INTRODUCTION
Several surveys have been designed across the globe to represent the population of different countries, yield a reliable source of data on the country’s epidemiological situation and trends of different health indicators and inform evidence-based decision making and designing policies.

However, currently, the majority of survey data only permits a comparison in a binary framework, that is, between male and female respondents. It is assumed that the gender identity of the respondents aligns with the sex assigned at birth. As a result, non-binary individuals often go unnoticed within the majority of survey data. This lack of recognition has limited our understanding of their experiences and has hindered policymakers’ capacity to develop effective strategies and initiatives that can enhance their overall welfare.

Nationally representative surveys in India have also historically followed a gender-normative framework. Gender normativity refers to the societal expectations and norms regarding binary, stereotypical gender roles, behaviours and identities. Consequently, these surveys fail to capture the experiences and perspectives of non-binary individuals, thereby rendering them invisible within the collected data.

INSIGHTS AND DISCUSSIONS
‘Gender’ is a social construct that differs fundamentally from ‘Sex’ which is biologically determined at birth. Gender involves the concept of self-identification and self-actualisation. A person who does not identify with the sex assigned to them at birth is regarded as a ‘Transgender’. It includes ‘Trans-men’ and ‘Trans-women’.

The term ‘non-binary’, on the other hand, expresses a more diverse concept. A person who does not fit into the traditional male–female gender identities can identify as ‘non-binary’. This term embraces people identifying as transgender, intersex, agender, gender-fluid, demi-gender, multigender and other unconventional gender identities.

In India, the ‘Transgender Persons (Protection of Rights) Act, 2019’ came into force defining a transgender person ‘as one whose gender does not match the gender assigned at birth. It includes trans-men and trans-women, persons with intersex variations, gender queers and persons with socio-cultural identities, such as kinnar and hijra.’

Gender identities in India vary significantly across different regions. Each region may have its own specific terms, cultural practices...
and understandings of gender diversity. Hijra, a term used predominantly in the Indian subcontinent of South Asia, are individuals who do not fit into the conventional male or female gender categories and are often considered a distinct third gender. The term ‘kinnar’ is primarily used in North India, particularly in the Hindi-speaking region, to refer to transgender or third-gender individuals. Like hijras, kinnars do not fit into the binary gender categories of male or female. They may be assigned male at birth but identify and express themselves outside the gender norms associated with males. In certain parts of India, the Aravanis or Thirunangais are recognised as a distinct gender identity. They are often associated with transgender or third-gender individuals and have their own cultural practices and traditions. Nupi Manbi, which literally means ‘looks like a girl’ in Meitei, is an indigenous trans women community in Manipur.

While non-binary identities have existed throughout the history of India, their recognition and acceptance have historically been limited and denied in many societies, the issue having its roots in the colonial history of the country and its social and cultural norms.

During colonial rule, the British administration attempted to categorise Indian society into heteronormative and binary genders based on European notions of masculinity and femininity. This colonial influence resulted in the criminalisation, stigmatisation and marginalisation of indigenous gender identities, such as hijra and kinnar communities, which were historically recognised and respected in pre-colonial India. The colonial legacy of moral policing and the imposition of Victorian-era gender norms continues to shape attitudes towards gender minorities in modern India. Discrimination, social stigma and legal challenges persist, leading to significant disparities in various arenas including healthcare, education, employment, housing and social security, thus impacting the lives and rights of non-binary individuals.

In addition, psychiatric health diagnoses have been wrongly used to label gender-non-conforming identities as illnesses for many years, which has led to stigma and discrimination. This pathologisation has deeply infiltrated the collective conscience of society, thus affecting public policy, legislation and jurisprudence.

The absence of legal recognition of trans and gender-diverse individuals leads to significant disparities in various arenas including healthcare, education, employment, housing and social security. Real and perceived stigma and discrimination affect the accessibility of appropriate care and services among transgenders. Tackling these issues will be a long and challenging process that requires determined and proactive measures to succeed.

Previous research has also demonstrated that disregard for the requirements of gender minorities has resulted in a high risk of HIV infection among this population and the lack of effective interventions to tackle this global issue. Moreover, a significant number of healthcare providers lack the necessary knowledge and skills to effectively address the general healthcare requirements of transgender individuals, such as providing appropriate care for a pregnant non-binary individual or a trans-woman diagnosed with prostate cancer.

In May 2019, the World Health Assembly approved the 11th revision of the International Classification of Diseases, removing trans categories from the ‘Mental and behavioural disorders’ chapter. As a result, being transgender is no longer classified as a disorder or mental illness.

Globally, various countries have started to adopt legislative frameworks on gender recognition based on self-determination, including Argentina in 2012, Denmark in 2014, Colombia, Ireland and Malta in 2015, Norway in 2016, Belgium in 2017, Brazil, Luxembourg, Pakistan, Portugal, Uruguay and Chile in 2018, Iceland in 2019 and Switzerland in 2020.

India has also seen significant progress in recent years in terms of legal recognition and rights for gender minorities. The Supreme Court of India’s verdict in the landmark case of NALSA versus The Union of India legally recognising the existence of gender-incongruent individuals and the passage of the Transgender Persons (Protection of Rights) Act in 2019 are examples of steps towards greater inclusion and recognition. Efforts are being made to challenge and overcome the colonial legacy and create a more inclusive and accepting society for all gender identities.

Globally, there has been a progressing acknowledgement of the inadequate representation of gender minority populations in survey datasets. This has led to a burgeoning field focused on enhancing gender inclusivity in surveys through the development of innovative approaches to capture and measure gender identity. A number of population-level surveys have started incorporating inquiries aimed at assessing transgender or other gender minority statuses.

Census 2011 was India’s first national survey to recognise the nation’s gender-nonconforming populace by introducing an option for individuals to identify as ‘others’ in the gender category. This enabled individuals who do not identify strictly as male or female to have an alternative option to mark their gender.

Household questionnaires of nationally representative surveys of India like the National Family Health Survey (NFHS)—5 and 6 have included provisions for non-binary people to identify outside of the binary gender identities. However, the factsheet or reports of NFHS-5 do not show a representation of non-binary individuals, resulting in the invisibility of non-binary genders in such surveys.

Though these were significant steps forward, non-binary genders are still largely unrecognised in Indian society and frequently encounter injustice and hostility. The lack of understanding and awareness around the concept of non-binary identity remains one of the major challenges in recognising non-binary gender in India.
RECOMMENDATIONS
In terms of national surveys in India, there is a need to expand the gender categories offered to respondents to include non-binary options so that the experiences and conditions of marginalised groups can be better understood and addressed.

Certain studies have suggested that surveys should incorporate gradient measurements of feminine and masculine traits in addition to probes about sex assigned at birth and present gender expression. Including non-binary gender options in national surveys will help increase visibility and recognition for non-binary people and address the marginalisation and discrimination that non-binary people often face. It will also lead to more accurate and comprehensive data collection on gender identity which will facilitate researchers and policy makers to understand the experiences and needs of non-binary people in a better way and meet their needs.

However, the inclusion of non-binary gender options can also present challenges in implementation and arouse issues related to data analysis and privacy. This would require a shift in the way that gender is conceptualised and measured in Indian society, and would likely require consultation and collaboration with non-binary individuals and communities.

CONCLUSION
The invisibility of non-binary genders in nationally representative surveys of India is a significant issue that can be addressed by collaborative efforts to promote awareness about non-binary gender identities, as well as expanding the gender categories in national survey data. It would send a message of inclusivity and recognition of non-binary individuals in India and would help inform policy making and advocacy efforts aimed at improving the lives of non-binary individuals.

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ORCID iD
Sneha Singh http://orcid.org/0009-0001-6796-350X

REFERENCES