Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women

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Abstract

Gender discrimination is not just encoded in language and linguistic codes but in other modes of expression like color choices in art forms and shapes and sizes of symbols creating and contextualizing gender stereotypes in social minds. Such stereotypes result in limited opportunities for women in the professional domains, especially in the fields of science, technology, engineering, and mathematics (STEM). Such prevailing stereotypes not only limit professional prospects for women but also condition them into self-doubt owing to the 'normalization' of such a discriminatory mindset as a social reality. Such conditioning results from consistent exposure to subtle social cues and practices that impact their cognition, leading to them not choosing or opting out of STEM fields. This study investigates the socio-cognitive effects of gender stereotypes in the linguistic landscape (LL) of twelve higher education

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   70

institutions in Bihar and Jharkhand and its impact on the balance of opportunities for women. Content analysis of the photographs suggests that the LL in the institutions is gendered, which also strongly impacts the attitude, both male and female, about career choices. As gender-based disparities lead to unevenness in society, the study highlights the need to change the social reality through subtle changes in the linguistic landscape, especially within educational institutions.

Introduction

Gender has been depicted as a multi-dimensional, historically changing structure of social relations constructed in active social practices (Connell, 1987). These social practices often cognitively impact society by creating guiding principles that determine how the genders perform social roles. These 'social roles' often limit humans in recognizing an individual's true potential beyond societal expectations. This, in fact, is a stereotype. A stereotype may be defined as an overstated perception linked to a specific group utilized to rationalize one's behavior concerning that group (Allport, 1954). Lipmann (1922) states that a stereotype can be described as a persistent and broadly generalized belief about a specific class or group of individuals, often noted as a phenomenon in scientific inquiry. In other words, it could be implied that stereotypes are thought to assist individuals in simplifying and managing the complexity of the social environment (Lipmann, 1922).

Stereotypes, according to Hamilton (1979), occur when a perceiver makes judgments about another person solely based on that person's membership in a particular group. Since individuals cannot communicate and comprehend every group member, they judge the entire group based on their observations about some of them. Gender is a social construction, and individuals often distinguish between genders and develop ideas about the characteristic traits and behaviors associated with each gender (Liu et al., 2023). These gender stereotypes partly encapsulate the distinctions between males and females (Ellemers, 2018).

Gender stereotypes, similar to other social stereotypes, are a manifestation of observers noting people's everyday behaviors (Eagly & Steffen, 1984). Numerous studies have revealed

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   71

that gender stereotypes label women as communal and warm (nurturing and caregiving) as opposed to labeling men as agentic (being dominant, adventurous, and aggressive) (Biernat & Sesko, 2018; Kahalon et al., 2018; Eagly, 1987). These convictions empower members of a society to manage conduct, authorize specific actions, penalize or constrain others, and delineate what is deemed acceptable or condemned within a community (Romera, 2015; Fairclough, 2003; van Dijk, 1998, 2003). Gender stereotyping poses a substantial challenge to the advancement of women's careers, particularly in management roles (Tabassum & Nayak, 2021). Stereotypes can either benefit or harm cognitive performance in men and women depending on whether the participants perceive the testing environment as frightening or challenging (Betz & Hackett, 1981).

Gender stereotypes are prevalent in our society to such an extent that even certain occupations and careers have become gendered. While considering professions, a typical or representative image of the occupational group may be conjured in one's mind (He et al., 2019).

In childhood, the socialization process of genders is often shaped by the expectations of teachers and parents regarding the roles, behaviors, and attitudes of children, and this influence directs males and females towards professions perceived as suitable for their respective genders (Ramaci et al., 2017).

Educational premises expose students to subtle cues regarding their expected social roles, thus profoundly impacting nascent cognitive minds in their formative years. Consequently, professions viewed as practical are often seen as masculine, making them more favored by males, while social and artistic roles are traditionally associated with femininity and are thus preferred by females (Ji et al., 2004). While growing up, male children are allowed to engage in mechanical, scientific, and technical activities compared to female children (Betz & Hackett, 1997). Despite the absence of gender-based variations in academic grades, parents are more inclined to perceive science as both less captivating and more challenging for their daughters compared to their sons (Tenenbaum & Leaper, 2003).

Literature Review

The subsequent paragraphs offer a comprehensive review of prior research on gender stereotypes and their impacts on career choices, presenting diverse viewpoints and insights derived from global studies. Studies have revealed that boys tend to confine their aspirations to careers traditionally dominated by males (often in high prestige), whereas girls show interest

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Language in India www.languageinindia.com ISSN 1930-2940 **Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   72

in a broader spectrum of careers, encompassing both traditionally male-dominated and female-dominated options (Mendez & Crawford, 2002). It is seen that there is a higher proportion of men in comparison to women in careers like law enforcement, whereas occupations like nursing have a higher proportion of women than men (Eagly & Wood, 2012; Jarman et al., 2012). Certain occupations are categorized as 'women's jobs' or 'men's jobs,' contributing to a discernible gap in the distribution of occupations between women and men (Bradley, 2000; Maccoby, 1998). It has been revealed that there is a tendency for women to surpass men in the teaching profession, while in science, technology, engineering, and math (STEM) fields, men tend to outnumber women (Meece, 2006; Messersmith et al., 2008). Snyder & Dillow's (2012) study reveals that in 2011, women obtained 80 percent of the degrees in education, 85 percent in nursing and health professions, and 77 percent in psychology, while it was 30 percent, 19 percent, and 29 percent for economics, physics, and engineering, and philosophy respectively. A study by Ramaci et al. (2017) found that among Italian adolescents, females more commonly express an inclination to pursue further education, while males tend to prefer non-university routes, such as military careers. Additionally, more women than men place considerable importance on factors such as employment prospects, access conditions, class size, and, notably, the availability of practical workshops in their university courses.

Existing research also indicates no discernible gender disparities in academic grades related to performance achievement (Mozahem, 2020). According to Bandura et al. (2001), their path analysis demonstrates that, while overall perceived academic self-efficacy did not differ between boys and girls, boys exhibited higher self-efficacy, specifically in math, science, and technology. Girls, on the other hand, demonstrated greater efficacy in educational and health-related fields. Other studies, such as Cech et al. (2011), have also indicated that females tend to have lower confidence and self-efficacy in fields like engineering.

Research indicates that gender differences in grades related to performance are non-existent. However, if a significant number of women choose not to pursue STEM fields, they might miss the chance to evaluate their abilities in these areas. This avoidance could impede their mastery development, as proficiency usually requires engaging multiple times (Bandura, 1982). Despite the increasing participation of women in STEM education and professions, persistent gender disparities exist, with women exhibiting a lower likelihood of involvement in STEM education and pursuing STEM careers compared to men (Charlesworth & Banaji, 2019;

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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   73

Wang & Degol, 2017). In the United States, research indicates that during middle school, the intention to pursue STEM-related careers is more than twice as prevalent among boys as girls (Legewie & DiPrete, 2014).

The under-representation of women in STEM disciplines (science, technology, engineering, and mathematics) is globally observed (Ceci & Williams, 2011). In India, just like in marriages, an individual's educational decisions are usually decided by family members, especially their parents (Mukhopadhyay, 2018). The subjects a student chooses in high school generally determine their future study path. Gender role stereotypes lead to the gender labeling of school subjects. Subjects related to language are commonly viewed as predominantly associated with females, while Mathematics is often perceived as predominantly linked with males (Whitehead, 1996), a perception shared not only by students but also by teachers (Simpson, 1974; Keller, 2001). The selection of career options or alternatives is shaped by a combination of external factors, such as the labor market and economic conditions, as well as internal factors, including education, family background, and individual attitudes (Agarwala, 2008). The gender-based categorization of careers emerges during the initial stages of adolescence, potentially manifesting in middle school or the initial phases of high school (Adya & Kaiser, 2005). Culture, too, plays an important role. The career-related choices of students are anticipated to be influenced by cultural values, impacting the various factors and relationships involved (Agarwala, 2008). Hofstede's (1980) empirical index on cultural dimensions reveals that Western countries, including the USA, the UK, and Australia, tend to align with individualist tendencies, while Asian nations such as Japan, Taiwan, and India lean towards collectivist inclinations. In this context, "individualism" denotes a propensity for individuals to prioritize their interests, perceive themselves as independent from organizations, and emphasize self-reliance and individual actions; on the other hand, "collectivism" refers to the inclination of individuals to perceive themselves as interdependent within a larger group, prioritizing the interests of the group members (Agarwala, 2008). In the Indian context, individuals prefer to take the collectivist approach in choosing their careers as it prioritizes the interests of group members, especially family members.

The patrifocal nature of Indian society primarily influences the Indian academic science environment. Patrifocality pertains to family structures and beliefs within kinship systems that prioritize men over women (Mukhopadhyay & Seymour, 1994; Subrahmanyan, 1998). The

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Language in India www.languageinindia.com ISSN 1930-2940 **Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   74

predominant hindrances to women's education in India have been the existence of robust patrifocal structures and ideologies (Gupta & Sharma, 2003).

Gaps and Motivation

A high school degree enables individuals to prepare for the future by securing employment, negotiating for better wages, and enhancing their household's standard of living (Hussain, 2011). Nevertheless, in South Asia, there is a perception that parents have lower motivation to educate their daughters up to this level (Hussain, 2011). Significant evidence points to gender disparity in education in India, with girls historically falling behind boys in educational achievements (Aggarwal, 1987; Agrawal & Aggarwal, 1994). Moreover, India's significant preference for male children is a result of the cultural construct of Indian society, which perpetuates gender bias against men and women, with varied degrees and variable circumstances against the opposite sex (Kohli, 2017). India is ranked 141st out of 142 countries and 2062 districts worldwide that are considered gender critical in terms of women's survival and health relative to men (Kohli, 2017). Studies indicate that the impact of female education on social outcomes such as fertility, child health, and infant mortality is more significant than male education (Drèze & Murthi, 2001; Subbarao & Raney, 1995). A regional disparity in gender literacy exists in India, especially marked by a North-South divide with higher gender disparity in education noticeable in Northern and Central Indian states such as Bihar, Uttar Pradesh, and Madhya Pradesh (Sopher, 1980), especially in the Hindi speaking regions of India. Begum and Sinha's (2017) study attempts to highlight the prevalence of gender bias in Hindi, linking language use to stereotypical and discriminatory behavior against women. Interestingly, existing research has not investigated the impact of the subtle cues that are presented to the students within the premises of educational institutions in the form of their visual landscape reinforcing gender stereotypes and disparate behaviors, which oftentimes go against the classroom teachings.

The current study has been undertaken to fill the gap so that society as a whole becomes sensitive to the contents that are exposed to the impressionable mind. Two states, Bihar and Jharkhand, have been selected for this study.

Objectives

The gap, as identified in the previous sections, thus leads to the study's objectives: to investigate whether gender stereotypes are visible in the schoolscape and how they impact an

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   75

individual's career choices. The focus of this study is on individuals from two states in India - Bihar and Jharkhand. Thus, this study attempts to highlight such characteristics of the LL within educational institutions and discusses their impact on students' attitudes and career choices. The objective has been crystalized into two research questions here:

1. Is the schoolscape gendered in the context of higher educational institutions in Bihar and Jharkhand?

2. How do such gender stereotypes cognitively influence the students' career choices?

Figure 1. Map of India highlighting Bihar and Jharkhand
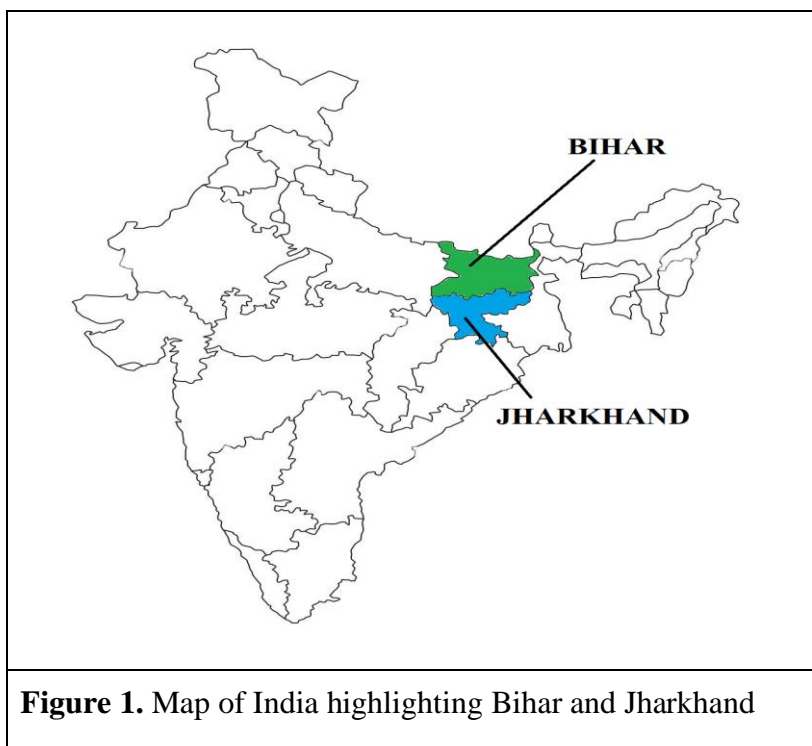
Theoretical Framework and Methodology

       This section presents the theoretical framework and methodology adopted for this study.

Social Cognitive Theory

       In addition to cultural values, cognition also plays an important role. Social cognitive theory (SCT) is one of the predominant theories employed to elucidate observed gender disparities in career preferences (Mozahem, 2020). The Social Cognitive Theory, proposed by Bussey and Bandura (1999), provides a framework for comprehending why women continue to be underrepresented in particular disciplines. This theory holds that learning is closely related to a person's observation of other people in social situations and interactions.

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Language in India **www.languageinindia.com** **ISSN 1930-2940** **Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti,
Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on
Career Choices for Women   76

Bhattacherjee and Sinha's (2023) study tries to understand the impact of the use of animal imagery in social media discourse on human behavior towards animals. This study uses conceptual metaphor and conceptual blending theories to highlight the relations between language, cognition, and manifested behavior.

The socio-cognitive domain also controls gender stereotypes. Social cognitive career theory proposes that self-efficacy significantly influences interest development and future educational and occupational decisions. Self-efficacy also plays a vital role in an individual's career choices. It functions as a self-fulfilling prophecy (Betz, 2004). Betz and Hackett (1981) and Hackett and Betz (1981), using social cognitive theory, explained differences in career choices between males and females. They found that female college students demonstrated reduced self-efficacy for occupations traditionally associated with males, whereas male students exhibited comparable self-efficacy for roles historically dominated by men.

Self-efficacy is often associated with the underrepresentation of women in STEM fields. In 1977, Bandura first described self-efficacy expectations as people's confidence in their ability to carry out a specific activity. Perceived self-efficacy is an evaluation of one's talents that are impacted by and affect performance rather than being only based on objective skills. Instead, it molds how we use our abilities (Lent & Hackett, 1987). Layton's (1984) significant discovery revealed that career salience moderates the influence of self-efficacy on occupational consideration, with career self-efficacy being a more reliable predictor for women with high career salience. Hackett and Betz (1981) highlighted the potential of self-efficacy theory to explain women's professional advancement by extending it to career behavior. According to their concept, societal views instilled via socialization experiences may represent substantial obstacles to professional choice and successful behavior, influencing self-efficacy-related cognitive beliefs.

Methodology for Data Analysis

The methodology adopted for this study is content analysis and data collection through a questionnaire. Content analysis is employed to analyze the images of educational institutions' posters, advertisements, and wall paintings. The theory of multimodality proposed by Kress and van Leeuwen (2021) is applied to analyze the images. Kress and Van Leeuwen (2021) define multimodality as using multiple semiotic modes to create a semiotic product or event. Advertisements, posters, and wall paintings are filled with diverse communication strategies,

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Language in India www.languageinindia.com ISSN 1930-2940 **Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   77

such as various fonts and vibrant colors, to quickly capture the viewer's attention. Along with this, they also feature slogans and captions. Both the verbal and non-verbal elements have to be analyzed to interpret the meaning associated with these images; hence, the multimodal framework has been employed.

Data Collection

Twelve higher education institutions from Patna and Gaya (Bihar) and Jamshedpur and Ranchi (Jharkhand) were selected for data collection. The two states' highest two most populated cities were selected based on the census data (Indian Census, 2011). As per the Indian Census 2011, Bihar is one of the most populated states in India, with 104 million total population. The male-to-female ratio in Bihar is 918 per 1000 males. Jharkhand has a population of 32.9 million, and the sex ratio of Jharkhand is 948 per 1000 males. To address the first research question, photographic data (n=240) comprising posters, art, and other images were collected from higher education institutions.

These educational institutes offer undergraduate degree courses, diploma courses, post-graduate degree courses, and doctoral degree courses. Only those images were collected where a male or female figure was present for the photographic data collection. Posters, art, advertisements, and other images found in hallways, classrooms, and common rooms (recreational rooms in institutes) were considered. No data was collected from individual residential spaces (hostel rooms).

For the second study, data was gathered through a structured questionnaire with multiple-choice response formats. Its design drew upon existing literature for formulation. Ethical guidelines were strictly followed, and informed consent was obtained from each of the respondents. Out of a total of 225 responses initially, 23 were discarded due to their incompleteness. Hence, for the final analysis, 202 responses were considered. Respondents (n = 202, mean age = 21.40, SD = 3.82) were either in their undergraduate degrees or postgraduate degrees. Of the total participants, 62.9% (n=127) were males, and 37.1% (n=75) were females. 76.7% (n=155) of the participants were in Undergraduate courses; 101 were males, and 54 were females. 23.3% (n=47) are in Postgraduate courses; 26 were males, and 21 were females. 85.1% (n=172) belonged to Science and Technology; 115 were males, and 57 were females, 8.9% (n=18) belonged to Humanities and Social Sciences; 9 were males, and 9 were females, and 5.9% (n=12) belonged to Commerce and Finance; 3 are males 9 are females.

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   78

Analysis

The following sections attempt to analyze both the photographic data as well as the questionnaire to understand their socio-cognitive impact through two subsections: Analytical Study 1 and Analytical Study 2 below. Study 1 is further subdivided into three distinct themes, as explained below.
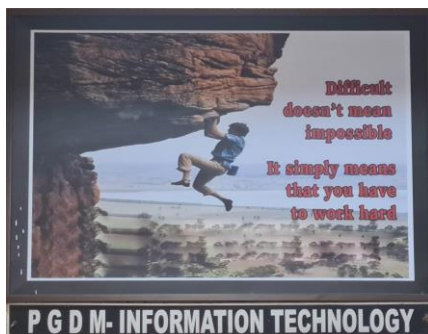
Analytical Study 1

The following sections attempt to analyze both the photographic data.

The following section shows the analysis of images. The analysis is subdivided into three themes:

- Images showing males and females in gendered activities.
- Images showing males and females in different gender roles.
- Images showing female empowerment.

Images showing males and females in gendered activities

Figure 2. Poster showing motivation

Figure 3. Painting of a girl dancing

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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   79

Figure 4. Advertisement for a sports **Figure 5.** A woman doing yoga
competition

Numerous visual representations in outdoor sports and adventurous activities consistently depict males as predominant participants, contributing to the establishment and reinforcement of gendered perceptions. The prevalent portrayal of men in these activities perpetuates the belief that traits such as risk-taking and adventurous spirit are inherently associated with the male gender, while females are notably underrepresented in similar scenarios. Moreover, even when females are depicted, they are frequently portrayed in the company of males, reinforcing the societal notion that women are less inclined to engage in independent risk-taking pursuits.

In specific visual instances, such as depicting a man engaged in rock climbing accompanied by a quote, 'Difficult doesn't mean impossible. It simply means that you must work hard,' subtle associations may inadvertently reinforce gendered interpretations (Figure 2). Additionally, within the context of sports, visual content tends to showcase male players in activities like basketball and badminton (Figure 4), while representations of females are often confined to traditionally feminine pursuits such as dancing and yoga (Figures 3 and 5). This contributes to the gendering of activities, where sports are predominantly associated with males, reinforcing societal stereotypes.

Images showing males and females in different gender roles

Figure 6. Advertisement for a soft drink   **Figure 7.** Advertisement of Nestle products

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Language in India www.languageinindia.com ISSN 1930-2940 **Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   80

Figure. 8. Poster of motivation
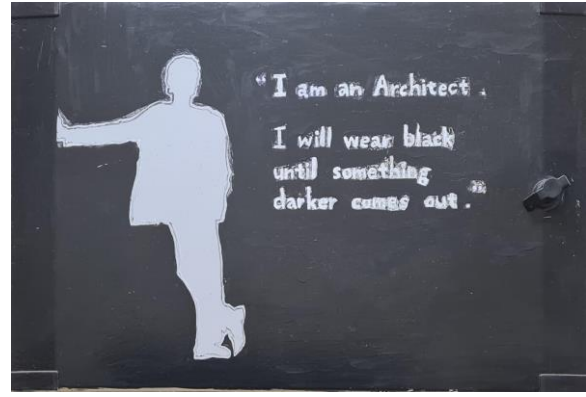
Figure 9. Poster showing an architect

In the context of visual representations in posters and advertisements, distinct gender roles are often depicted. Females are frequently portrayed in casual and dream-like scenarios. An illustration features a woman thinking about a romantic event where a boy gives flowers to a girl (Figure 8). Another image (Figure 6) depicts two women consuming soft drinks and smiling or sharing a laugh while looking at a mobile phone. A third image (Figure 7) features a female standing beside a beverage can. The image portrays the woman touching herself, what Goffman (1987) termed 'feminine touch.' This involves women using their hands and fingers to touch their hair or other body parts. Additionally, women in these depictions are shown smiling, aligning with Goffman's (1987) notion that a smile is a form of ritualistic subordination. Ritualization of subordination is detachment from the present scenario.

In contrast, images portraying men depict them in serious roles. For instance, one image features a paper cut-out with the caption, I am an architect. I will wear black until something darker comes out,' resembling a man (Figure 9). This image underscores that when men are represented, they are typically showcased in serious, occupation-related scenarios, engrossed in remunerative activities. The way these images portray gender stereotypes creates an impact on the viewer's mind that limits them in making confident choices.

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Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   81

Images showing female empowerment.

Figure 10. Poster of SWAYAM   **Figure 11.** Billboard advertisement for a university

Despite efforts by institutions and organizations to promote gender equality by including women in posters and advertisements, the prevalence of such representations remains limited. In Figure 10, an advertisement for SWAYAM, a Government of India program focused on providing education and optimal teaching-learning resources to all segments of society, features three women and one man. Notably, one woman is depicted in professional attire, symbolizing women's empowerment. Figure 11 is an advertisement for a university program for Bachelor and Masters in Business Administration. Advertisements for such degrees rarely feature female figures. Consequently, when the public notices such portrayals, it influences individuals to rethink while opting for various courses, particularly females. These promotional materials serve as a notable and impactful initiative. These instances underscore the potential of visual representations to act as catalysts in fostering gender inclusivity within educational and professional domains.

Analytical Study 2

This section deals with the analysis of the questionnaire. The research design was developed to gain insights into the perceptions and experiences of gender stereotypes among the students about their career choices. The study exclusively focused on students across diverse disciplines. The questionnaire consisted of 2 sections: Section 1 consisted of demographic questions; Section 2 consisted of perceptions of gender equality and gender roles toward career choices in humanities and social sciences and STEM fields. Data analysis was

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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   82

performed using IBM – SPSS (Statistical Package for the Social Sciences) to perform inferential statistics. For inferential statistics, the focus was on the chi-square analyses to examine the relationships between variables.

Measures

To examine the perceptions of gender roles and gender equality toward career choices, chi-square tests were employed for the items in the questionnaire. The results are as follows-
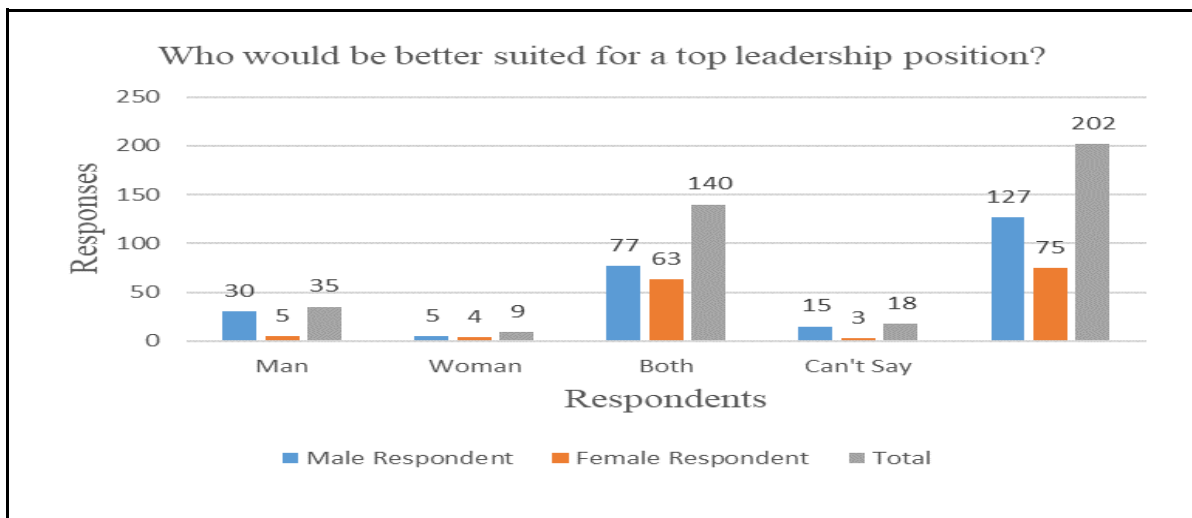
**Figure 12.** Who would be better suited for a top leadership position?

Table 1. Who would be better suited for a top leadership position?

	Male Respondent	Female Respondent	Total
Man	30	5	35
Woman	5	4	9
Both	77	63	140
Can't say	15	3	18
Total	127	75	202

On the question, who would be better suited for a top leadership position?' Out of the total 202 respondents, 35 respondents believed that men are better suited for a top leadership

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   83

position, while 9 respondents believed that women are better. 140 respondents believed both men and women were better suited for a top leadership position, while 18 respondents believed they were unsure. A chi-square test examined the relationship between gender and perceptions of suitability for top leadership positions. The results indicated a significant association between the respondents' gender and their perceptions, $\chi^2(3, N=202)= 14.974$, $p=0.002$. These findings suggest a statistically significant gender-based difference in perceptions regarding the suitability for top leadership positions.
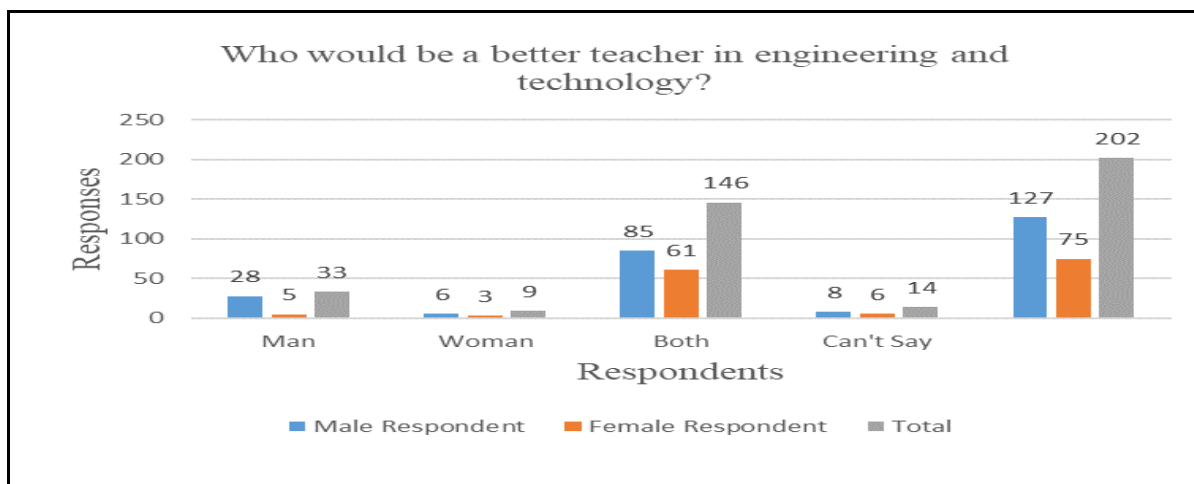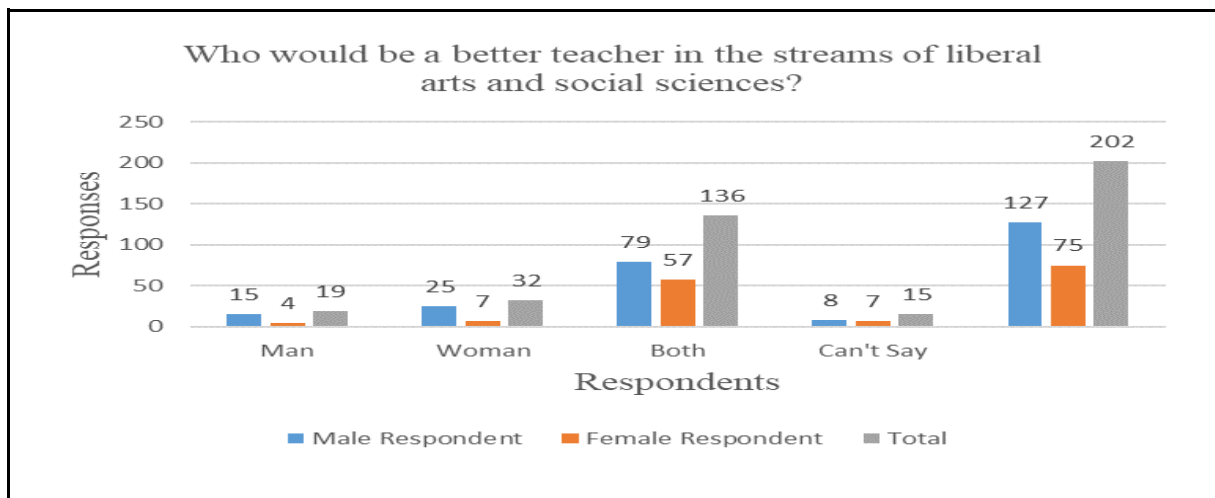

Figure 13. Who would be a better teacher in engineering and technology?

Table 2. Who would be a better teacher in engineering and technology?

	Male respondent	Female respondent	Total
Man	28	5	33
Woman	6	3	9
Both man and Woman	85	61	146
Can't say	8	6	14
Total	127	75	202

On the question about 'who would be a better teacher in engineering and technology?' 33 respondents believed that men would be better teachers in engineering and technology streams, while 9 respondents believed that women would be better teachers in engineering and

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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:2 February 2025**
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   84

technology streams. Again, 146 respondents believed that both men and women would be better teachers, while 14 respondents believed that they were unsure. A chi-square test was conducted to explore the relationship between gender and perceptions of suitability for a better teacher in engineering and technology streams. The results indicated a significant association between the respondents' gender and their perceptions, χ^2 (3, N=202)= 8.434, p=0.038. These findings suggest a statistically significant gender-based difference in perceptions regarding gender and teaching in science and technology streams.

Figure 14. Who would be a better teacher in the streams of liberal arts and social sciences?

Table 3. Who would be a better teacher in the streams of liberal arts and social sciences?

	Male Respondent	Female Respondent	Total
Man	15	4	19
Woman	25	7	32
Both	79	57	136
Can't say	8	7	15
Total	127	75	202

On the question about 'who would be a better teacher in the streams of liberal arts and sciences?' 19 respondents believed that men would be better teachers in the streams of liberal

arts and social sciences, while 32 respondents believed it to be women. Again, 136 respondents believed that both men and women would be teachers in the streams of liberal arts and social sciences, while 15 respondents believed that they were unsure. A chi-square test was conducted to explore the relationship between gender and perceptions of suitability for a teacher in the streams of liberal arts and social sciences. The results, however, did not reveal a statistically significant association between the respondents' gender and their perceptions, χ^2 (3, N=202)= 7.211, p=0.065. These findings suggest that there is no significant difference between male and female perceptions regarding whether a man or a woman would be a better teacher in the stream of liberal arts and social sciences.

Discussions

From the findings of Analytical Study 1, it can be implied that many of them are stereotypical in nature. Figures 2 and 4 show men undertaking mountaineering, playing badminton, respectively. Figures 3 and 5 show a woman performing a dance step (ballet) and a woman in a yoga pose. Selecting a male representation for promotional campaigns associated with risky behavior establishes a connection between masculinity, strength, and warfare (Romera, 2015). Students tend to align their professional aspirations with stereotypical norms, with males showing a preference for traditionally male-dominated careers and females leaning towards traditionally female roles such as teaching and nursing (Zysberg & Berry, 2005). Again, the figures 6, 7, 8, and 9 feature men and women in different gender roles. The women are portrayed in advertisements promoting products like beverages, and men are portrayed in specific occupations such as an architect. These images portray gender stereotypes by impacting the viewer's mind and limiting them in making certain choices based on their genders.

However, there are a few images that show women in empowering roles. These posters portray women in roles that are non-traditional. Figures 10 and 11 portray women in advertisements and posters promoting higher education and in technology-related advertisements, which is very rare. Generally, it is observed that higher education and the field of technology are male-dominated. Bussey and Bandura's (1999) social cognitive theory proposes self-efficacy that plays a vital role in the career choices of individuals. An increase in

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   86

the portrayals of females in non-traditional roles will influence the female population to take up such roles in their lives.

In Analytical Study 2, the results provided valuable data indicating that individuals have varying opinions regarding occupations and career choices among males and females. Focusing on the careers in institutes of higher education, the results showed that individuals are of the opinion that males are better in the streams of science and technology. They prefer men more than women in teaching subjects related to science and technology. These findings are consistent with the findings of Ceci and Williams (2011). Furthermore, the gender results also indicate that among male respondents, more males choose men to be better teachers in engineering and technology streams and in leadership positions. On the other hand, female respondents are less stereotypical in their attitudes, as they prefer both men and women suitable for top leadership positions and as teachers in science and technology streams.

Ramaci et al. (2017) state that stereotypes serve as a method of categorizing that individuals employ to simplify a diverse world of experiences, resulting in two primary outcomes: firstly, they simplify reality, and once established, they often resist change due to reinforcement through cognitive, behavioral, and linguistic mechanisms; secondly, they contribute to misinterpretation. This is clearly indicated from the results in this study as most of the male responders are of the perception that female teachers are not suited for science and technology streams and they also do not have an interest in pursuing these fields. The results also indicate that male teachers are suitable for teaching both science and technology streams in higher education and they are also fit to be teaching in the primary and pre-primary grades. As already established in another research rooted in language in the Indian context, linguistic tools must be used and propagated responsibly (Begum & Sinha, 2017); it is imperative that non-linguistic ways of expression be monitored for a more equitable society.

Conclusion

This study explores the gender stereotype-building process in the LL of educational institutions in Bihar and Jharkhand and its consequences on the career choices of both genders in the select two states. This makes gender identity more static, contrary to its fluid nature in the era of postmodernism. The study reveals a prevalence of gender stereotypes, particularly in the portrayal of men in roles associated with strength, leadership, and warfare, while women

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   87

are often depicted in traditional and stereotypical roles. This aligns with existing research suggesting that such stereotypical representations can influence individuals' perceptions and choices.

The study also underscores the persistence of gender stereotypes in students' professional aspirations, with males gravitating towards traditionally male-dominated careers and females leaning towards roles in teaching and nursing. The impact of these stereotypes is further evident in respondents' perceptions of gender roles in various occupations, with some professions being deemed gendered. Interestingly, the research findings indicate a nuanced perspective among female respondents, challenging stereotypes in their attitudes toward leadership positions and teaching roles in science and technology. However, male respondents exhibit more stereotypical views, particularly in their skepticism regarding female teachers' suitability for science and technology streams.

The study's second phase, focusing on opinions about occupations and career choices, reinforces the gendered perceptions prevalent in society. Males are often perceived as more suitable for science and technology-related subjects, reflecting deeply ingrained stereotypes. This trend persists despite the recognition that gender stereotypes can manifest in various ways, leading to potential underrepresentation of women in certain fields. These findings underscore the need for ongoing efforts to challenge and dismantle gender stereotypes in educational and professional settings. Addressing these stereotypes is crucial for promoting inclusivity, diversity, and equal opportunities for both genders. By understanding and confronting these biases, educators, policymakers, and society at large can contribute to creating a more equitable and diverse environment in institutes of higher education and beyond. Thus, it can be said that gender-stereotyped signs and symbols, as part and parcel of society, influence people cognitively in the course of everyday life and are shaped by societal practices simultaneously.

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti,
Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on
Career Choices for Women   88

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti,
Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on
Career Choices for Women   89

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Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   90

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Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   91

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Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   92

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti, Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on Career Choices for Women   93

Wang, M. T., & Degol, J. L. (2017). Gender gap in science, technology, engineering, and mathematics (STEM): current knowledge, implications for practice, policy, and future directions. *Educational Psychology Review*, *29*(1), 119–140. https://doi.org/10.1007/s10648-015-9355-x

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Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:2 February 2025
Debraj Gogoi, Research Scholar, Dheeraj Kumar, Research Associate, Indrajeet Jyoti,
Research Scholar and Sweta Sinha, Associate Professor
Gender Stereotypes in the Higher Educational Institutions of Bihar and Jharkhand: Impact on
Career Choices for Women   94