemic.

After the removal of the autonomous status of the erstwhile state of Jammu and Kashmir through the abrogation of Article 370 of the Indian constitution, the region witnessed the longest communication clampdown (RSF, 2020) which also included complete internet shutdown and mobility restrictions as every kind of transport remained suspended for months (Khan et al., 2021).

In Kashmir, digitalization is characterized by the state's control, frequent internet shutdowns, surveillance, and restricted access to digital infrastructure. These factors pose unique challenges to the ASHA workers. Their inclusion in the intensely promoted digital economy of healthcare has been characterized by political precariousness and a deliberate 'digital redlining' (Gilliard, 2017). Such frequent disruptions of essential digital infrastructures marginalize specific groups like ASHAs and not only perpetuate inequalities of access to the internet services and digital technologies, but also jeopardize their bare safety in more ways than the challenges faced by ASHAs in India.

Despite the critical role that ASHAs play in the health ecosystem of India, tensions pertaining to their gendered social and occupational status persist (Ved et al., 2019), as they occupy the 'lowest level' in the Indian public healthcare system (Das, 2024), being underpaid and undervalued (Rao & Dutta, 2021).

With restricted communication access, infrastructural challenges, and insecure employment conditions, ASHAs in Kashmir occupy the borderlands of the digital economy and their experiences become antithetical to the impetus of 'digital transformation' discourse of healthcare in mainland India.

Studying the impact of the digital economy on women in the Global South, like healthcare digitization in Kashmir, gives rise to unique challenges as deeper structural inequalities and the political precarities of the place get obscured. ASHAs in Kashmir navigate a double burden of the patriarchy of the state and society which mandates a contextual critique of the digitization of healthcare system, unlike the notion of a mere 'digital divide'.

The participatory methodology of this study positions ASHAs as co-creators of knowledge and recognizes knowledge production as political. Exploring and documenting the experiences of these frontline health workers operating under political precarity is not just empirical data but an epistemological challenge to the dominant narrative of women's (digital) 'empowerment' (Mushtaq & Bukhari, 2018) in Kashmir.

# Objective of the Study

Through an enquiry into the structural challenges, I analyze intersecting factors of gender, conflict, and digitization in the narratives of ASHAs in Kashmir, particularly in terms of their access to the utilization of digital technologies for healthcare delivery.

# Review of Literature

The incorporation of ASHA workers in Kashmir within the digital system is often characterized by inequality as they remain at a socio-economic disadvantage, while this (adverse) digital incorporation exacerbates labor exploitation and precarity. The future of digital technologies in the Global South is marked by this dual reality: developmental benefits and the challenges of inequality. Unlike exclusion from digital systems, the notion of "adverse digital incorporation" lays out inequalities that arise when marginalized individuals and groups in the Global South are included within systems under exploitative or inequitable conditions. This framework addresses the critical questions of how, what, who, and why, to systematically analyze the relationship between digital technologies and inequality (Heeks, 2022).

ASHAs in Kashmir remain positioned at the intersection of formalized health systems and informal labor structures. Their inclusion in the digital system often leads to additional workloads, restricted autonomy, and inadequate recognition of their labor, while they navigate a militarized governance (Human Rights Watch, 2024).

ASHAs navigate patriarchy at home and exploitation at work. They remain in a perpetual state of precarious employment—not recognized as formal employees or given fixed salaries. Their work is questioned by their families and their extensive working hours are viewed as a disruption to their domestic roles. This dismissal reflects the broader structure of the gendered digital, where feminized labor remains invisible (Ming et al., 2022) despite its essentiality. This also reflects the double burden that working women carry–the expectation to perform unpaid domestic labor alongside their professional duties. The patriarchal expectation of their primary responsibility for domestic work persists, making their employment a contestation within the household as well.

ASHAs in Kashmir work under frequent internet shutdowns (RSF, 2020). A study by Rajbagshi et al., (2021) on ASHA workers in conflict affected settings in Assam explores the experiences of ASHAs emphasizing the intersection of health work and socio-political instability. Taking the narratives of four ASHAs as case studies, the paper lays out compounding vulnerabilities such as transportation challenges, labor insecurity, displacement and erosion of trust–vital necessities in healthcare delivery. The study posits that the global health community is narrowly focussed on an approach determining Community Health Workers' (CHWs) performance while fewer studies focus on the psychological, social, and cultural issues faced by workers in conflict settings.

As ASHAs demonstrate resilience and continue their work in conflict settings, the study suggests recognition of conflict as a crucial factor for shaping health workers' realities and calls for policy reforms in the contextual settings like incentivizing ASHAs when they provide services during conflict. The study also suggests psychological support and job security for CHWs in conflict settings.

Scholars call for a reframing of the feminist digital rights that recognize how neoliberal digital systems impact women's agency and well-being. Gurumurthy et al., (2019) in their report on gender equality in the digital economy criticize the 'techno-solutionist' narrative in digital economy emphasizing its failure to address systemic inequalities and its tendency to "depoliticize gender inequality".

Similarly, Graham et al., (2017) identify four primary challenges affecting workers in Sub-Saharan Africa and Southeast Asia in digital labor ecosystems that resonate with the experiences of ASHAs in Kashmir i.e. bargaining power, economic inclusion, intermediated value-chains, and upgrading opportunities. While digital platforms bring tangible benefits such as increased access to work opportunities, they introduce significant risks, such as precarious labor conditions, limited bargaining power and the commodification of workers. The authors argue that these risks disproportionately impact marginalized workers, exacerbating existing socio-economic inequalities.

In Kashmir, ASHA workers' realities reflect the co-occurring effects of conflict and digitization on marginalized labor. ASHAs work amidst infrastructural, administrative, and political challenges with little to no recognition while also struggling for dignity in the communities they serve. ASHAs bear the burden of increasing demands without corresponding benefits (Graham et al., 2017).

Ming et al., (2022) explore the "invisible work" performed by frontline health workers, including ASHAs in Uttar Pradesh, India while situating their labor in the gendered context. The paper parallels experiences between ASHAs in India and home health aides in New York city and discusses how both work in the shadows of healthcare systems, performing tasks beyond their formal requirements to bridge gaps between patients and institutional care systems. This invisibility, they posit, is compounded by the feminized nature of care work, which often leads to undervaluation and a lack of recognition. ASHAs desire for better support and recognition, parallels the similar experiences of their counterparts in other contexts while emphasizing a universal need for technologies that facilitate advocacy, reporting, and data sharing.

While there is scholarship that problematizes the dualities of the discourse of empowerment (Mushtaq & Bukhari, 2018; Mushtaq, 2020) vis-à-vis the militarized governance of Kashmir, the review reveals a dearth of specific research about these contradictions within the digitization of healthcare. This gap necessitates an in-depth inquiry into the digital ecosystem in which ASHA workers in the region operate, particularly as their work situates in the volatile politics of the region.

# Methodology

To examine the peripheral positions that ASHA workers in Kashmir occupy, I employed a qualitative design (Braun & Clarke, 2006). The primary focus of this design was not generalizability but to highlight the overlooked aspects of the context-specific experiences of ASHA workers that could be understood by closely evaluating their narratives. This approach was well-aligned with feminist and intersectional frameworks, as it foregrounded voices of ASHAs, often marginalized in the dominant discourse.

I drew from the theory of intersectionality (Crenshaw, 1991) as an analytical framework that lays out the "multiple, co-occurring forms of marginalization," ASHAs experience. Carbado et al. (2014) explain it as a "dynamic and ever-evolving theory that resists finality and fixed definitions," emphasizing its adaptability to new contexts and power structures. The theory's flexible nature allows it to be used in specific structures of power, functioning as a "work-in-progress", inviting newer applications.

Using this conceptual framework for studying ASHA workers in Kashmir allowed a deeper exploration of the overlapping axes of marginalization such as gender, socio-economic status, digital divide, emotional and psychological dimensions and the political context of conflict.

# Recruitment of Participants

To capture varied experiences of ASHAs, participants were recruited through snowball sampling from five districts of Kashmir including the capital city Srinagar, where it was expected that ASHA workers would have better access to digital technologies and skills. The study included ASHA workers from remote and rural regions where scarce infrastructure, transportation, access to education, required skills, electricity, and digital connectivity pose significant challenges. By encompassing these disparate locations, I illuminate the differential impacts of digitization on ASHA workers, the communities they serve, and their struggles.

ASHAs who had joined as early as 2005 or pre 2019 were selected for the in-depth interviews purposively as they had better insights into the evolution of their work post digitization that happened during COVID-19 and these ASHAs experienced the communication lockdown during the months following the abrogation of Article 370 in 2019. The study's participants are aged between 34 and 52. All ASHAs had basic education, some had completed their secondary schooling and some higher secondary school.

# Data Collection and Ethics

In-depth, interpersonal, semi-structured interviews were conducted over a month primarily in Kashmiri, the first language of the ASHA workers, as they were more comfortable speaking in their mother tongue. The duration of the interviews ranged between forty-five minutes to an hour.

The interviews were recorded digitally and transcribed verbatim to not miss out on the specificities of the narratives of participants. It was followed by a familiarization with the data to identify recurring issues and patterns. Memo-writing was done to gather observations during the field-work and emerging themes while coding. Data was organized and interpreted through thematic analysis (Braun & Clark, 2006).

Verbal consent was sought to record the interviews on the phone-recorder. Participants were given detailed information about the study and its objectives ensuring that their consent was informed and voluntary. Participants' identities were anonymized to protect their privacy. Each participant received remuneration for their time and effort.

# Findings and Analysis

## State, Society and Gendered Fear

Experiences of ASHA workers in Kashmir need to be contextualized within the framework of state violence and militarization. The precarious labor conditions they navigate need not to be seen as merely administrative challenges but 'structurally entrenched' (Gurumurthy et al., 2019). The intersections of state and civil violence and gendered vulnerability under militarization (Singh, 2016) pose unique challenges to ASHA workers.

The abrogation of Article 370 of the Indian constitution in August 2019 led to an unprecedented communication and mobility lockdown in Kashmir, intensifying the precarities of ASHAs. Deployed without transportation and telecommunication, they were left to navigate an environment fraught with militarized checkpoints, surveillance, and threats from both the state and local society.

Zareena (37) belongs to a low-income household and is the only breadwinner as her husband is unemployed. She shared about the experience of working during the 2019 lockdown:

> "Patients had to travel by foot. Sometimes, they would hear that today was the day of vaccination but couldn't reach.

The communication gag suspended coordination for health interventions as they were ordered to continue their work, at the same time risking their safety as they travelled through densely militarized roads.

Shareefa (50), one of the heads of ASHA associations in Kashmir shared:

> "If we would leave in the morning our families wouldn't have any idea about our whereabouts and we wouldn't know about them or when we would have to reach somewhere.

The communication restrictions imposed by the state kept the general population and ASHAs under a digital clampdown and were forced to improvise on informal strategies to continue their work.

Ateeqa (53) along with her fellow ASHA came 15 kilometres away from her residence for the interview in a town as limited transport plies to her village. She shared about working without phone communication:

> We had to go door-to-door in our village. Nowadays, we can do things using our phones, but back then, we had to visit each house separately and escort patients to the hospital.

During the 2019 lockdown ASHAs were forced to operate outside the regular bureaucratic norms, suspending rights and routine protocols. Ateeqa also shared:

> Sometimes, we had to guess when the (routine) vaccination drive would happen. A driver would inform us when vaccines were available, and we would reach out to the families accordingly.

As an ASHA from a remote rural region, she also remarked about having to go to work during the lockdown with more threats:

> There were wild animals—bears, lions—and a significant presence of the army. It was extremely dangerous.

Rural areas in Kashmir comprise lush green landscape with mountains and roads connecting villages and towns, farther areas are less populated with poor infrastructure. During shutdowns roads become isolated, with little to no transportation, leaving the places desolate with the presence of military forces in civilian areas as well.

ASHAs' mobility restrictions during both 2019 and COVID-19 lockdowns, forced them to pass through checkpoints where their movement was scrutinized and they were often obstructed from doing their duties.

Women in Kashmir, particularly those in rural areas, have historically been subjected to sexual violence like rape (Neogi, 2022), creating additional fear and insecurity. ASHAs, moving through forested and militarized spaces, feared for their safety, given the documented instances of sexual violence perpetrated by security forces in Kashmir. ASHAs' work exposes them to both state and societal violence, often manifesting in gendered forms.

During the 2019 lockdown, ASHAs continued doing their duties while they faced gendered probing by the army and police on the roads.

Nighat (34) who has worked as an ASHA in the capital city of Srinagar for many years shared that her fellow worker resigned due to such harassment while they were walking on foot during the curfew and were stopped by an army personnel:

> We showed them our cards...still they told us 'ghar mai chain nahi hai...jao ghar mai baitho...curfew chal raha hai' [can't you sit inside your homes, it's a curfew outside].

As the army is accompanied by local police officials, the ASHA remarked that after they started explaining their work to the army personnel, a local police official came forward and mansplained to them:

> Why are you here in this curfew, they (army) will hurt you, go sit inside your homes, serve your husbands instead, you 'darbadar!' [reckless].

Both the army personnel and the police constable, while infantilizing the ASHA, exhibited paternalism, while the command "serve your husband" invoked domestic servitude.

During COVID-19, ASHAs were sent to military camps to administer vaccines to army soldiers– an act that placed them under both physical and moral scrutiny while being seen with suspicion by their communities.

Head of ASHA association, Shareefa, who was given the duty of administering COVID-19 vaccines in army camps shared:

> I felt guilty thinking, I might be doing something that is not right. I shouldn't do this job because I don't think it's good for me, why? Because I thought, I am a woman, I have to enter alone, inside the camp, I don't know what they will do to me.

The deep-seated gender norms in Kashmiri society render women who interact with the institution of military–historically associated with violence and occupation–as morally suspect. In the complex political history of Kashmir conflict, many Kashmiri women have been accused of being Mukhbir (state informers) resulting in perpetual life-threats or even persecution by militants. Such stigma associated with a perceived closeness with the army marked Shareefa as what Goffman (1963) refers to as 'socially deviant'. The act of entering a military camp not only subjected her to the fear of assault but also made her a target of social stigma. She added:

> Those who saw me come out from the camp, they did judge me and talk behind my back, wondering what I was doing inside the camp.

The ASHA anticipated being devalued based on the internalized social judgments. Here the gender norms dictated that a woman entering a military camp alone was, what Goffman (1963) calls, 'inherently transgressive'.

ASHAs reported instances of physical violence at the hands of civilians during the lockdown, particularly when they were unable to provide their services due to the stoppage of local transport and telecommunication following the orders from the Indian government after the abrogation of Article 370 (Nadimpally, 2020).

Shafeeqa (38) one of the senior Female Multipurpose Health Workers (FMPHWs), who has worked with many ASHAs for almost 8 years shared that during the 2019 lockdown she failed to reach the healthcare center in time and a pregnant woman's brother assaulted her on the road:

> He used racist slurs, 'You are a villager!' he shouted so much, he slapped me, even that slapping didn't hurt me as much as his shouting the cuss words did.

Noticeable in the incident, many stereotypes may compound the varied discrimination that the health workers face–the urban-rural divide being one such stereotype that was pronounced in this act of violence against the FMPHW, who the perpetrator presumed was a health worker from a village.

Shareefa also shared being chased by a couple of boys during COVID-19 in a secluded colony where she and another ASHA had gone to administer vaccination. They were physically assaulted by the boys in the isolated place. While they escaped the assault and retaliated on the spot, they did not file a case against them for the fear of being judged by their own people.

> If we go to the police, our families would judge, 'See, you went to the thanaa' (police station). First and foremost she would be questioned by her own husband preventing her from going out and doing the work and going out the next very day.

Similar moral scrutiny arises (as in the case of women's proximity to the institution of the army) when women approach law enforcement agencies like the Jammu and Kashmir Police, who are seen as complicit in the state repression and enforced the restrictions during 2019 lockdown as well. Hence, the reluctance to seek recourse with the police meant that ASHAs remained vulnerable in that instance of assault from their harassers, without any institutional protection. A patriarchal context complicates this dynamic as women's bodies are often viewed as symbols of community honor, any association with state institutions like the military or police becomes a source of collective anxiety and shame. ASHAs remain vulnerable to both domestic and workplace violence.

Ateeqa shared that a fellow ASHA was divorced due to her late working hours while others constantly kept up with abuse from their husbands due to their work:

> Her husband doesn't allow her to go anywhere unless I talk to him. He's very controlling. He says, 'Why do you need to leave the house every day? What kind of job requires you to come and go constantly?' He suspects something else is going on. Even though he's educated, his mind doesn't work properly. The department knows her situation. Her husband even went to complain to them, asking, 'How can there be so much work for these madams?'

ASHAs work under a sexual contract in a patriarchal structure which dictates and controls their behaviours in their professional roles as well.

Nighat noted similar case of a fellow worker:

> Sometimes the patients' husbands call...An ASHA would talk to them for 15-20 minutes, for vaccines, and the husband would pick up a fight, why she talked to them for so long, 'what is the reason, why are you talking to gair mard' [unknown men].

These narratives highlight the dual oppression that the ASHAs face as women and as healthcare workers caught between the state and society where their labor and mobility are over-determined by social scrutiny. They grapple with state control, community policing, and domestic regulations, constantly navigating a gendered surveillance apparatus.

The intersection of gender and class-based policing of women's mobility–as these women on the margins, face multiple challenges–tries to limit their agency (Carbado et al., 2013). ASHAs are left to constantly negotiate their legitimacy, both within the communities and their domestic spaces.

## Exploitative-frontlining and Community Suspicion

The increasing digitization of healthcare has placed ASHAs in Kashmir at the center of a precarious system of data extraction, suspicion, and risk. The state engages them in frontlining, while positioning them as visible agents of healthcare intervention and at the same time offloading accountability of collecting digital records from the community onto them. This dynamic reinforces a form of coercion, wherein the burden of asking for personal details and datafication of communities falls on women workers who must navigate the challenges of peoples' distrust.

ASHAs get positioned as intermediaries in a fraught digital landscape of Kashmir, where data collection transforms into a site of risk. They are frequently assigned duties beyond healthcare including election related work. In a region where electoral participation is heavily contested and boycotted (Bin Wasi, 2009), ASHAs were deployed to ensure voter participation in the elections of 2024, putting their safety at risk.

Shakeela (47) works in a remote rural region and shared about the additional duties assigned to ASHAs:

> This year, we were assigned election duty too. We had to go door-to-door, motivating people to cast their votes...for example, when we visited someone's home and motivated them to cast votes for their chosen candidate, we had to take a photo that had to be geo-tagged and forwarded to our superior.

In another example of exploitative-frontlining, Sabreena (45) ASHA from another rural region remarked on convincing people to vote, causing suspicion about them in the communities.

> Some people were comfortable, some weren't. They demanded that we don't click their pictures, and they would also question us, why we forced them to cast votes. We used to tell them that we were also being compelled to push them to vote.

This institutional role-conflict (Parsons, 1951) placed ASHAs in untenable situations where their credibility within communities became questionable due to which they came under more stress and risked losing their legitimacy.

Shakeela also noted about being suspected of working with political parties when forced to take up the election campaign duties:

> We face a lot of problems. People in the community say things like, "You talked to this person; he's a voter for X party, and you asked him to vote for Y party." These accusations create a lot of tension for us.

In addition to this, ASHAs were placed in precarious positions during the COVID-19 vaccination drive, as the state enforced vaccine compliance through coercive measures, threatening to cut essential supplies. ASHAs were frontlined for such enforcement of state mandates, left to face the hostility from communities who again saw them as state agents rather than healthcare providers.

Zareena (37) recollected the experience of working during COVID-19:

> During that time, the Tehsildar and Patwari would come with us because people were not on board with the vaccines. They would come to the villages and announce on the mosque loudspeakers that those who refused to get vaccinated would have their power supply cut-off and their rice rations stopped.

In the militarized space of Kashmir, the intersection of healthcare and political coercion blurred ethical boundaries, forcing ASHAs into roles that undermined their agency and endangered their lives.

From the standpoint of marginalization (Harding, 2004) of ASHAs, the enforced state mandates–whether through vaccination drives or electoral campaigns–underscores coercive nature of governance in Kashmir, where it can be seen how healthcare work is instrumentalized for political control (Foucault, 1977). In conflict-affected settings, where trust in state institutions is already fractured, such tactics reinforced public resentment.

In Kashmir digital surveillance is an extension of militarized governance (Al Jazeera, 2023) and collecting personal data heightens the risks for ASHAs and the communities they serve. The fear of digital profiling meant that communities refused to share their information, suspecting state surveillance or militant retaliation.

Nighat shared that they get varied responses, suspicion being a common response that they face within communities:

> Some people are kind, they respond very well, welcome us to their homes, say that they respect our work and some act very rudely. They don't even let us inside their homes, they ask 'what do you need?' We tell them that we are ASHA workers and that we are doing surveys...they say, 'No...no...no...these are the times of scams...you empty our accounts,' this is how we get received!

ASHAs report facing hostility when collecting data, with some encountering outright refusals and verbal aggression. This phenomenon underscores a politics of claiming invisibility (Talvitie-Lamberg et at., 2022), where community members resist becoming data subjects within state-driven surveillance regimes.

Nighat recounted a particularly tense interaction:

> A harsh face-off...just yesterday, I went to a home for the survey. Although she knows me very well, she said, 'how can I give you' (details), she misbehaved with me so much, she said, 'how can I give you (details)...so what if you are an ASHA worker?'

While Aadhar cards have become a mandatory prerequisite for accessing healthcare services, people remain wary of the implications of sharing their details. ASHAs as the intermediaries, bear the brunt of this suspicion, with even some facing violence while requesting personal details.

Such interactions highlight a complex dynamic at play, where ASHAs despite their grassroots role, are seen as agents of the state's datafication. ASHAs must employ extensive persuasion tactics, engaging in long negotiations to secure cooperation.

Despite facing resistance, Nighat shared, she persists in taking the details as their work is based on it:

> We motivate them somehow...We tell them not to worry...show them our id proofs...slowly and steadily... we counsel them, till they agree.

This form of affective labor (Hardt, 1999) places an emotional and cognitive burden on ASHA workers, who must manage the anxieties of the community while simultaneously ensuring that the communities comply with the state's digital health documentation.

ASHAs often experience surveillance and policing in return. Senior ASHA, Shareefa described an incident where she was asked to provide her own identification and was subjected to intrusive scrutiny:

> Some days ago, I was doing a survey. They asked me to show my card details...then they asked us to sit from the other side and took our photos. We were two ASHAs...although they knew us...they said, 'we will keep your photos with us.'

This reversal of surveillance where the surveilled become the surveyors reflects the community's anxieties around data theft, digital scams, and state's scrutiny.

Safeena (52), a single mother who looks after her family with meagre income shared about the suspicion and violence some workers faced for asking personal details from community members:

> They often disagree with sharing the card details. Some workers faced physical harm for asking the details.

ASHAs were pushed as easy targets to absorb community anger, further making their position as expendable labor within a militarized health governance structure. ASHAs in these situations were left to face community suspicion while being forced to carry out their healthcare duties and campaigns of the state such as elections. By forcing them into confrontational roles the state pushed them in dangerous situations, risking their lives that exposes the dual violence ASHAs endure as unpaid, precarious workers and as unwilling agents of a public health enforcement. Their work, especially during the 2019 lockdown became contested. They bore the brunt of state policies that disrupted civilian life leading to hostility from communities who viewed them as agents of the state, placing them in no-win situations. ASHAs were instrumentalized by the state and suspected by their own communities.

## Devalued Labor, Burden of Digital Inclusion and Technological Breakdown

One of the dominant narratives of digitalization of healthcare is that digital technology has empowered frontline workers by streamlining the administrative process and expanding the capacity to deliver healthcare (Srinidhi et al., 2021; Mohsin et al., 2023). However, the participants' experiences reflect a contrasting reality where digitalization imposes additional burdens (Pal et al., 2017; Ismail & Kumar, 2018), while failing to provide them necessary tools and infrastructure. This "adverse digital incorporation" (Heeks, 2022) deepens existing inequalities of the marginalized workers rather than alleviating their socio-economic vulnerabilities.

Narratives of ASHAs reveal how their labor is both essential and invisible within homes and within communities and denied formal recognition. At the forefront of digital governance in the Indian healthcare system, ASHAs navigate a paradox where they are both indispensable and disposable within the healthcare system. The state's structural negligence adds to the exploitation and the physical and emotional burden of ASHAs.

Shakeela highlighted the deplorable infrastructure in hospitals when they accompany pregnant women for delivery and check-ups:

> If a patient goes into labor at night, we have to stay with her at the hospital. We either sleep on the cold cement floor or remain standing all night. There are no beds or blankets for us. They had promised to provide an Asha Ghar—a rest area for us— but we never received it.

Despite having played a critical role during the COVID-19 emergency, ASHAs were not given incentives for the extra work they did and felt disposable as workers, making their labor invisible. While they ensured last-mile delivery, they were left unprotected and unsupported when they themselves fell ill.

Shareefa recalled her bitter experience with being side-lined during COVID-19:

> No one from the department called me...sometimes they would say that if an ASHA falls ill, she would be compensated...some would say ₹50000, some would say ₹100000, we didn't see anything.

Workers bear the burden of increasing demands without corresponding benefits (Graham et al., 2017). This expectation that ASHAs perform dangerous tasks without adequate safeguards reveals a structural violence embedded in India's health governance.

Shareefa recalled about the exploitative labor during COVID-19 without compensation:

> We would be taken to do the vaccination during COVID, in gardens, we would be taken to do sampling, they took immense labor from us. We would be taken in a bus at 10:30 in the morning and would be dropped off at 4:30...5:00 in the evening.

This expansion of responsibilities reflects a broader trend of the invisible work of the frontline health workers, where institutional responsibilities are displaced onto the low-wage workers under the guise of (technological) efficiency. This shift mirrors broader global trends in digital labor, where work is increasingly outsourced to precarious gig-like arrangements that lack institutional protections (Graham et al., 2017).

Shakeela shared that ASHAs are forced to do work that is unsafe and demeaning:

> They also give us containers to collect TB samples from elderly patients. Imagine how risky and demeaning that is. We carry spit samples ourselves and transport them to the health center. If there's no transport available, we keep the sample at home until we can take it to the center...

The absence of institutional support places ASHA workers in degrading and unsafe conditions with little recognition of the risks involved:

> ...Not just that, we also have to collect urine samples for pregnancy tests. People from far-flung areas leave their samples on our desks, and we have to pick them up and dispose-off ourselves. Bedridden patients are another challenge. We have to visit them, check for bed sores, and teach their families how to take care of them.

The expectation to perform bio-hazardous work, often in unhygienic settings without necessary protective gear or training highlights the structural vulnerability ASHAs face within the digital healthcare ecosystem.

Clearly, ASHAs are forced to do medical/paramedical work that they have no training for or are forced to expand their skill-set for menial incentives. Their lack of bargaining power with the state about the expansion of these responsibilities underscores how digital labor becomes an instrument for their heightened exploitation (Graham et al., 2017).

Digitization has created an unpaid second-shift-of-sorts for ASHAs. Given frequent network disruptions, application malfunctions, and the unease with using technology, they are forced to first record the data manually in registers before uploading the same data on digital platforms. This redundant practice doubles their workload without offering any material benefits.

Shareefa's 18-year-old daughter, a participant in the interview conducted inside their home–helps her mother with uploading and processing the data online and noted:

> In case the data gets deleted from any worker's phone, they have to collect each detail again.

Exploitation through an unfair extraction of value–central to adverse incorporation–does not improve the working conditions of ASHAs rather increases their vulnerability. They remain excluded from formal labor protections, forcing them to endure exploitative conditions without due redress.

Digital literacy gaps intersect with gendered household dynamics that further complicate ASHAs engagement with technology. ASHAs rely on male members of the family and their children to assist them with online tasks reinforcing a gendered dimension of digital exclusion where women are nominally included in digital ecosystems and remain dependent on male intermediaries to navigate them.

Shareefa's daughter noted:

> How many times we have to call people...that the website isn't functioning...They will scold and belittle us, saying, 'You don't know how to operate things.'

ASHAs are expected to engage with digital technologies beyond their training and expertise from handling biometric authentication systems to collecting and processing biological samples. These tasks demand technical competencies that many ASHAs struggle to acquire due to a lack of formal digital literacy training.

Shakeela noted about the newly introduced Ayushman PVC cards:

> I had almost 350 cards. We had to go door-to-door and deliver them to their homes. Some people had linked them to their Aadhaar numbers, some hadn't... for those who didn't have it linked, we had to link it by scanning their faces. And that would not happen in the evening. There were a lot of trees around (poor lighting), so the phones were unable to scan faces. Sometimes a card would take three or four days. We would look for sunlight and then try at five or seven places to scan the face. Each PVC card would take almost half an hour.

The expectation that ASHAs engage with these complex digital tasks without institutional support and training further marginalizes these workers—nominally included in the digital systems with little autonomy and resources to navigate them effectively (Gurumurthy & Chami, 2021).

ASHAs in Kashmir do not receive government-provided smartphones despite being required to use multiple applications for data collection and documentation. Instead the workers purchase their own devices–an expense that is prohibitive, given their low earnings, this reflects a broader privatization of infrastructural costs, where the state shifts the burden of digital inclusion onto ASHAs.

With a menial income at home, Zareena shared how she collected money to get the device for continuing the work:

> I got this phone in 2021 or 2022. When this app was supposed to be nationally integrated, I had to get one...It is costly. I had some savings—saving a little here and there. I didn't have the financial strength to buy a new phone all at once. So, what I did was, as soon as I got my incentives, I would keep something aside, I would take out ₹500 and save it in my daughter's pocket. I did this until I saved ₹9,500, and then I was able to buy a phone. Otherwise, I would not have been able to afford it.

In addition to purchasing devices, ASHAs also bear the cost of mobile data to operate the applications. The meagre internet allowance of ₹200 provided by the state is insufficient, given that ASHAs use multiple data-intensive applications for work.

Shakeela noted that the allowance provided by the government exhausts soon and it requires them to use their own money to continue with the work on their phone applications:

> A pack including internet costs ₹249. Earlier, it was ₹150, but now it is ₹249. To ensure all our apps run smoothly, we need to recharge for at least ₹350 or ₹400... Even with a ₹249 recharge, it's not enough. You know how it is. I have a 5G phone, and the recharge runs out so fast. I'll make five golden cards, and that's it—it's finished...The Golden Card app consumes a lot of data, and then the phone becomes useless...

Consequently they are forced to use personal funds to sustain digital operations that primarily benefit the state's health surveillance apparatus.

> ...It's become very hard for us, and they still don't pay us enough. We spend our own money to come to the center—₹100 for bus fare each way. Sometimes it costs us ₹200 to ₹400 just for transportation.

This cost-shifting mechanism, where workers must finance their own tools aligns with extractive value in platform capitalism where precarious workers bear the operational costs of digital infrastructure.

As technology demands repairs and constant updations, ASHAs struggle to keep up with the expensive demands of the technology on which their digital work is based. The technological obsolescence faced by ASHAs underpins an intersection of digital precarity, economic exploitation and gendered labor vulnerabilities.

Shakeela shared:

> Two of my phones have already malfunctioned. Just now, I went to a shopkeeper to fix my phone's display. He asked for ₹2,000. I couldn't afford it, so I didn't get it repaired.

ASHAs struggle with technological breakdowns of their personal devices, frequent power outages, dysfunctional websites, and slow network further hinders their work, yet the higher authorities shift the blame on them.

Zareena shared about the difficulties of digitally processing the documents:

> eKYC involves either getting the individual's fingerprint or taking a picture of their face while they blink their eyes so that it captures the photo properly. It's not a smooth process, and it takes a lot of time. The work that was supposed to be done by Khidmat Centers is now on us, the ASHA workers. We are not able to handle so much work.

ASHAs are left to look for the solutions themselves, seeking help from men in their families and relatives to fix any such technical issues with their devices.

Shareefa's daughter who helps her mother in her work and witnesses her mother's 'harassment' through the work remarked:

> Authorities don't cooperate in the sense that if they (ASHAs) can't figure out something on their own they have to assist them...what they do in turn is that they treat them very rudely.

In contrast to a techno-optimistic narrative, ASHAs experiences reveal how digitization expands responsibilities without compensation, risking their safety while they bear privatized infrastructural costs.

## Surveillance, Constant Availability, and Solidarity

As frontline health workers ASHAs are required to collect large volumes of sensitive personal data, including Aadhar numbers, bank details, and health records. They lack the digital security to protect this data, making them both vulnerable to surveillance and scams.

In the process of data collection, ASHAs are subjected to constant monitoring through digital attendance mechanisms, including geo-tagging, and selfie submissions. Their labor is not acknowledged unless it is digitally documented, disregarding structural barriers like network failures.

Shareefa noted about the GPS attendance on field:

> We have GPS attendance, we even show all the work we do on the field. They won't acknowledge it till we don't show them the GPS attendance. We have to take photos with the people. When we ask them, they don't let us click photos with them.

Workers also expressed frustration at the excessive verification process that reduces their physical labor to a mere digital proof. Feeling humiliated in the process Shareefa also noted:

> If I have given the government all the data about the family... their photos, their Aadhar, their health status and every bit of the details, then what is the point of still asking for the GPS attendance?

This hypervisibility of labor through panoptic surveillance enforces mechanisms that discipline workers by making their performance continuously observable and verifiable. ASHAs frustration with this algorithmic management demonstrates how their embodied and field-based labor is reduced to digital proof.

The blame of technological failures is shifted onto ASHAs and they are penalized for systemic issues beyond their control. Technological failures aren't accepted to be infrastructural failures as they are held responsible for not being able to complete their tasks often.

Shareefa commented on such regulations–inconsiderate about the infrastructural weaknesses:

> Sometime maybe I am not able to do it (GPS attendance), sometime maybe I don't have an internet connection, sometimes we are in a no-network area.

Despite handling vast amounts of sensitive community data, ASHAs operate without basic cyber security protections, leaving them vulnerable to digital breaches. All workers express anxiety over the safety of the personal information stored on their personal devices and Shareefa noted:

> We have this fear always, my phone doesn't have a lock. Anyone can access this, so today scammers can access anything. There is every kind of detail in our phone. We were also asked some days ago to take account details, you gave Aadhar, you gave every detail, why would they give you bank details?

The precariousness of their positions means that a single data breach could have severe consequences, both for the ASHAs and the communities they serve.

Ateeqa noted that she has to constantly remain cautious about her device and reflected on the weight of this responsibility:

> When I take somebody's family details, I get scared that someone shouldn't touch my phone or do something, here are the details of the community, no one should touch the phone because they can share the details with someone else.

In response to these risks, some ASHAs adopt personal coping strategies such as avoiding social media altogether to minimize data theft.

Ateeqa also shared:

> I don't use Facebook or anything else. Neither do I let my kids do anything with the phone. I think if, God forbid, something happens to the data, then it is all on me. I don't let anyone touch my phone. I don't use it too much myself. This job requires extra precaution. At times, I could use my phone for other things, for example, I could keep my child busy with it for a while, but I have to be careful. There is so much data; if it leaks, then that is a different headache.

Despite their vigilance, data losses due to technical failures are common and ASHAs are forced to redo their work without institutional support.

One worker narrowly escaped a fraud attempt when an imposter posing as a government official requested confidential details.

Ateeqa shared about a fellow worker:

> Someone called an ASHA worker, saying, 'I'm from the department, share the PIN with me.' Because they already had the phone number, the app could also be downloaded. Now they asked the ASHA worker for the PIN. As soon as she gave the PIN, the other person started using it. All the details are added there, even the bank account numbers of these patients are entered in the app. The person noted down all the phone numbers and corresponding bank account numbers and sent a fake message claiming that money was credited to the account. Then he asked them to send the money back. But the person saw their account balance and realized that this transaction was not reflected in the bank account. Then the ASHA worker immediately informed the administration, and it was revealed that it was a scammer calling.

ASHAs remain prime targets of scams due to their access to sensitive community information.

The digitization of ASHAs' work has also resulted in a perpetual connectivity, where they are expected to be constantly available. With a continuous string of notifications, calls and updates, ASHAs experience an intensified form of platformized labor (Graham et al., 2017), where the digital infrastructure enforces continuous accessibility.

Zareena shared about her inability to take time-off of her work because of the continuous connectivity:

> If we want to take a day off or stay at home, we can't do that anymore. We don't have the time to stay at home. Now that all the work is digital.

ASHAs inability to 'stay at home' or disconnect from work underscores the erosion of temporal autonomy–a phenomenon in late capitalism in which rest and disengagement are systematically undermined. This inability to rest illustrates a disciplining power of digital governance, in which the promise of efficiency masks an exploitative labor without proportional compensation (Crary, 2013).

In this perpetual connectivity amidst erratic access to electricity (Ashiq, 2023), ASHAs in Kashmir are asked to keep their devices charged and working all the time. Workers from rural regions struggle to keep their devices charged, especially in heavy snowfall during winters when there are frequent power outages. ASHAs have to travel lengths to find power supplies to charge their phones.

Shakeela, likewise faces many difficulties especially during winters, when the electricity shuts down for months due to snow, she noted:

> They (authorities) say phones should be active all the time, somehow charged all the time.

This constant connectivity requirement transforms ASHAs into perpetual nodes within the state's healthcare and data collection network, blurring boundaries between their personal and professional time. Indispensability of mobile phones creates a pervasive surveillance (Srnicek, 2017) while precarious workers are tethered to digital infrastructures, making them perpetually accessible yet structurally disempowered.

Shareefa's daughter added about the nature of her mother's work:

> We get calls any time, even at midnight...husbands of these pregnant women call us, our phones are always on, data and location is on.

Narratives of ASHAs thus reveal how they have to navigate the pressures of datafication, surveillance and bureaucratic accountability in a deeply asymmetrical system of digital health governance underpinned by fragile trust networks.

Despite the structurally entrenched challenges that ASHA workers face on a daily basis, they create their unique meanings and form special solidarities among themselves. Most ASHAs interviewed came from lower economic strata, where the meagre incentives earned through their work were crucial for their daily survival. Safeena–a widow, solely relied on her incentives to provide for her children while Zareena found the incentives indispensable for running her home as her husband was unemployed.

The economic precarity of the participants meant that despite feeling overburdened and exploited by their work, they had no choice but to continue, reinforcing a systemic entrapment of marginalized women in undervalued care labor.

However, economic necessity was not the only motivation, as ASHA Association President, Shareefa–from a middle-class background, supported by her husband, approached the role differently. She saw her work–despite being exploitative–as an opportunity to escape the stagnation of being idle inside the home. Like most ASHAs, she also viewed her work as a means of learning and engaging with her community, expanding her social network, and assisting other ASHA workers get their rights and voices heard. The contrast highlights a spectrum of agency and economic dependence within the group of participants while also depicting the exploitative structures that shape their labor experiences.

Some ASHAs find support in their female higher-ups, like Female Multipurpose Health Worker (FMPHWs) and Facilitators, while most ASHAs helped each other complete their tasks to navigate the exploitative system.

Rafiqa (40) shared about their trust networks:

> Yesterday I was asked to go to Deligam (village) for training (she had some other work). I called up a fellow ASHA worker to go on my behalf, next time when she has any such emergency I would return her the favour. We cooperate with one another.

These solidarities not only mitigate the physically and emotionally taxing effects of surveillance, exploitation and gendered policing but also forge feminist practices rooted in care and collective endurance.

ASHAs have also created different associations where they bring up their issues and continuously mobilize, create representations and make their demands for dignified work.

Rafiqa continued:

> When we face any difficulty we call our group as we have 85 (ASHAs) in the block. We call up and decide that because of any problem we won't go to work and do a strike. That's how we help each other.

ASHAs create mutual support and collective strength to sustain their professional roles and personal dignity despite the structural violence they face every day. They navigate bureaucratic and domestic hardships through organized associations and informal solidarities, they offer emotional and technical support when overwhelmed or when their devices fail or data is lost.

ASHAs persistence in their work, seeking dignified labor while resisting the apathy of the state in everyday acts of resistance is a testimony to their communal strength and a will to bargain for their agency every day.

# Conclusion

Experiences of ASHA workers in Kashmir reveal a complex entanglement of digitization, state surveillance, structural violence, and a gendered devaluation of labor. Amidst a heightened impetus given to digital health governance in India, exists an intensified precarity of frontline health workers. ASHAs are subjected to constant surveillance, exploitative labor conditions, and technological vulnerabilities.

The militarized context of Kashmir exacerbates challenges that were more pronounced during months after the abrogation of Article 370, following which the valley remained under complete communication lockdown. The period through the narratives of ASHA workers exemplified how digital dependency became a tool of state control, disconnecting workers from their families, exposing them to risks on the field. The paternalistic policing of workers by the army and local police during curfew illustrated how the state not only controlled communication and movement but reinforced gendered expectations of confinement. ASHAs faced community suspicion and became unwilling agents of the state's public health enforcement as they were frontlined for vaccine compliance. They were also assigned election related duties, using them as expendable labor for political control with no compensation, while their safety was disregarded.

The over-reliance on technology also disregards structural barriers under which ASHAs in Kashmir work such as poor connectivity, digital illiteracy and community resistance, placing an undue burden on them to repeatedly do the same tasks, offline and then online. ASHAs also undergo affective labor to convince communities that are reluctant to share their data as they suspect state surveillance or militant connections.

ASHAs in Kashmir are expected to self-finance phone repairs and replacements despite their meagre earnings and lack of institutional support, and are forced to absorb the cost of technological breakdowns.

The feminization of their work is evident in the devaluation and dismissal of their contributions, both by the state and the communities they serve. Despite being critical mediators between the public health infrastructure and the marginalized populations, their presence is met with skepticism, hostility, and accusations of intrusion by locals. At many instances they are suspected as state agents that puts their safety at risk.

ASHA workers' narratives highlight how digitalization functions as an extension of state violence, bureaucratic control and gendered exploitation in Kashmir. The complex interplay of conflict, surveillance, and technological precarity opens up a paradox of India's digital healthcare where workers are increasingly dependent on digital tools for service delivery yet systematically on the fringes of infrastructural, labor, and economic stability.

While ASHAs continue to resist and display resilience, rooted in solidarity, a critical reassessment of the systems of digital governance is needed. In precarious political contexts like Kashmir, exploring the lived realities of workers reveals contrasting realities than what is posited and promoted by the state about digitalization of healthcare.

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