

## A Comparative Study of Mental Health and Perceived Discrimination among Female Sex Workers, Transgenders and Injecting Drug Users

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### Abstract

This quantitative study explores perceived discrimination and mental health disparities among marginalized populations: Female Sex Workers (FSWs), Injecting Drug Users (IDUs), Men Who Have Sex with Men (MSM), and Transgender Individuals (TGs). A stratified random sample of 400 participants was recruited from Targeted Intervention sites in Dehradun, Haridwar, and Nainital districts. Data were analyzed using one-way ANOVA and Games-Howell post-hoc testing. The study found substantial group differences in mental health ratings ( $F(3, 396) = 7.96, p < .001$ ) and perceived discrimination (Welch's  $F(3, 213) = 33.1, p < .001$ ). IDUs had the highest average mental health score ( $M = 26.7, SD = 6.84$ ) and moderate perceived discrimination ( $M = 38.9, SD = 9.31$ ). FSWs had the lowest mean perceived discrimination score ( $M = 30.3, SD = 7.44$ ), with significant differences compared to MSM (mean difference =  $-12.47, p < .001$ ) and TGs (mean difference =  $-9.67, p < .001$ ). MSM reported the most perceived discrimination ( $M = 42.8, SD = 13.79$ ) and substantial mental health issues ( $M = 25.5, SD = 4.86$ ), indicating identity-related stigma. TGs ( $M = 40.0, SD = 14.05$ ) suffered similar prejudice as MSM, but had the lowest mental health scores ( $M = 23.1, SD = 6.97$ ), highlighting the impact of stigma and societal isolation. FSWs (mean =  $23.0, SD = 6.28$ ) had slightly better mental health than TGs and faced similar issues as MSM. These findings highlight the complex impact of stigma and discrimination on mental health, underlining the importance of targeted, stigma-reducing interventions and inclusive policies for these vulnerable groups.

**Keywords:** marginalized populations, perceived discrimination, mental health, stigma, societal exclusion

### Introduction

Marginalized people, such as Female Sex Workers (FSWs), Transgender people (TGs), Men Who Have Sex with Men (MSMs), and Injecting Drug Users (IDUs), face severe mental health challenges as a result of stigma, discrimination, and social exclusion (Bhattacharya & Ghosh, 2020). Persistent consumption of unpleasant content frequently leads marginalized women, particularly female sex workers (FSWs), to adopt negative views and develop low self-esteem (Pandwal, 2023). FSWs experience significant mental health challenges such as depression,

anxiety, PTSD, emotional discomfort, and suicide ideation, which are exacerbated by discrimination, abuse, and barriers to healthcare access (Rössler, 2010; Iaisuklang, 2017). Similarly, MSM individuals who face discrimination based on their sexual orientation are more likely to suffer from depression, suicidality, and anxiety. The Minority Stress Model highlights how MSM experience stress as a result of societal rejection and prejudice, making them more vulnerable to mental health issues (Nalla et al., 2022). Many MSM prefer not to seek help, which increases their risks (Burgess et al., 2007). These findings highlight the vital need of providing specialized mental health services to both populations. MSM face prejudice in a variety of areas, including HIV testing, sexual conduct, and healthcare, as a result of both society's anti-gay stigma and their community's judgment based on HIV status (Chong et al., 2017). Their mental and physical well-being are adversely affected by this bias. Because MSM experience verbal abuse, physical attacks, and exclusion globally, research shows that discrimination based on sexual orientation increases the risk of HIV transmission. This emphasizes the significance of inclusive policies and supportive measures. IDUs commonly have mental health problems, including suicidal ideation, and face barriers to accessing mental health and medical care (Nowotny et al., 2017). Their general well-being and happiness are greatly impacted by these challenges. Due to their drug usage, this group is frequently subjected to stigma and prejudice, which leads to social condemnation and exclusion.

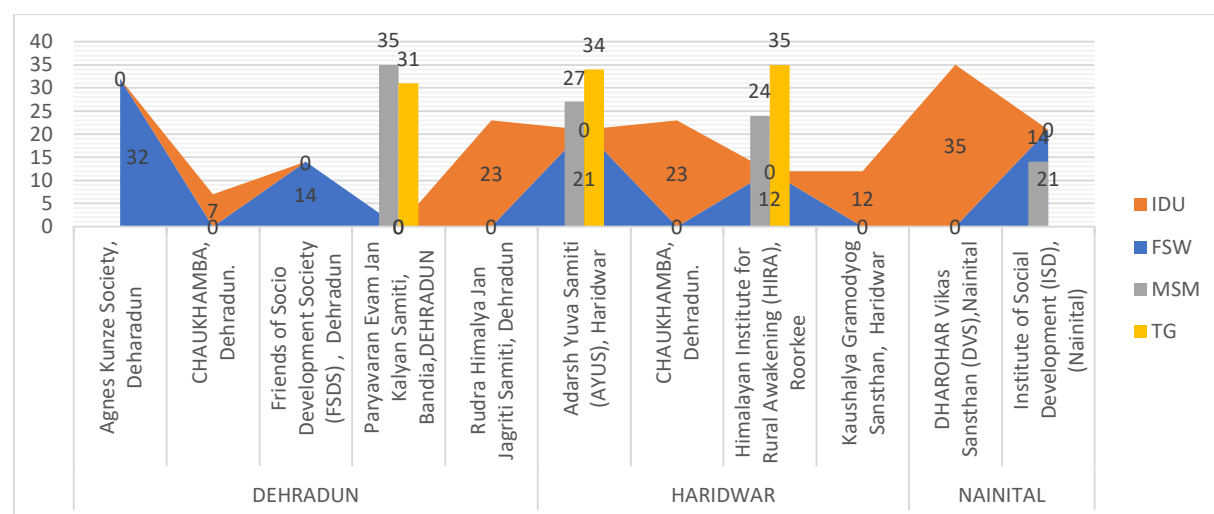
According to Williams and colleagues (1997), intravenous drug users' (IDUs') well-being is significantly impacted by discrimination and human rights breaches, which can result in a variety of social and psychological challenges. Perceived stigma causes people to engage in risky behaviors and suffer from unfavorable psychosocial outcomes; self-stigma around requesting help exacerbates these difficulties. Suicidal thoughts and other signs of poor mental health are common and often associated with childhood trauma (Williams et al., 1997). However, by highlighting the significance of targeted treatments to address the health and social inequalities faced by IDUs, programs like NACP's Targeted Intervention (TI) have promoted better behaviors.

Compared to heterosexual groups, transgender people have a higher rate of unmet needs and significant mental health issues. Many people experience gender dysphoria, a psychological distress brought on by the mismatch between their assigned sex at birth and their gender identity (Iyer et al., 2019). Customized treatments are essential since the transgender community in India faces severe emotional suffering and needs specific mental health help. Due to prejudice, discrimination, and violence, transgender individuals and female sex workers (FSWs) have significant mental health problems that are exacerbated by their elevated risk of HIV infection (Ng, 1986). While female sex workers frequently experience PTSD, anxiety, and depression as a result of violent episodes and stress related to their jobs, transgender people frequently experience higher degrees of sadness, social disengagement, and feelings of loneliness as a result of being rejected and abused. According to research, there are alarming

mental health statistics among these groups, such as the fact that 20.8% of sex workers in Bangladesh report having anxiety disorders, 73.3% in Zurich report experiencing anxiety, and 67% of sex workers in Chennai report witnessing serious violence (Iaisuklang & Ali, 2017). For both groups to effectively address psychosocial difficulties, mental health help must be quickly integrated into HIV/AIDS programs in India. Due to internalized stigma and discrimination, many marginalized groups—including MSM and sex workers—face barriers to receiving healthcare, which raises their rates of anxiety, despair, and suicidal thoughts. According to research, 29% of MSM in Mumbai suffer from severe depression, and 89.9% of sex workers need medical care but struggle to get it (Burgess et al., 2007). MSM has also alleged discrimination in healthcare in Hyderabad and IDUs in South Florida. Discrimination against transgender persons is common in Punjab and Los Angeles. These findings underscore the urgent need for improved healthcare access, integrated mental health services, and supportive environments for these populations.

## Method

**Study design:** This study was a quantitative study that focused on comparative analysis between four groups namely FSWs, IDUs, MSM, and TGs using descriptive and inferential analysis particularly One Way ANOVA. **Participants:** The sample of this study includes 400 participants from the key population divided into four strata namely, FSWs, MSM, IDUs, and TGs. The sample distribution for this study included a total of 400 participants from the key population, divided across four groups: FSWs, MSM, IDUs, and TGs. Each group was further segmented by district and Targeted Intervention (TI) centers, facilitating a balanced representation across the locations of Dehradun, Haridwar, and Nainital. **Procedure:** Purposive sampling was performed to select TI centers, and then participants within these TI centers were chosen through random sampling for data collection. Stratified random sampling was used as the participants were divided into four stratas.



The sample distribution for this study included 400 participants across four key groups: FSWs, MSM, IDUs, and TGs, with each group representing 100 participants. For Female Sex Workers (FSWs), Dehradun contributed 46 participants divided between the Friends of Socio Development Society (14) and Agnes Kunze Society (32); Haridwar included 33 participants with 12 from the Himalaya Institute and 21 from Adarsh Yuva Samiti; Nainital provided the remaining 21 participants from ISD. The Men Who Have Sex with Men (MSM) group also comprised 100 participants, with Dehradun contributing 35 through Paryavaran, Haridwar including 51 participants (24 from the Himalaya TI center and 27 from Adarsh), and Nainital adding 14 participants through ISD. For Injecting Drug Users (IDUs), the 100 participants were distributed as follows: Haridwar provided 35 (23 from Chaukhamba Haridwar and 12 from Kaushalya), Nainital contributed 35 through Dharohar, and Dehradun included 30 participants (23 from Rudra and 7 from Chaukhamba Dehradun). Lastly, the Transgender (TGs) group had 100 participants, with Dehradun contributing 31 through Paryavaran, and Haridwar contributing a larger portion of 69 participants (35 from the Himalaya TI center and 34 from Adarsh TI center).

## Tools

**Mental Health Checklist:** This scale is developed by Kumar (1992). This checklist includes 11 items with 6 mental and 5 somatic items. For A (mental items), the score ranges between 6-24, and for B (somatic items) the score ranges between 5-20, and the total score varies from 11 to 44.

**Perceived discrimination scale:** This tool is developed by Williams et al. (1997). It consists of two subscales, the lifetime discrimination subscale items comprise of 11 items (from 1 to 11) and the daily discrimination subscale comprises 9 items i.e., from (12 to 20). The responses are as, 1: often, 2: sometimes, 3: rarely, and 4: never.

## Result and Discussion

### Mental Health

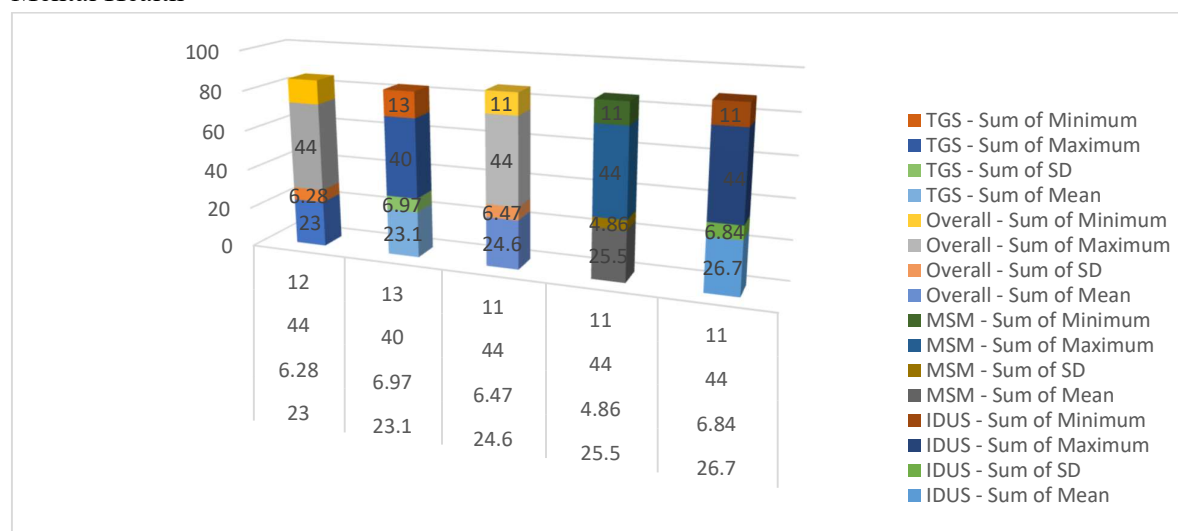


Table 1: Mental Health Descriptives

Table 1 presents the mental health scores for 400 participants, with a mean of 24.6 and a median of 24.0, indicating a generally symmetric distribution. The standard deviation of 6.47 suggests moderate variability in mental health scores, reflecting diverse mental health experiences within the sample. The range from 11 to 44 highlights the broad spectrum of mental health status across the group. Previous literature emphasizes similar variability in mental health outcomes across marginalized groups. For example, MSM in India have reported high rates of anxiety and sadness, while prejudice and trauma cause major mental health issues for female sex workers worldwide. These results highlight the influence of social and psychological factors on well-being in these communities and are consistent with the observed variance in mental health ratings. According to Bailey et al. (1999) and Beattie et al. (2020), IDUs, which had the highest mean score of 26.7 (SD = 6.84), indicate increased distress associated with substance abuse, social stigma, and physical difficulties. With a mean score of 23.0 (SD = 6.28), FSWs experience stress due to social exclusion (Gyawali et al., 2018), violence (Bhattacharya & Ghosh, 2020), and economic instability (Mojtabai et al., 2002). These factors are consistent with the group's typical experiences with discrimination and mental health problems. With a mean score of 25.5 (SD = 4.86), MSM suffer from social rejection, internalized homophobia, and identity-related stigma (Williams et al., 1997). The widespread prejudice and lack of legal recognition cause TGs, who have a mean score of 23.1 (SD = 6.97), to be distressed (Schmitt & Branscombe, 2002).

Table 2: One-Way ANOVA (Welch's)

|                 | F    | df1 | df2 | P      |
|-----------------|------|-----|-----|--------|
| "Mental health" | 7.96 | 3   | 218 | < .001 |

Post-hoc analysis supports the results, which show substantial variations in mental health scores between groups ( $p < .001$ ,  $F = 7.96$ ). These results are consistent with earlier research showing the negative effects of stigma on the mental health of marginalized groups, such as MSM communities (Chong et al., 2017) and LGBT people (Burgess et al., 2007).

Table 3: Games-Howell Post-Hoc Test – Mental Health

|      |                 | IDUS | FSWS     | MSM     | TGS       |
|------|-----------------|------|----------|---------|-----------|
| IDUS | Mean difference | —    | 3.72 *** | 1.26    | 3.6600 ** |
|      | t-value         | —    | 4.01     | 1.50    | 3.7497    |
|      | df              | —    | 197      | 179     | 198       |
|      | p-value         | —    | < .001   | 0.439   | 0.001     |
| FSWS | Mean difference |      | —        | -2.46 * | -0.0600   |
|      | t-value         |      | —        | -3.10   | -0.0640   |
|      | df              |      | —        | 186     | 196       |
|      | p-value         |      | —        | 0.012   | 1.000     |
| MSM  | Mean difference |      |          | —       | 2.4000 *  |
|      | t-value         |      |          | —       | 2.8248    |
|      | df              |      |          | —       | 177       |
|      | p-value         |      |          | —       | 0.027     |

The comparisons showed notable differences in each group's mental health. In line with Nowotny et al. (2017), IDUs showed superior mental health compared to FSWs (mean difference = 3.72,  $t = 4.01$ ,  $p < .001$ ) and TGs (mean difference = 3.66,  $t = 3.75$ ,  $p = .001$ ), indicating that focused interventions may lessen psychological burdens in this population. The non-significant difference between MSM and IDUs (mean difference = 1.26,  $t = 1.50$ ,  $p = .439$ ), however, is indicative of common difficulties noted in other studies. MSM exceeded FSWs in terms of score (mean difference = -2.46,  $t = -3.10$ ,  $p = .012$ ), which is consistent with Pandwal's (2023) findings that marginalized women experience more psychological difficulties. According to Bhattacharya and Ghosh (2020), the lack of a significant difference between FSWs and TGs (mean difference = -0.06,  $t = -0.064$ ,  $p = 1.000$ ) emphasizes shared marginalization. According to Becerra-Culqui et al. (2018), TGs' poorer scores than MSM (mean difference = 2.40,  $t = 2.82$ ,  $p = .027$ ) demonstrate the serious negative effects of societal exclusion and stigma on TGs' mental health.



## Perceived Discrimination

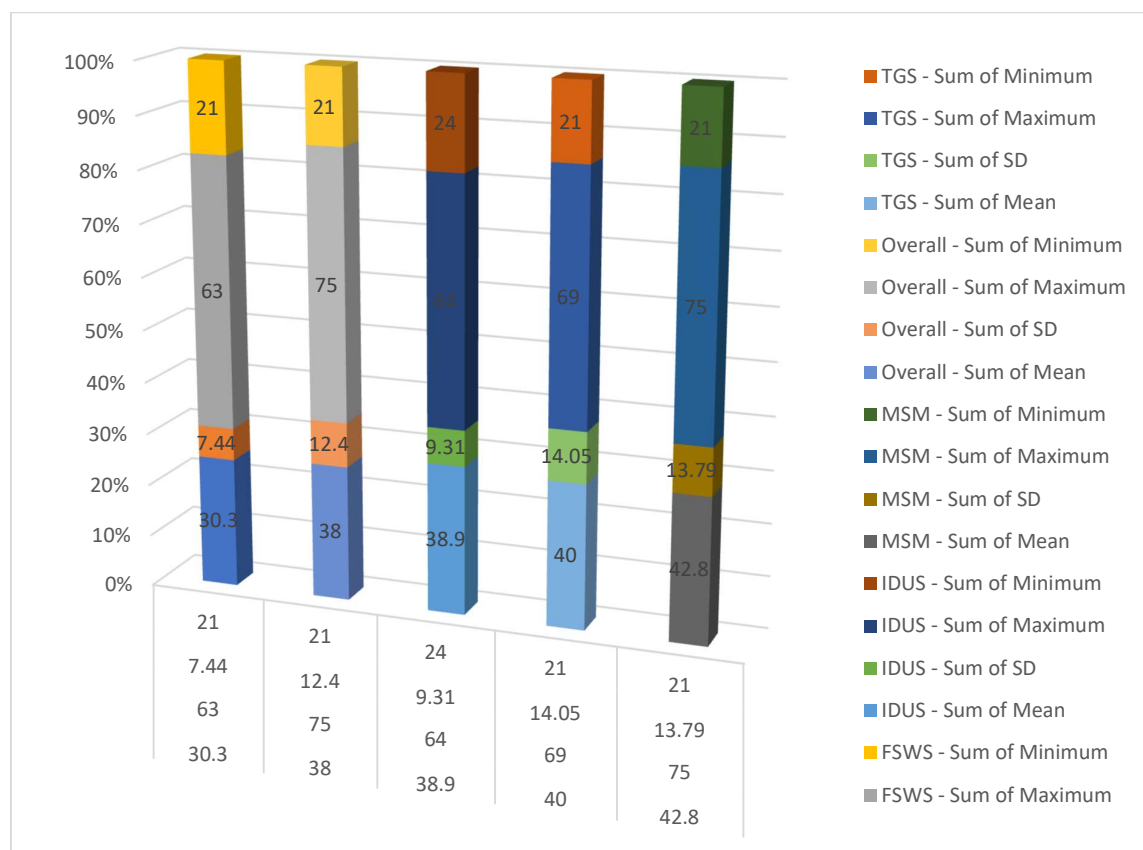


Table 4: Perceived Discrimination Descriptives

In line with earlier studies, the descriptive statistics for perceived discrimination show notable differences among important populations. According to Iyer et al. (2019), MSM had the highest mean score ( $M = 42.8$ ,  $SD = 13.79$ ), which reflects the widespread social stigma associated with their sexual orientation. Following closely behind TGs ( $M = 40.0$ ,  $SD = 14.05$ ), Iyer et al. (2019) confirmed the structural stigma associated with gender identification. These groups' wide variation reflects a range of experiences depending on things like community support and socioeconomic level. IDUs indicated moderate levels of discrimination ( $M = 38.9$ ,  $SD = 9.31$ ), which is consistent with the findings of Hammarlund et al. (2018), who highlighted the stigma associated with substance use in society. Comparatively speaking, FSWs reported the lowest scores ( $M = 30.3$ ,  $SD = 7.44$ ), which is in line with Iaisuklang and Ali (2017), who observed clandestine work settings and differing levels of community acceptance.

Table 5: One-Way ANOVA (Welch's)

|                          | F    | df1 | df2 | p      |
|--------------------------|------|-----|-----|--------|
| Perceived Discrimination | 33.1 | 3   | 213 | < .001 |

Significant variations in perceived discrimination among the four major populations are highlighted by the Welch's ANOVA results ( $F(3, 213) = 33.1, p < .001$ ), which confirm robust differences caused by unequal variances. This is in line with Schmitt and Branscombe (2002) and Williams et al. (1997), who highlighted how prejudice affects different groups differently. To find particular group differences, post-hoc analysis is essential, according to Rössler et al. (2010) and Zehnder et al. (2019).

Table 6: Games-Howell Post-hoc Test – Perceived Discrimination

|      |                 | IDUS | FSWS     | MSM        | TGS       |
|------|-----------------|------|----------|------------|-----------|
| IDUS | Mean difference | —    | 8.56 *** | -3.91      | -1.11     |
|      | t-value         | —    | 7.19     | -2.35      | -0.659    |
|      | df              | —    | 189      | 174        | 172       |
|      | p-value         | —    | < .001   | 0.091      | 0.912     |
| FSWS | Mean difference | —    | —        | -12.47 *** | -9.67 *** |
|      | t-value         | —    | —        | -7.96      | -6.084    |
|      | df              | —    | —        | 152        | 150       |
|      | p-value         | —    | —        | < .001     | < .001    |
| MSM  | Mean difference | —    | —        | —          | 2.80      |
|      | t-value         | —    | —        | —          | 1.423     |
|      | df              | —    | —        | —          | 198       |
|      | p-value         | —    | —        | —          | 0.487     |

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

IDUs perceive discrimination at a considerably higher rate than FSWSs, according to the Games-Howell post-hoc test (mean difference = 8.56,  $p < .001$ ). According to Pandwal and Bhatt (2024) and Rössler et al. (2010), this emphasizes the social stigma associated with substance use, which is in line with Schmitt and Branscombe (2002) and Williams et al. (1997). There was no discernible difference in the reported level of discrimination between IDUs and MSM (mean difference = -3.91,  $p = .091$ ), which is in line with Chong et al. (2017), who observed that MSM experienced severe stigma because of their sexual orientation. Comparable levels of discrimination were also reported by TGs (mean difference = -1.11,  $p = .912$ ), which is



consistent with research by Das et al. (2023) that shows that stigma is exacerbated by gender identity. These findings point to common social exclusionary practices among TGs, MSM, and IDUs that are shaped by societal marginalization and exclusion, as emphasized by Ng (1986).

Compared to MSM (mean difference = -12.47,  $p < .001$ ) and TGs (mean difference = -9.67,  $p < .001$ ), FSWs reported much reduced felt discrimination, indicating that social attitudes toward sex work and gender/sexual identity contribute to varying experiences of discrimination. This is consistent with research by Williams et al. (1997) that shows how social stigma affects mental health. Due to the covert nature of their employment, FSWs frequently encounter less overt social discrimination, which may account for their lower perceived discrimination ratings (Rossler et al., 2010).

## Conclusion and Implications

The study finds that marginalized groups differ significantly in their perceptions of discrimination and mental health. Compared to FSWs and TGs, IDUs reported greater mental health and less perceived prejudice, underscoring the need for focused interventions. In line with earlier studies on marginalized women, MSM had lower mental health and more discrimination than FSWs. Similar levels of perceived discrimination and mental health were displayed by TGs and FSWs, indicating that they had similar experiences of marginalization. Compared to MSM, TGs had worse mental health and more stigma. These results highlight the need for more study on the relationship between stigma, discrimination, and mental health as well as for customized interventions and legislative changes.

## Ethical Consideration

The study complied with ethical standards as the confidentiality of the participants remained intact. Informed consent was taken from them. They had the right to opt out of the study at any time, and no other incentive was provided.

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