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ORIGINAL ARTICLE

Gender inequalities in depression/anxiety and the consumption of psychotropic drugs: Are we medicalising women's mental health?

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Abstract

Aims: Clinical studies show that women are more likely to be diagnosed with depression and anxiety, and to consume prescribed psychotropic drugs. Applying an intersectional perspective that considers age, education and social class, the present study assesses gender inequalities in the diagnosis of depression/anxiety and in psychotropic consumption. *Methods:* We analysed data from the 2018 Basque Country Health Survey (Spain; *n*=8014). Prevalence rates of poor mental health, diagnosis of depression/anxiety and psychotropic consumption were calculated for each sex by age and socio-economic status. Poisson regression models were calculated to estimate PRs of these variables in women, adjusted for age, mental health status and health-care visits, and for diagnosis of depression/anxiety in the case of psychotropic drug consumption. *Results:* Women were 2.48 times more likely than men to be diagnosed with depression or anxiety, and this difference remained significant after adjustments (prevalence ratio (PR)=1.86; 95% confidence interval (CI) 1.40–2.47). Women also took significantly more prescribed psychotropic drugs, even controlling for their poorer mental health, their higher prevalence of diagnosis and their more frequent health-care visits (PR=1.52; 95% CI 1.28–1.82). No gender inequalities were observed in those younger than 45 or with the highest level of education. ***Conclusions:*** **Gender inequalities in the diagnosis and prescription of psychotropic drugs exist, and these cannot be explained by differences in mental-health status or health-care visit frequency. It seems, then, that medicalisation of mental health is occurring among women. Further evidence about the mechanisms that underlie the results is crucial to design truly gender-sensitive health policies that reduce medicalisation of women's mental health.**

Keywords: *Mental health, gender inequalities, medicalisation, Spain*

Introduction

An abundance of literature has demonstrated that there are major differences between men's and women's health. Apart from the distinctive biological features that determine the functioning of male and female bodies, the studies stress the inequalities in the opportunities that men and women have to enjoy good health, related to the roles, practices and symbols which are constructed socially on the basis of gender. Women are nearly twice as likely as men to suffer from depression and anxiety, and they are more vulnerable to other psychosocial disorders as well [1]. Women also tend to have higher rates of psychotropic drug prescription, especially anxiolytics and antidepressants, and in fact these rates appear to have risen in recent years [2].

Possible explanations for these mental-health inequalities have emphasised genetic and/or endocrine factors and women's socially disadvantaged position – a situation that also applies to unequal clinical care [3]. The evidence for the first argument is insufficient or inconclusive. As for the explanations based on the relevance of social inequality, two appear to be particularly salient: (a) the 'social causality' perspective, according to which the adverse conditions of life for women – less job security, their traditional role as caregivers, multiple forms of discrimination – account for their higher rates of mental illness [4], and (b) the 'social labelling' perspective

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which contends that the medicalisation of everyday life – a process in which previously non-medical health issues become defined and treated as disease or disorder [5] – very often implies over-diagnosis of mental-health problems, especially among women. Works about the related process of pharmaceuticalisation also show that over-treatment by means of pharmaceutical solutions is also gender-patterned in the mental-health arena [6]. Other hypotheses suggest that the prevailing models of masculinity mean that men are less able to express psychological distress, and are therefore underrepresented in populations acknowledged as having anxiety and depression problems [7]. Finally, instruments to screen depression may also be based on gender-biased items, and could therefore give higher scores of depression in women [8].

Few studies have analysed gender inequalities in the medicalisation of mental health, most of them applied to a clinical context. In general, these studies indicate that with the same levels of symptoms, women are more likely than men to be diagnosed with anxiety or depression [9,10] and that they consume higher levels of prescribed psychotropic drugs [11], although not all the results point in this direction [12,13]. There are also studies that have stressed the underdiagnosis of mental disorders in men and the insufficient pharmacological treatment prescribed to them [7]. Notably, even though the differences in mental-health patterns between men and women are known, numerous studies have failed to disaggregate their samples according to gender, or consider gender in their analyses [14].

In recent public-health research, intersectional analyses have emerged as an essential way to consider the joint impact of gender and socio-economic status on health in the attempt to advance health equity [15]. In the context of mental health, however, we do not know of any studies that have explicitly explored the joint effect of social and gender inequalities in the medicalisation of the care provided.

Therefore, this article aims to analyse gender inequalities in the prevalence of depression and anxiety as well as in the consumption of psychotropic drugs, and to explore the process of medicalisation and pharmaceuticalisation of mental health that may be occurring. The analysis will be done from an intersectional perspective that considers age, educational level and social class as possible modifiers of the gender inequalities.

Methods

Design, study population and data source

A cross-sectional study was performed using data from the 2018 Basque Country Health Survey (Spain) driven by the Basque Department of Health. The survey was based on a large random sample of households (N=12,071), covering the non-institutionalised population. Data were collected by means of face-to-face interviews in participants' homes. The response rate of the survey was 79%. A more detailed description of the survey methodology can be found elsewhere [16]. The analysis was restricted to the population aged ⩾16 years for whom information was available (n=8014).

Variables

Mental-health status was measured by means of the Mental Health Inventory Scale (MHI-5) – a five-question subscale of the SF-36 used to detect the risk of depression and anxiety. The MHI-5 score was computed by adding up the scores of all question items. In line with other studies, the cut-off value used to identify poor mental health was 52 [17].

The diagnosis of depression or anxiety was based on an affirmative response to the items 'chronic depression' or 'chronic anxiety' included in a list of the chronic diseases most frequently diagnosed by health professionals.

Psychotropic drug consumption was measured according to the response to the question regarding the 2 days prior to the survey. People who answered affirmatively were asked which medicine they took from a list written in non-specialist language. Drugs prescribed by a professional related to 'nerves', 'anxiety', 'tranquilizer pills' or 'for depression' were selected.

To consider the differences in the frequency of health-service use by men and women, and its impact on the probability of being diagnosed with depression or anxiety, the number of primary-care visits during the last year was measured.

Social class was assigned according to the current or previous occupation of the interviewee or, if he/she had never worked, according to the occupation of the head of the household, following the adaptation of the Goldthorpe classification proposed by the Spanish Society of Epidemiology [18]. Two groups were identified: manual and non-manual.

The highest level of educational attainment was reclassified into three levels following the ISCED international classification: primary/lower, secondary or university level.

Statistical analysis

Crude prevalence rates of poor mental health, diagnosis of depression or anxiety and psychotropic consumption were calculated for each sex by age, social class and educational level. The differences between men and women (and their statistical significance)

Table I. Distribution of sample (% and *n*) according to sociodemographic, health and socio-economic variables in men and women and bivariate differences. Basque Country (Spain), 2018.

	Women (*N*=3953)	Men (*N*=3420)	*p* (95%)
Age (years)			
16–29	3.5 (*n*=138)	4.4 (*n*=150)	<0.001
30–44	19.8 (*n*=783)	23.0 (*n*=787)	
45–64	40.3 (*n*=1593)	41.7 (*n*=1426)	
65–80	24.2 (*n*=957)	23.3 (*n*=797)	
>80	12.2 (*n*=482)	7.6 (*n*=260)	
Poor mental health	17.1 (*n*=676)	10.0 (*n*=342)	<0.001
Diagnosis of depression or anxiety	5.8 (*n*=229)	2.1 (*n*=72)	<0.001
Psychotropic drugs consumption	12.5 (*n*=494)	4.9 (*n*=168)	<0.001
Visits to primary care	2.7 (*n*=107)	2.1 (*n*=72)	<0.001
Social class			
Non-manual	42.8 (*n*=1692)	38.3 (*n*=1310)	<0.001
Manual	57.2 (*n*=2261)	61.7 (*n*=2110)	
Educational level			
University	22.8 (*n*=901)	19.4 (*n*=664)	<0.001
Secondary	48.1 (*n*=1902)	57.9 (*n*=1980)	
Primary or lower	29.1 (*n*=1150)	22.7 (*n*=776)	

were calculated by means of prevalence ratios (PR), using robust Poisson regression models. First, age-adjusted PRs of poor mental health were calculated. Second, PRs of diagnosis of anxiety or depression were estimated, adjusted consecutively by age, mental-health status and visits to primary health care. Third, PRs of prescribed psychotropic consumption were calculated, adjusted by the previous variables as well as by the diagnosis of anxiety or depression. In all cases, men were the reference group. All the models were calculated for the total population, as well as for different age groups, social classes and educational levels. The analyses were carried out using SAS v9.4 (SAS Institute, Cary, NC).

Results

Table I shows the sample characteristics. The majority of the population was aged between 45 and 64 years old, although the percentage of oldest women was higher. As regards social status, the majority of men and women were manual workers – especially men – and the most frequent educational level attained was secondary. Women were more likely to be in the lowest educational level. Among women, 17.1% (compared to 10.0% of men) presented poor mental health; 5.8% (vs. 2.1% of men) had a diagnosis of depression or anxiety and 12.5% (vs. 4.9% of men) used prescribed psychotropic drugs for mental conditions. Women also attended primary-care health services more often than men. All the differences were statistically significant.

The prevalence of poor mental health, diagnosis of anxiety or depression and consumption of psychotropic drugs increased with age, and clear inequalities were found according to social class and educational level (Table II). Women aged ⩾80 years and of lower social class and lower educational level presented the highest values: 28.6% of women >80 years had poor mental health (compared to 5.1% of young men), 6.2% of women of who were manual workers were diagnosed with depression or anxiety (compared to 1.2% men who were not manual workers) and 18.9% of women with the lowest educational level consumed psychotropic drugs (compared to 4.6% of male university graduates).

Gender inequalities in mental health, in the frequency of diagnoses of mental disorders and in the consumption of prescribed psychotropic drugs after various adjustments, are shown in Tables III and IV, for both the total sample and broken down according to age, social class and educational level. Table III shows that women were 2.48 times more likely (PR=2.48; 95% confidence interval (CI) 1.86–3.29) to be diagnosed with depression or anxiety than men were, and this likelihood remained 1.86 times higher after adjusting the model for their poorer mental health and their higher frequency of visits to health services (PR=1.86; 95% CI 1.40–2.47). The consumption of prescribed psychotropic drugs was 2.23 times higher in women, and the inequalities were maintained after adjusting for their poorer mental health and their more frequent diagnoses of depression or anxiety in addition to the number of medical visits made (PR=1.52; 95% CI 1.28–1.82).

According to age groups (Table III), gender inequalities in the likelihood of being diagnosed with depression and anxiety increased with age but were not significant at young ages ($PR_{30–44}$=1.31; 95% CI 0.58–2.99). After adjusting the model for mental-health

Table II. Prevalence (%) of poor mental health, diagnosis of depression and anxiety and psychotropic drug consumption in men and women according to age, social class and educational level, Basque Country (Spain), 2018.

	Poor mental health (%)		Diagnosis of depression or anxiety (%)		Psychotropic drugs consumption (%)	
	Women (*N*=3953)	Men (*N*=3420)	Women (*N*=3953)	Men (*N*=3420)	Women (*N*=3953)	Men (*N*=3420)
Age (years)						
16–29	11.9	5.1	0.7	1.1	2.7	1.9
30–44	11.7	9.1	2.3	1.8	5.0	3.9
45–64	17.5	10.4	5.3	1.8	11.6	3.8
65–80	18.4	8.2	7.6	2.3	15.7	6.1
>80	28.6	19.5	12.6	3.6	27.3	14.1
Social class						
Non-manual	11.5	6.0	3.6	1.2	8.0	3.9
Manual	20.7	11.7	6.2	2.3	13.5	5.0
Educational level						
University	7.9	5.9	2.0	1.4	5.3	4.6
Secondary	19.1	10.5	6.2	2.1	11.9	4.0
Primary or lower	23.3	12.7	8.1	2.2	18.9	6.9

Table III. Prevalence ratios (95% confidence interval) of poor mental health, diagnosis of depression or anxiety and psychotropic drugs consumption in women versus men by age according to different adjustments, Basque Country (Spain), 2018.

	Model 1	Model 2	Model 3	Model 4
Poor mental health				
Total	1.70 (1.48–1.95)			
16–29	2.26 (0.91–5.58)			
30–44	1.28 (0.90–1.82)			
45–64	1.67 (1.36–2.05)			
65–80	2.24 (1.68–2.99)			
>80	1.47 (1.05–2.05)			
Diagnosis of depression or anxiety				
Total	2.48 (1.86–3.29)	1.89 (1.42–2.51)		1.86 (1.40–2.47)
16–29	1.15 (0.18–7.22)	0.39 (0.10–1.47)		0.50 (0.14–1.80)
30–44	1.31 (0.58–2.99)	1.11 (0.52–2.41)		1.03 (0.47–2.27)
45–64	3.00 (1.88–4.78)	2.31 (1.44–3.69)		2.22 (1.39–3.57)
65–80	3.33 (1.98–5.61)	2.40 (1.41–4.09)		2.43 (1.41–4.19)
>80	3.52 (1.73–7.18)	2.90 (1.44–5.86)		2.93 (1.44–5.94)
Psychotropic drugs consumption				
Total	2.23 (1.85–2.69)	1.86 (1.54–2.24)	1.53 (1.28–1.83)	1.52 (1.28–1.82)
16–29	5.46 (0.62–48.48)	1.20 (0.44–3.28)	1.66 (0.70–3.97)	1.61 (0.67–3.86)
30–44	1.26 (0.73–2.18)	1.13 (0.67–1.90)	0.98 (0.63–1.54)	0.97 (0.61–1.53)
45–64	3.06 (2.24–4.19)	2.55 (1.87–3.49)	2.09 (1.57–2.78)	2.06 (1.55–2.74)
65–80	2.59 (1.80–3.73)	2.04 (1.42–2.94)	1.63 (1.17–2.29)	1.64 (1.17–2.30)
>80	1.93 (1.32–2.82)	1.73 (1.19–2.51)	1.38 (0.96–1.98)	1.39 (0.91–2.00)

Model 1: crude (just adjusted by age for the 'total'); model 2: adjusted by poor mental health; model 3: adjusted by poor mental health and diagnosis of depression or anxiety; model 4: adjusted by poor mental health and number of visits to primary care in the case of the variable 'diagnosis of depression or anxiety' and adjusted by poor mental health, diagnosis of depression or anxiety and number of visits to primary care in the case of the variable 'psychotropic drugs consumption'.

status and number of visits, the pattern was maintained. In the >80 age group, the probability of being diagnosed with these pathologies was almost three times higher among women (PR=2.93; 95% CI 1.44–5.94). In relation to the consumption of prescribed psychotropic drugs, the greatest inequalities between men and women were found in the 45- to 64-year age group, among whom the probability of psychotropic drug consumption was 2.06 times higher in women (PR=2.06; 95% CI 1.55–2.74) after adjusting the model for all the variables.

According to social class and educational level (Table IV), inequalities between men and women in the probability of having a diagnosis of anxiety or depression were observed in all groups, except for the university graduate group in which the differences

Table IV. Prevalence ratios (95% confidence interval) of poor mental health, diagnosis of depression or anxiety and psychotropic drugs consumption in women versus men by social class and educational level, according to different adjustments, Basque Country (Spain), 2018.

	Model 1	Model 2	Model 3	Model 4
Poor mental health				
Non-manual	1.78 (1.35–2.33)			
Manual	1.68 (1.44–1.98)			
University	1.36 (0.90–2.04)			
Secondary	1.80 (1.49–2.17)			
Primary or lower	1.69 (1.33–2.16)			
Diagnosis of depression or anxiety				
Non-manual	2.96 (1.68–5.23)	2.42 (1.38–4.26)		2.39 (1.35–4.21)
Manual	2.39 (1.72–3.33)	1.76 (1.27–2.45)		1.72 (1.24–2.40)
University	1.56 (0.71–3.41)	1.47 (0.67–3.22)		1.39 (0.62–3.12)
Secondary	2.80 (1.90–4.13)	1.99 (1.35–2.93)		1.94 (1.32–2.87)
Primary or lower	3.36 (1.96–5.78)	2.65 (1.56–4.54)		2.68 (1.57–4.58)
Psychotropic drugs consumption				
Non-manual	2.00 (1.44–2.77)	1.75 (1.26–2.42)	1.35 (0.98–1.87)	1.35 (0.97–1.86)
Manual	2.43 (1.93–3.05)	1.97 (1.57–2.47)	1.66 (1.34–2.05)	1.64 (1.33–2.03)
University	1.30 (0.79–2.15)	1.26 (0.76–2.08)	1.15 (0.71–2.82)	1.14 (0.72–1.82)
Secondary	2.82 (2.14–3.70)	2.21 (1.68–2.91)	1.80 (1.40–2.31)	1.78 (1.38–2.29)
Primary or lower	2.41 (1.74–3.32)	2.06 (1.50–2.84)	1.64 (1.20–2.23)	1.66 (1.22–2.25)

Model 1: adjusted by age; model 2: adjusted by age and poor mental health; model 3: adjusted by age, poor mental health and diagnosis of depression or anxiety; model 4: adjusted by age, poor mental health and number of visits to primary care in the case of the variable 'diagnosis of depression or anxiety' and adjusted by age, poor mental health anxiety, diagnosis of depression or anxiety and number of visits to primary care in the case of the variable 'psychotropic drugs consumption'.

were not statistically significant (PR_{model4}=1.39; 95% CI 0.62–3.12). Inequalities increased, however, as the level of education fell, being 2.68 times more likely in women with the lowest educational level than in men (PR=2.68; 95% CI 1.57–4.58). In contrast, according to social class, inequalities between men and women were greater among the population of higher socio-economic status.

As for the consumption of prescribed psychotropic drugs, gender inequalities were clearer in the most disadvantaged social groups. The differences were not significant in the population with the highest educational level or in the highest social class after adjustment for mental health status, diagnoses of depression or anxiety and number of health-care visits made (PR=1.35; 95% CI 0.97–1.86]).

Discussion

To our knowledge, this is the first population-based study to examine gender inequalities in the medicalisation of mental health from an intersectional perspective, considering the influence of several factors of social inequality such as social class and educational level. Women clearly reported worse mental health than men (17.1% and 10.0%, respectively) and were also more frequently diagnosed with depression or anxiety (5.8% and 2.1%, respectively). The consumption of psychotropic drugs was also much higher among women than men (12.5% and 4.9%, respectively). However, it is not easy to compare the magnitude of these percentages in relation to other contexts, since the scales and cut-off points used to calculate poor mental health vary largely among studies [19].

The main finding of the study is that diagnoses of depression or anxiety are significantly more common among women after controlling for mental-health status and frequency of health-care visits. Women also take more prescribed psychotropic drugs than men do, to a degree not explained by their poorer mental health, their higher prevalence of diagnosis of depression and anxiety or their more frequent health-care visits. From an intersectional perspective, it is striking that no gender inequalities were found among the younger population, but they tended to increase with age. From a socio-economic perspective, gender inequalities tended to be higher as social status decreased. This was especially clear with regard to education, since no gender inequalities were observed among the population with the highest educational level with regard to frequency of diagnoses or psychotropic drug consumption.

The results are consistent with the literature about women's worse mental health and more frequent diagnoses of depression or anxiety [20]. Moreover, socio-economic inequalities have also been reported in mental health, the diagnosis of mental disorders and psychotropic drug consumption, with poorer results in the more disadvantaged social groups [21].

However, there is much less evidence of gender inequalities with regard to the diagnosis of depression or anxiety because clinical studies often do not break down data according to gender, and no population-based studies are known so far [14]. In general terms, our findings corroborate those which have reported a higher probability among women to be diagnosed with depression or anxiety than men, given similar mental health status [9,10,22]. Some studies, however, have not shown these gender inequalities in diagnoses [12], or at least not for all age groups [23].

Identifying the reasons for this situation is complex, since mental-health management is itself a paradoxical arena. On the one hand, there is over-diagnosis and over-treatment of mental health in health-care settings, often fuelled by a pharmaceutical industry interested in broadening the boundaries of illness [24]. On the other hand, mental-health problems are still often under-recognised as a consequence of a social stigma that persists. From a gender perspective, there is some evidence that the over-diagnosis of depression in women (false positives) is more frequent than underdiagnosis in men (false negatives) [9]. Moreover, over-diagnosis of depression seems to be more frequent than underdiagnosis [14,25], suggesting that gender inequalities in the diagnosis of depression are fundamentally the result of the medicalisation of women's mental health [9]. Nevertheless, we should not dismiss the idea that hegemonic conceptions of masculinity may discourage men from expressing traditionally female symptoms of depression or anxiety, and also make clinicians less attuned to diagnosing these symptoms in male patients, which might explain in part the gender inequalities observed [7]. Screening tools could be better, recognising typically feminine symptomatology, and also bias the diagnosis [8].

We found no previous studies that analysed data from an intersectional perspective in order to determine how gender interacts with other socio-economic inequalities. According to our results, belonging to disadvantaged groups (especially by educational level) seems to increase gender inequalities in some of the variables, thus reinforcing the idea that multiple, interconnected forms of discrimination may make socio-economically disadvantaged women even more vulnerable to the gender-biased attitudes and responses of health professionals towards their mental health. Some studies have reported that practitioners use less socio-emotional talk and a more directive and a less participatory consulting style with patients of lower social status – a situation that may contribute to higher rates of diagnosis and drug prescriptions [26]. Another study of gender and socio-economic inequalities in communication with health-care providers showed that women felt that their physicians did not spend sufficient time with them – an impression that was not reported by men [27]. Moreover, women of lower socio-economic status might perhaps ask for more immediate pharmacological solutions to allow them to recover quickly and resume their family responsibilities, as they have fewer external resources at their disposal. However, to our knowledge, no studies to date have explored the specific intermediary determinants of gender inequalities in diagnosis and psychotropic prescription across socio-economic groups, and so the reasons remain unknown.

This study has the limitations inherent in all cross-sectional and sample-based survey studies. Regarding mental-health measurement, the MHI-5 cannot be considered as a gold standard to judge the (in)adequate diagnosis of depression or anxiety, as it is not a clinical tool or part of a standard diagnostic interview. However, this scale has been validated as a good measure of the presence of symptoms of depression and anxiety [28]. It may also be that gender-related measurement bias is embedded in screening tools and diagnostic instruments, with the result that men are less likely to have symptoms that fit standard measurement tools [8]. However, if this was the case, gender inequalities described in this study would be underestimated, and conclusions would not change its meaning. All these factors might lead to an under-reporting of the prevalence of poor mental health in men and, in consequence, to an underestimation of the gender inequalities in the diagnostic practices observed in this study. Memory bias may also have affected the reporting of the number of primary-care visits, as the reference period was the previous 12 months. However, no differential bias according to gender would be expected. Another significant limitation is that consumption of physician-prescribed psychotropic drugs is not the same as the consumption of psychotropic drugs in itself. The approach used in this study may be biased if women have a higher adherence level to psychotropic drugs consumption, as has been shown elsewhere [29]. Finally, using information from a survey rather than from clinical records may also lead to biased estimations of the prevalence of depression or anxiety. However, a previous study revealed that the Basque Health Survey yields good estimations for different chronic diseases compared to health records [30].

This study opens up new avenues for exploring the mechanisms that underlie the results reported here. Women's higher risk of being medically labelled as depressed and their higher consumption of psychotropic drugs probably respond to complex and

intertwined processes related to an androcentric construction of the diverse social arenas, and the relevance of the 'epistemologies of ignorance' that operate in the scientific study of women's health [31]. Not only biased medical knowledge and practices, but also women's and men's unequal life conditions, expectations and capabilities may all come together to produce unequal mental-health experiences.

From a structural perspective, studies show that there is a clear relationship between the level of gender inequality in society and gender inequalities in mental health [32]. Therefore, all the policies to diminish discrimination suffered by women in relation to the labour market, their disproportionate responsibility over domestic work and caring, in the use of time and, in general terms, those that empower women socially and politically will have a positive impact on the reduction of gender inequalities in mental health. From a health-services perspective, determining the extent of the medicalisation of women's mental health in each context may help to lay the foundations for introducing fairer medical practices. Some steps forward might be actually to incorporate the biopsychosocial model in clinical practice, incorporate feminist approaches to narrative psychotherapies as well as enhance strategies for promoting health and emotional well-being from an asset-based positive health approach, especially among women.

Conclusions

The study shows that diagnoses of depression or anxiety as well as psychotropic drugs consumption are significantly higher among women, after controlling for their poorer mental health and their higher frequency of health-care visits. Gender inequalities in diagnoses of depression or anxiety as well as psychotropic drugs consumption tend to be higher among the older population and lower social status groups, revealing that all gender-sensitive health policies in clinical settings aimed at reducing medicalisation of women's mental health also need to consider other inequality axes.

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