

Bias against men's issues within the United Nations and the World Health Organization: A content analysis

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Males fair worse than females on many health outcomes, but more attention, particularly at a national level, is given to women's issues. This apparent paradox might be explained by gamma bias or a similar gender bias construct. Such potential biases require exploration. The purpose of the current paper is to present six streams of evidence that illustrate a bias against men's issues within the United Nations (UN) and World Health Organization (WHO). First, the UN's sustainable development goal on 'gender equality' is exclusive to females. Second, the UN observes nine International Days for women's issues/achievements and one day for men's issues/achievements. Third, the UN operates 69 Twitter accounts dedicated to women's issues, culminating in 328,251 tweets since 2008. The UN does not operate a Twitter account for men's issues. Fourth, female words (e.g., 'women') appear more frequently than male words (e.g., 'men') in documents archived in the UN and WHO databases, indicating more attention to women's issues. Fifth, in WHO reports where similar use of male and female words might be expected (e.g., gender and health reports), female words appear more frequently. Sixth, more female than male words appear in the *Bulletin of the World Health Organization*, with articles on women's health more frequently non-original research (e.g., editorials). Overall, because the UN and WHO are the causal agents directly responsible for the outcomes assessed, the findings reveal a bias against men's issues within these organisations. The findings support the construct of gamma bias. Ways to reduce this bias are discussed.

Keywords: bias; gender; men's health; public health; women's health

Life expectancy for males is lower than for females in every country in the world (Wang et al., 2012). This sex difference is due to numerous factors. In the US, for example, males are more likely than females to die in motor vehicle accidents, bicycle crashes, occupational incidents, drownings, and murders (Nuzzo, 2020). Males are also more likely than females to commit suicide and die from most types of cancers (Nuzzo, 2020). Males are also more likely than females to use alcohol, tobacco, and illicit drugs (Nuzzo, 2020). Finally, males are also more likely than females to be homeless or incarcerated (Nuzzo, 2020).

In the US, a 'national health paradox' appears to exist regarding men's health issues (Nuzzo, 2020). On several important physical and mental health outcomes, males fair worse than females; yet, national offices, such as the Office for Research on Women's Health, exist for the discovery and dissemination of knowledge about women's health but not men's health (Nuzzo, 2020). The notion of a 'national health paradox' has also been supported by an analysis of biomedical research articles indexed in the PubMed database. The analysis revealed the term 'women's health' appeared in the titles or abstracts of 14,501 articles, whereas the term 'men's health' appeared in the titles or abstracts of 1,555 articles (Nuzzo, 2020). PubMed also indexes more journals on women's health than men's health (Nuzzo, 2020). Thus, unlike women's health, men's health is not being conceptualised as a distinct field of medicine or research, and it might not be receiving adequate attention relative to the epidemiological data (Nuzzo, 2020).

A similar lack of recognition of men's issues might also occur at an international level within the United Nations (UN) and the UN's health branch – the World Health Organization (WHO). Seager and Barry (2019) revealed the UN celebrates International Women's Day but not International Men's Day (Teelucksingh, 2019). Moreover, Bates et al., (2009) noted that a 2008 report on health equity by the WHO included a chapter on gender that did not mention men's health (Commission on Social Determinants of Health, 2008).

Evidence of a lack of international recognition of men's issues should be considered closely. First, not acknowledging men's issues might be detrimental to the flourishing of boys and men. Second, the agendas of the UN and WHO influence numerous organisations. Third, the UN and WHO are funded, in part, by taxpayers of member states. Thus, if the UN and WHO do not operate in an objective way, taxpayers and legislators of member states should be made aware of this. Fourth, the exploration of a potential difference in international recognition of men's and women's issues might also relate to the study of human psychology. For example, studies in experimental psychology have revealed both sexes are more protective of women and more likely to consider women as victims (Reynolds et al., 2020; Stewart-Williams et al., 2020). These experimental results appear to support the construct of 'gamma bias's – a proposed cognitive bias in which male issues/achievements are minimised while female issues/achievements are magnified as demonstrated by Seager and Barry (2019), who also provided other examples to support gamma bias. One example was the frequent portrayal of men as the perpetrators of intimate partner violence against women; when in fact, males and females are sometimes equally likely to be perpetrators (Archer, 2000; Fiebert, 2014; Seager & Barry, 2019).

Therefore, given the importance of men's health issues and the potential implications that their lack of recognition might have, the current paper presents and discusses six new streams of evidence that confirm the existence of bias against men's issues within the UN and WHO. The six evidence streams have arisen from the examination of the following outcomes: (a) the number of UN sustainable development goals aimed at males and females; (b) the number of UN International Days of Observance for men's and women's issues or achievements; (c) the number of UN Twitter accounts used to disseminate knowledge about men's and women's issues; (d) the number of times sex-/gender-specific terms have appeared in documents archived in the UN and WHO databases, and the number of times UN and WHO documents have been categorised under 'women's health' and 'men's health'; (e) the number of times sex-/gender-specific terms have appeared in WHO reports on topics in which similar use of male and female words might be expected (i.e., health equity, gender and health); and (f) the number of times sex-/gender-specific terms have appeared in articles published in the *Bulletin of the World Health Organization*.

Normally, descriptive comparisons of the above type are not ideal for determining causation. However, except for outcome 'f', all the above outcomes are directly controlled by the UN and WHO. For example, the UN chooses what goals to declare as sustainable development goals, what days to observe as

International Days, and how many Twitter accounts to create and operate. Thus, the UN and WHO are the causal agents directly responsible for any potential differences observed.

Evidence stream 1: United Nations' Sustainable Development Goals

BACKGROUND AND METHODS

One outcome that can be examined to look for evidence of potential bias within the UN is the organisation's 'sustainable development goals' (UN, 2015, 2020b). In September 2015, the UN announced these goals in *Transforming Our World: The 2030 Agenda for Sustainable Development* (UN, 2015). In their report, the UN declared 17 sustainable development goals and 169 associated target goals (UN, 2015). The intent of this 'new Agenda' has been to inform policy and 'address the global challenges we face' and 'achieve a better and more sustainable future for all' (UN, 2020a). According to the UN, the 'new Agenda' is meant to 'stimulate action over the next 15 years in areas of critical importance for humanity and the planet' (UN, 2015). In January of 2016, the sustainable development goals went into effect (UN, 2015). In 2020, the UN published its *Sustainable Development Goals Report 2020* (UN, 2020b), which provided an update on progress made toward these goals.

RESULTS AND BRIEF DISCUSSION

Analysis of the UN's sustainable development goals reveals a lack of recognition of boys' and men's issues. Of the 17 sustainable development goals, one goal (Goal 5) is dedicated to the topic of gender. Goal 5 reads: 'Achieve gender equality and empower all women and girls.' Goal 5 has nine associated target goals (Table 1). The nine associated targets are all directed toward girls and women (e.g., violence against girls and women, women in leadership roles in government). In the *Sustainable Development Goals Report, 2020* (UN, 2020b), the only time the word 'men' appears in the section 'Goal 5: Gender Equality' is to emphasise greater needs of women. The 2015 report briefly mentions engaging with boys and men as a way to reduce domestic violence against girls and women (UN, 2015). However, the report does not mention (a) engaging with boys and men about violence against other boys and men, nor does it mention (b) engaging girls and women about violence against boys and men. The reason 'a' and 'b' should be considered is that violence against boys and men from other boys and men, and violence against boys and men from adult women, are both known problems (Archer, 2000; Breiding et al., 2014; Costa et al., 2015; Fiebert, 2014; Seager & Barry, 2019; Stemple & Meyer, 2014; Stemple et al., 2017). Lack of recognition of 'a' and 'b' suggests an institutional-level bias that males are almost always the perpetrators of violence and females are almost always the victims, which would be consistent with the experimental findings that women are often viewed as victims (Reynolds et al., 2020). Recommendations for moving forward with sustainable development goals are provided in the discussion of the current paper.

Table 1
The United Nations' Sustainable Development Goal for 'Gender Equality'

Item	Goal (direct quotation) ^a	Target gender
5.1	End all forms of discrimination against all women and girls everywhere.	Female
5.2	Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.	Female
5.3	Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.	Female
5.4	Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.	Female ^b
5.5	Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life.	Female
5.6	Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.	Female ^b
5.a	Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.	Female
5.b	Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.	Female
5.c	Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.	Female

^a Quoted from the UN's report, *Transforming Our world: the 2030 Agenda for Sustainable Development* (United Nations).

^b Females are not mentioned explicitly in the goal, but the UN's accompanying report, *Sustainable Development Goals Report, 2020* (United Nations, 2020b), indicates females are the targets of these goals.

Evidence stream 2: United Nations' International Day of Observance

BACKGROUND AND METHODS

Another outcome that can be examined to look for evidence of bias within the UN is the organisation's International Days of Observance, which were given initial consideration by Seager and Barry (2019). The UN designates specific days within a calendar year as International Days. Member states propose International Days, then a consensus is reached by the UN General Assembly on whether to establish a particular day as an International Day. According to the UN, International Days are: 'occasions to educate the general public on issues of concern, to mobilise political will and resources to address global problems and to celebrate and reinforce achievements of humanity. The existence of international days predates the establishment of the United Nations, but the UN has embraced them as a powerful advocacy tool. Each international day offers many actors the opportunity to organise activities related to the theme of the day. Organisations and offices of the United Nations system, and most importantly, governments, civil society, the public and private sectors, schools, universities and, more generally, citizens, make an international day a springboard for awareness-raising actions (UN, 2020c).

Moreover, the UN states themes of international days are:

'always linked to the main fields of action of the United Nations, namely the maintenance of international peace and security, the promotion of sustainable development, the protection of human rights, and the guarantee of international law and humanitarian action.' (UN, 2020c).

For the current paper, a list of the UN's International Days was acquired from the UN's website. The title of each day was categorised as being either sex-/gender-neutral or sex-/gender-specific. A sex-/gender-neutral day was one whose name/theme was not specific to one sex. A sex-/gender-specific day was one whose name/theme was specific to either a men's issue or a women's issue. Days named after prominent male or female figures were also considered sex-/gender-specific days.

RESULTS AND BRIEF DISCUSSION

The UN observes a total of 172 international days (Table 2). Ten days (5.8%) are sex-/gender-specific. Nine of the 10 sex-/gender-specific days (90%) are dedicated to women's issues. The UN does not observe any days for boys' or men's issues, although one of the 10 sex-/gender-specific days (10%) is the observance of the life/achievements of one man (Nelson Mandela International Day, 18th July).

The specific themes of International Days and the context surrounding the days also warrant consideration. First, the UN does not hold days of observance on all calendar days. Thus, there are calendar days available to celebrate men or bring awareness to men's issues. Moreover, if a calendar day is already used to observe a topic, a precedent already exists within the UN that a given calendar day can be used to observe multiple topics. For example, the UN observes five different topics on 21st March. Thus, a day that is already used to observe one topic could also be used to observe a men's issue. This is relevant regarding International Men's Day (November 19), which is not observed by the UN. Instead, the UN observes World Toilet Day on 19th November (Seager & Barry, 2019; Teelucksingh, 2019). Thus, the UN could choose to observe both World Toilet Day and International Men's Day on 19th November.

Second, even if all calendar days were used for other topics, and a policy was adopted that only one topic could be recognized per day, this would still not justify ignoring men's issues. Bringing attention to men's issues is arguably more important than bringing attention to many topics on the UN's list of International Days. For example, the UN observe numerous days for language – French (20th March), Chinese (20th April), English (23rd April), Spanish (23rd April), Russian (6th June), and Arabic (18th December). The UN also observes days for radio (13th February), poetry (21st March), jazz music (30th April), tuna (2nd May), bees (20th May), tea (21st May), bicycles (3rd June), yoga (21st June), asteroids (30th June), chess (21st July), tourism (27th September), toilets (19th November), television (21st November), banks (4th December), and mountains (11th December). Migratory birds receive two days of observation (9th May and 10th October). Finally, the UN observes two days to recognise *itself* (29th May and 24th October).

Third, some themes associated with women's days are also applicable to men, but the male equivalent is not recognised. For example, the UN observes a day for widows (23rd June) but not for widowers. The UN also observes International Day of Women and Girls in Science (11th February), but it does not recognize a day for men and boys in academic fields for which they have historically not been a substantial part of (e.g., nursing, elementary education). The UN also observes the International Day for the Elimination of Violence against Women (25th November). However, violence against men is also an issue. For example, assumptions that males rarely experience intimate partner violence (Archer, 2000; Fiebert, 2014; Seager & Barry, 2019) and sexual abuse/victimisation (Breiding et al., 2014; Stemple et al., 2017; Stemple & Meyer, 2014) are false.

Fourth, the UN sometimes names international days in a sex-/gender-specific way when an issue is believed to affect females more than males, but the organisation does not name a day in a sex-/gender-specific way when the issue affects males more than females. For example, 2nd April is World Autism Awareness Day. Males are four times as likely as females to be identified with autism spectrum disorder (Nuzzo, 2020). However, the UN does not name or frame World Autism Awareness Day in a sex-/gender-specific way. Moreover, on 31st May, the UN observes No Tobacco Day. Tobacco abuse is primarily a men's health issue (Nuzzo, 2020). However, the UN does not name or frame No Tobacco Day in a sex-/gender-specific way. The same lack of male recognition also applies to days observed for achievements. For example, males have arguably made more contributions to human space flight (12th April), jazz music

(20th April), and philosophy (19th November) than females. However, these days are not named or framed in a sex-/gender-specific way.

Fifth, for some international days that are specific to women, the root cause of the issue is arguably a men's issue. For example, the UN observes International Widows Day on 8th March. But why are many women widows in the first place? Perhaps their husbands died in war or from suicide, a motor vehicle accident, or an occupational incident. Thus, it would be appropriate to also recognise the underlying causes of widowhood. Recommendations for moving forward with International Days of Observance are provided in the discussion of the current paper.

Table 2
United Nations' Days of Observance for Women's Issues, Men's Issues, and Other Topics

Date	Women's day name	Date	Men's day name
06 February	International Day of Zero Tolerance to Female Genital Mutilation	18 July	Nelson Mandela Day
11 February	International Day of Women and Girls in Science		
08 March	International Women's Day		
23 April	International Girls in Information and Communication Technologies Day		
23 June	International Widows Day		
18 September	International Equal Pay Day		
11 October	International Day of the Girl Child		
15 October	International Day of Rural Women		
25 November	International Day for the Elimination of Violence against Women		
Date	All other day names	Date	All other day names (cont.)
04 January	World Braille Day	27 June	Micro-, Small, and Medium-Sized Enterprises Day
24 January	International Day of Education	29 June	International Day of the Tropics
27 January	International Day of Commemoration in Memory of the Victims of the Holocaust	30 June	International Asteroid Day
04 February	World Cancer Day	30 June	International Day of Parliamentarism
10 February	World Pulses Days	04 July	International Day of Cooperatives
13 February	World Radio Day	11 July	World Population Day
20 February	World Day of Social Justice	15 July	World Youth Skills Day
21 February	International Mother Language Day	18 July	Nelson Mandela Day
01 March	Zero Discrimination Day	20 July	World Chess Day
03 March	World Wildlife Day	28 July	World Hepatitis Day
20 March	International Day of Happiness	30 July	International Day of Friendship

20 March	French Language Day	30 July	World Day against Trafficking in Persons
21 March	International Day for the Elimination of Racial Discrimination	09 August	International Day of the World's Indigenous People
21 March	World Poetry Day	12 August	International Youth Day
21 March	International Day of Nowruz	19 August	World Humanitarian Day
21 March	World Down Syndrome Day	21 August	International Day of Remembrance and Tribute to the Victims of Terrorism
21 March	International Day of Forests	22 August	International Day of Commemorating the Victims of Acts of Violence Based on Religion
22 March	World Water Day	23 August	International Day for the Remembrance of the Slave Trade and its Abolition
23 March	World Meteorological Day	29 August	International Day against Nuclear Tests
24 March	World Tuberculosis Day	30 August	International Day of the Victims of Enforced Disappearances
24 March	International Day for the Right to the Truth concerning Gross Human Rights Violations and for the Dignity of Victims	05 September	International Day of Charity
25 March	International Day of Remembrance of Slavery Victims and the Transatlantic Slave Trade	07 September	International Day of Clean Air for Blue Skies
25 March	International Day of Solidarity with Detained and Missing Staff Members	08 September	International Literacy Day
02 April	World Autism Awareness Day	09 September	International Day to Protect Education from Attack
04 April	International Day for Mine Awareness and Assistance in Mine Action	12 September	International Day for South-South Cooperation
05 April	International Day of Conscience	15 September	International Day of Democracy
06 April	International Day of Sport for Development and Peace	16 September	International Day for the Preservation of the Ozone Layer
07 April	World Health Day	17 September	World Patient Safety Day
07 April	International Day of Reflection on the 1994 Genocide against the Tutsi in Rwanda	21 September	International Day of Peace
12 April	International Day of Human Space Flight	23 September	International Day of Sign Languages
20 April	Chinese Language Day	24 September	World Maritime Day
21 April	World Creativity and Innovation Day	26 September	International Day for the Total Elimination of Nuclear Weapons
22 April	Earth Day	27 September	World Tourism Day
23 April	World Book and Copyright Day	28 September	World Rabies Day
23 April	English Language Day	29 September	International Day of Awareness of Food Loss and Waste

23 April	Spanish Language Day	30 September	International Translation Day
24 April	International Day of Multilateralism and Diplomacy for Peace	01 October	International Day of Older Persons
25 April	International Delegate's Day	02 October	International Day of Non-Violence
25 April	World Malaria Day	05 October	World Teachers' Day
26 April	World Intellectual Property Day	05 October	World Habitat Day
26 April	International Chernobyl Disaster Remembrance Day	09 October	World Post Day
28 April	World Day for Safety and Health at Work	10 October	World Mental Health Day
29 April	Day of Remembrance for all Victims of Chemical Warfare	10 October	World Migratory Bird Day
20 April	International Jazz Day	13 October	International Day for Disaster Risk Reduction
02 May	World Tuna Day	16 October	World Food Day
03 May	World Press Freedom Day	17 October	International Day for the Eradication of Poverty
07 May	'Vesak', the Day of the Full Moon	20 October	World Statistics Day
08 May	Time of Remembrance and Reconciliation for Those Who Lost Their Lives during the Second World War	24 October	United Nations Day
09 May	World Migratory Bird Day	24 October	World Development Information Day
15 May	International Day of Families	27 October	World Day for Audiovisual Heritage
16 May	International Day of Living Together in Peace	31 October	World Cities Day
16 May	International Day of Light	02 November	International Day to End Impunity for Crimes against Journalists
17 May	World Telecommunication and Information Society Day	05 November	World Tsunami Awareness Day
20 May	World Bee Day	06 November	International Day for Preventing the Exploitation of the Environment in War and Armed Conflict
21 May	International Tea Day	10 November	World Science Day for Peace and Development
21 May	World Day for Cultural Diversity for Dialogue and Development	14 November	World Diabetes Day
22 May	International Day for Biological Diversity	15 November	World Day of Remembrance for Road Traffic Victims
23 May	International Day to End Obstetric Fistula	16 November	International Day for Tolerance
29 May	International Day of United Nations Peacekeepers	19 November	World Philosophy Day
31 May	World No Tobacco Day	19 November	World Toilet Day
01 June	Global Day of Parents	20 November	Universal Children's Day
03 June	World Bicycle Day	20 November	Africa Industrialization Day

04 June	International Day of Innocent Children Victims of Aggression	21 November	World Television Day
05 June	World Environment Day	29 November	International Day of Solidarity with the Palestinian People
05 June	International Day for the Fight against Illegal, Unreported and Unregulated Fishing	30 November	Day of Remembrance for all Victims of Chemical Warfare
06 June	Russian Language Day	01 December	World AIDS Day
07 June	World Food Safety Day	02 December	International Day for the Abolition of Slavery
08 June	World Oceans Day	03 December	International Day of Persons with Disabilities
12 June	World Day Against Child Labour	04 December	International Day of Banks
13 June	International Albinism Awareness Day	05 December	International Volunteer Day for Economic and Social Development
14 June	World Blood Donor Day	05 December	World Soil Day
15 June	World Elder Abuse Awareness Day	07 December	International Civil Aviation Day
16 June	International Day of Family Remittances	09 December	International Anti-Corruption Day
17 June	World Day to Combat Desertification and Drought	09 December	International Day of Commemorations and Dignity of the Victims of the Crime of Genocide
18 June	Sustainable Gastronomy Day	10 December	Human Rights Day
19 June	International Day for the Elimination of Sexual Violence in Conflict	11 December	International Mountain Day
20 June	World Refugee Day	12 December	International Day of Neutrality
21 June	International Day of Yoga	12 December	International Universal Health Coverage Day
23 June	Public Service Day	18 December	International Migrants Day
25 June	Day of the Seafarer	18 December	Arabic Language Day
26 June	International Day Against Drug Abuse and Illicit Trafficking	20 December	International Human Solidarity Day
26 June	International Day in Support of Victims of Torture		

^a List of days were acquired from <https://www.un.org/en/sections/observances/international-days>

Evidence stream 3: United Nations' Twitter accounts

BACKGROUND AND METHODS

Another outcome that can be examined to look for evidence of bias within the UN is the organisation's Twitter accounts. Twitter is a social media platform. Created in 2006, the platform now has 134 million daily active users and 330 million monthly active users (Twitter, 2019). In the United States, 22% of the population say they have used Twitter (Perrin & Anderson, 2019), and 63% of users say they get their news from Twitter (Pew Research Center, 2015). Moreover, about 60% of journalists in the US say they are on Twitter several times a day or are connected all day to Twitter (McGregor & Molyneux, 2020). Thus, tweets from a prominent organisation's Twitter account might influence the opinions of the

account's followers directly but might also lead to coverage of the tweet (and its related content) by the journalist who reports on the topic across various platforms. Moreover, every Twitter user who reads a tweet has the potential to serve as a multiplier for spreading information.

Before undertaking this part of the study, I was aware that the UN had a general Twitter account for women's issues (@UN_women) but not an account for men's issues. Thus, the aim was to determine if the UN had other Twitter accounts for women's issues, and if so, how many followers do the accounts have, and how many tweets have been sent out. The data on numbers of followers and tweets is publicly available and reveals the scope and breadth of this knowledge dissemination pathway. To identify accounts, relevant keyword searches were performed in the Twitter search bar. Twitter algorithms aided in the identification of accounts because once a given UN account is identified, Twitter populates a list of potentially related accounts. The search was performed on 29th August 2020.

RESULT AND BRIEF DISCUSSION

Table 3 presents data on UN Twitter accounts dedicated to men's and women's issues. The UN has 69 Twitter accounts dedicated to women's issues and zero dedicated to men's issues. The 69 accounts are typically associated with individual countries. The general UN Women Twitter account, which was created in 2008, has approximately 1.8 million followers. It has posted approximately 60,700 tweets. For the other 68 accounts dedicated to women's issues, the average number of followers was 23,967 (minimum: 45; maximum: 578,600). The average number of tweets was 3,935 (minimum: 31; maximum: 22,000). As of 29th August 2020, the 69 UN women's accounts had sent out a total of 328,251 tweets. Recommendations for moving forward with UN Twitter accounts are provided in the discussion of the current paper.

Table 3
Numbers and Names of Un Twitter Feeds Dedicated to Men's and Women's Issues

Tally	Twitter profile name	Twitter handle	Followers ^a	Number of tweets ^a	Year joined
UN Twitter profiles for men					
0	N/A	N/A	N/A	N/A	N/A
UN Twitter profiles for women					
1	UN Women	@UN_Women	1.8 million	60,700	2008
2	UN Women Afghanistan	@unwomenafghan	5,443	2,439	2018
3	UN Women Africa	@unwomenafrica	52,600	11,000	2013
4	UN Women Albania	@unwomenalbania	3,523	2,241	2015
5	UN Women Arabic	@unwomenarabic	28,900	7,916	2015
6	UN Women Asia Pacific	@unwomenasia	41,000	12,800	2012
7	UN Women Australia	@UNWomenAust	26,700	18,300	2009
8	UN Women Austria	@unwomenaustria	371	790	2014
9	UN Women BiH	@unwomenbih	1,821	1,777	2010
10	UN Women in Brussels	@unwomenEU	14,200	6,538	2015
11	UN Women Burundi	@UNWomenBurundi	500	177	2019
12	UN Women Canada	@CCUNIFEM	907	111	2009
13	UN Women Central Asia	@unwomenctrlasia	1,757	1,914	2015
14	UN Women Deutschland	@UNWomen_Germany	4,639	4,658	2011
15	UN Women Egypt	@unwomenegypt	3,570	970	2019
16	UN Women Ethiopia	@unwomenethiopia	431	159	2020
17	UN Women Europe & CIS	@unwomeneca	20,500	7,396	2014
18	UN Women IES	@unwomenEval	5,191	5,194	2015
19	UN Women India	@unwomenindia	578,600	14,100	2012
20	UN Women Indonesia	@unwomenid	1,628	941	2019
21	UN Women Iraq	@unwomeniraq	1,548	321	2018
22	UN Women 日本事務所	@unwomenjapan	4,505	2,183	2015
23	UN Women Jordan	@unwomenjordan	13,900	4,551	2016
24	UN Women Kenya	@unwomenkenya	1,200	327	2019
25	UN Women Kosovo	@unwomenkosovo	767	747	2019
26	UN Women Lebanon	@unwomenlebanon	947	764	2020
27	UN Women Liberia	@unwomenliberia	335	131	2020
28	UN Women Malawi	@unwomenmalawi	1,538	721	2019
29	UN Women Moldova	@unwomenmoldova	1,570	2,511	2014
30	UN Women Myanmar	@unwomenmyanmar	534	161	2020
31	UN Women Nepal	@unwomennepal	5,827	1,554	2017
32	UN Women_NL	@UNWomen_NL	1,375	1,378	2016
33	UN Women Nordic	@unwomennordic	2,405	1,669	2018
34	UN Women Pacific	@unwomenpacific	10,900	4,211	2015
35	UN Women Pakistan	@unwomen_pak	24,300	2,911	2016
36	UN Women Rwanda	@unwomenrwanda	1,146	150	2019
37	UN Women South Africa	@unwomenSA	2,897	1,278	2018
38	UN Women Suomi	@UNWomenSuomi	5,770	6,748	2009
39	UN Women Sweden	@UNWOMENSweden	2,369	8,029	2012
40	UN Women Turkey	@unwomenturkey	1,069	299	2020
41	UN Women in UAE	@unwomenuae	4,373	1,552	2018
42	UN Women Uganda	@unwomenuganda	6,501	2,755	2016
43	UN Women Ukraine	@unwomenukraine	1,319	538	2017
44	UN Women USA	@UNWomenUSA	5,143	10,200	2010

45	UN Women USA Chicago Chapter	@UNWomenChicago	406	630	2014
46	UN Women USA Los Angeles	@UNWomenLA	2,475	9,243	2012
47	UN Women USA NY	@UNWomenNY	3,677	7,013	2008
48	UN Women USA - GCC	@UNWOMEN_GCC	45	755	2017
49	UN Women USA Miami	@UNWomenMiami	129	256	2013
50	UN Women USA SFBA Chapter	@UN_Women_SF	708	1,810	2009
51	UN Women Viet Nam	@unwomenvietnam	1,276	1,191	2018
52	UN Women Watch	@UNWomenWatch	159,000	9,271	2010
53	UN Women Zimbabwe	@unwomenzw	2,188	230	2019
54	ONU Femmes	@ONUFemmes	38,600	8,053	2010
55	ONU Femmes Cote d'Ivoire	@onufemmesCIV	319	128	2020
56	ONU Femmes Frances	@ONUFemmesFR	12,600	4,633	2013
57	ONU Femmes Haiti	@ONUFemmesHaiti	1,182	255	2018
58	ONU Femmes Maroc	@ONUFemmesMaroc	5,209	4,387	2016
59	ONU Femmes Niger	@NigerOnu	48	31	2019
60	ONU Mujeres	@ONUMujeres	328,000	14,600	2009
61	ONU Mujeres Bolivia	@onumujeresbol	355	121	2020
62	ONU Mujeres Chile	@ONUMujeresChile	21,700	4,227	2015
63	ONU Mujeres Col	@ONUMujeresCol	28,200	7,802	2014
64	ONU Mujeres El Salvador	@onumujeresv	3,582	3,713	2017
65	ONU Mujeres Guatamala	@onumujeresgt	3,016	3,141	2018
66	ONU Mujeres Mexico	@ONUMujeresMX	91,200	22,000	2013
67	ONU Mujeres Rep. Dom	@onumujeresRD	2,229	2,416	2011
68	ONU Mulheres Brasil	@ONUMulheresBR	28,700	6,328	2015
69	ONU Mulheres Mocambique	@onumulheresmz	381	207	2019

Evidence stream 4: Sex-/gender-specific words in the United Nations and World Health Organization databases

BACKGROUND AND METHODS

Both the UN (<https://search.un.org>) and WHO (<https://apps.who.int/iris>) archive reports and other documents they have created and published. The WHO database, for example, archives over 220,000 documents. Thus, other ways to explore potential gender bias within the UN and WHO is to quantify the use of sex-/gender-specific words in documents archived in their databases and to quantify the number of documents that have been indexed in their databases within sex-/gender-specific categories.

For this analysis, sex-/gender-specific keyword searches were performed within the databases. The female words searched were 'girl', 'female', 'women', and 'women's health'. The male words searched were 'boy', 'male', 'men', and 'men's health'. For the UN database, searches were performed to identify sex-/gender-specific words in both the titles of documents and 'anywhere on the page' of the document. For the WHO database, searches were performed to identify sex-/gender-specific words only in the titles of documents. Within the WHO database, searches were also performed to identify sex-/gender-specific categories that have been created and used by the WHO to index documents by subject/topic (e.g., 'men's health', 'women's health').

RESULTS AND BRIEF DISCUSSION

The number of times sex-/gender-specific words appeared in the titles or text of documents archived in the UN's database is displayed in Table 4. Female words appeared in the titles of 12,117 documents. Male words appeared in the titles of 769 documents. The term 'women's health' has appeared in the titles of 51 documents archived in the UN's database. The term 'men's health' has never appeared in a document title in the UN's database. Female terms appeared anywhere in the page for 445,943 documents in the UN database. Male terms appeared anywhere in the page for 168,576 documents.

The number of times sex-/gender-specific words have appeared in the titles of documents archived in the WHO's database is displayed in Table 5. Female terms appeared in the titles of 1,184 documents, whereas male terms appeared in the titles of 209 documents.

The number of documents archived in the WHO's database under sex-/gender-specific subject categories is displayed in Table 6. A total of 1,716 documents were categorised under 'Women's Health' and related subject categories. A total of 19 documents were categorised under 'men's health' and related subject categories. Overall, the findings are consistent with the study by Nuzzo (Nuzzo, 2020), which reported a substantial difference in the number of times the terms 'women's health' and 'men's health' appeared in the titles or abstracts of papers indexed in PubMed. Recommendations for moving forward with increasing the number of UN and WHO reports on men's issues are provided in the discussion of the current paper.

Table 4
Number of Times Sex-/Gender-Specific Terms Have Been Used in the Titles or Text of Documents Archived in the United Nations' Database

Male keywords	Count	Female keywords	Count
<i>In document titles</i>		<i>In document titles</i>	
'men's health'	0	'women's health'	51
'men'	398	'women'	10,270
'male'	46	'female'	428
'boy'	325	'girl'	1,368
<i>Total</i>	769	<i>Total</i>	12,117
<i>Anywhere in page</i>		<i>Anywhere in page</i>	
'men's health'	152	'women's health'	7,257
'men'	104,294	'women'	319,702
'male'	21,214	'female'	37,505
'boy'	42,916	'girl'	81,479
<i>Total</i>	168,576	<i>Total</i>	445,943

NB: Searches performed at <https://search.un.org> on 27 August 2020.

Table 5
Number of Times Sex-/Gender-Specific Terms Have Been Used in the Titles of Documents Archived in the World Health Organization's (WHO) Database

Male keywords	Count	Female keywords	Count
'men'	93	'women'	979
'male'	158	'female'	156
'boy'	32	'girl'	49
<i>Total</i>	209	<i>Total</i>	1,184

NB: Searches performed at <https://apps.who.int/iris> on 27 August 2020.

Table 6
Number of Documents Archived in the World Health Organization's (WHO) Database Under Sex-/Gender-Specific Subject Categories

Male subject category	Count	Female subject category	Count
'Men's Health'	19	'Women's Health'	1,104
		'Women's health'	171
		'Women's Health and Development'	2
		'Women's Health Services'	119
		'Women's Rights'	320
<i>Total</i>	19	<i>Total</i>	1,716

NB: Searches performed at <https://apps.who.int/iris> on 27 August 2020

Evidence stream 5: Sex-/gender-specific words in the United Nations and World Health Organization reports on health equity and gender and health

BACKGROUND AND METHODS

According to Evidence Stream 4, women's issues receive considerably more attention in documents archived in the WHO database. However, Evidence Stream 4 does not reveal if potential bias exists within reports where one might think men's and women's issues would be given more equal attention – that is, in general reports on health equity and gender and health. Thus, a further way to explore potential bias within the WHO is to quantify the use of sex-/gender-specific words in documents on health equity and gender and health.

To identify reports on health equity, a keyword search for 'health equity' in the titles of reports was performed in the WHO database (<https://apps.who.int/iris>). Similarly, to identify reports on gender and health, a keyword search for 'gender and health' in the titles of reports was performed in the WHO database. Only reports published in English and after 1999 were included in the analysis. Reports on only men's health or women's health were not included in the analysis. After eligible reports were identified, they were downloaded to a computer and opened in Adobe Acrobat Reader. The 'advanced search' option in Adobe Acrobat Reader was used to identify the number of times the words 'male', 'men', 'men's health', 'female', 'women', and 'women's health' were used in each report.

RESULTS AND BRIEF DISCUSSION

A total of 25 reports on health equity were eligible for analysis. The number of times sex-/gender-specific words appeared in the text of these reports is displayed in Table 7. When summed across all reports, female words were used 2,714 times. Male words were used 1,190 times. A total of 38 reports on gender and health were eligible for analysis. The number of times sex-/gender-specific words appeared in the text of these reports is displayed in Table 8. When summed across all reports, female words were used 11,638 times. Male words were used 5,757 times.

One observation that I made while performing the sex-/gender-specific words searches was the WHO's use of 'although statements' or 'however statements' to emphasise women's issues. These statements are a potential form of bias because the men's issue, which is typically larger in magnitude, is usually only given one or two sentences of attention and is quickly followed by a more in-depth discussion on the women's issue, which is smaller in magnitude. 'Although statements' and 'however statements' were observed, for example, in reports on smoking/tobacco:

Example 1. Worldwide, daily tobacco smoking is approximately five times more common in males than females (GBD 2015 Tobacco Collaborators, 2017; Ng, M. et al., 2014). However, in WHO reports on

health equity and gender and health, 'although statements' or 'however statements' were sometimes used to draw attention to tobacco use in females, which naturally draws attention away from tobacco use in males. The below example is from section 3.6 of *Gender and health in the Eastern Mediterranean Region: conceptual and operational advocacy* (WHO Regional Office for the Eastern Mediterranean, 2006). Italics have been added below to reveal the start of the 'however statement.'

'There is a higher prevalence of male smokers in all countries of the Region. *However*, increasingly aggressive tobacco campaigns targeting women and the easing of societal restrictions regarding women's behaviour and autonomy have resulted in a rise in tobacco use among women. Recent reports from Somalia show greater use of tobacco among female youth than male youth' (WHO Regional Office for the Eastern Mediterranean, 2006).

Example 2. Below is an example of a 'however statement' from the chapter on 'gender equity in health' in *Improving Equity in Health by Addressing Social Determinants* (WHO, 2011).

'Smoking is an area where men have traditionally borne the bulk of the health effects. Globally, women comprise about 20% of the world's more than one billion smokers (Haglund, 2010). *However*, with considerable gendered marketing by the cigarette companies, smoking is seen as both an emancipating and coping strategy for women and this gender shift is most notable among the young. Data from 151 countries show that about 7% of adolescent girls smoke cigarettes as opposed to 12% of adolescent boys. In some countries, almost as many girls smoke as boys (WHO, 2009). Future projections of tobacco-related deaths must consider these changing gender trends in smoking (Snow, 2008; WHO, 2003; WHO, 2011).

However, the two examples above should be interpreted with caution. No attempt was made to quantify this information. Moreover, no attempt was made to identify opposing examples, in which 'although statements' or 'however statements' were used to draw attention to men's issues. Nevertheless, few opposing examples are likely to exist because many health outcomes are already worse in males than females, so there is no need to use 'although statements' or 'however statements' to draw attention to men.

Table 7

Number of Times Sex-/Gender-Specific Words Appeared in Reports Published by the World Health Organization on Health Equity

	Report name	Year	'Male'	'Female'	'Men'	'Women'	'Men's health'	'Women's health'
1	<i>Equity-oriented national strategy for public health in Sweden: a case study</i>	2001	0	0	4	9	0	0
2	<i>Tenth futures forum on steering towards equity in health</i>	2006	0	0	4	5	0	0
3	<i>Achieving health equity: from root causes to fair outcomes</i>	2007	1	2	13	51	0	2
4	<i>Actions towards health equity</i>	2007	1	0	1	4	0	0
5	<i>High-level meeting on promoting health equity: evidence, policy and action</i>	2007	0	0	3	10	0	0
6	<i>Closing the gap in a generation: health equity through action on the social determinants of health (Final report)</i>	2008	9	29	67	259	0	10
7	<i>Closing the gap in a generation: health equity through action on the social determinants of health (executive summary)</i>	2008	0	1	8	21	0	0
8	<i>How can gender equity be addressed through health systems?</i>	2009	6	5	114	123	2	4
9	<i>Promoting health and equity: evidence, policy and action – cases from the Western Pacific Region</i>	2009	3	2	6	19	0	0
10	<i>Equity, social determinants and public health programmes</i>	2010	32	29	74	306	0	13
11	<i>Urban HEART: urban health equity assessment and response tool - user manual</i>	2010	1	0	2	25	0	5
12	<i>Urbanization and health: health equity and vulnerable populations, case studies from the Eastern Mediterranean Region</i>	2010	2	10	5	28	0	1
13	<i>Improving equity in health by addressing social determinants</i>	2011	30	43	100	257	6	19
14	<i>Regional meeting on social determinants of health and health equity</i>	2011	0	0	2	11	0	1

15	<i>Closing the health equity gap: policy options and opportunities for action</i>	2013	0	5	9	44	0	2
16	<i>Intersectoral factors influencing equity-oriented progress towards Universal Coverage: results from a scoping review of literature</i>	2017	0	4	4	35	17	10
17	<i>Advancing health through attention to gender, equity and human rights: stories from the Western Pacific Region</i>	2017	6	11	47	195	0	10
18	<i>Advancing health through attention to gender, equity and human rights: summary of stories</i>	2017	0	0	4	16	0	2
19	<i>Delivered by women, led by men: a gender and equity analysis of the global health and social workforce</i>	2019	58	108	189	497	0	3
20	<i>Accountability as a driver of health equity</i>	2019	0	1	8	14	0	0
21	<i>Healthy, prosperous lives for all: the European Health Equity Status Report</i>	2019	5	6	160	184	0	3
22	<i>Strategic mapping of institutional frameworks and their approach to equity: mapping exercise conducted to inform the implementation of the Health Equity Status Report initiative (HESRI) of the WHO Regional Office for Europe</i>	2019	0	0	0	11	0	0
23	<i>Strategic mapping of public perceptions of health equity: what the public think is important to live a healthy prosperous life</i>	2019	1	0	16	22	0	0
24	<i>Workshop on strengthening governance for health equity to advance the sustainable development goals</i>	2019	0	0	6	7	1	0
25	<i>Health equity and its determinants in the Western Pacific Region</i>	2020	80	78	83	142	0	0
	Total	N/A	252	334	929	2,295	26	85

NB: All reports are publicly-available in the WHO database (<https://apps.who.int/iris>). Data on use of words 'boy' and 'girl' are not reported because both were used infrequently.

Table 8
Number of Times Sex-/Gender-Specific Words Appeared in Reports Published by the World Health Organization on Gender and Health

	Report name	Year	'Male'	'Female'	'Men'	'Women'	'Men's health'	'Women's health'
1	<i>A training curriculum for health programme managers - Transforming health systems: gender and rights in reproductive health</i>	2001	75	64	312	818	4	87
2	<i>A training manual for health managers - Transforming health systems: gender and rights in reproductive health</i>	2001	75	64	312	818	4	87
3	<i>Gender analysis in health: a review of selected tools</i>	2002	11	8	192	293	10	44
4	<i>Gender and health: gender and health in disasters</i>	2002	5	2	29	39	0	1
5	<i>Gender and health: gender and mental health</i>	2002	3	1	37	37	0	1
6	<i>'En-gendering' the Millennium Development Goals (MDGs) on Health</i>	2003	5	3	24	62	0	6
7	<i>Gender and health: gender, health and ageing</i>	2003	4	2	46	62	0	2
8	<i>Gender in mental health research</i>	2004	32	37	82	121	1	1
9	<i>Gender issues in health in the sociocultural context of the Eastern Mediterranean Region</i>	2004	12	10	64	149	0	21
10	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on nutrition</i>	2004	9	9	89	214	0	1
11	<i>Health and gender: gender and mental health in the Eastern Mediterranean Region</i>	2005	2	2	22	42	0	0
12	<i>Integrating poverty and gender into health programmes: a report on surveys of health ministries and educational institutions</i>	2005	7	8	15	51	0	10
13	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on gender-based violence</i>	2005	18	15	40	378	0	23
14	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on HIV/AIDS</i>	2005	37	37	223	410	3	6

15	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on malaria</i>	2005	12	14	66	160	0	4
16	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on mental health</i>	2005	2	1	48	128	0	9
17	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on sexual and reproductive health</i>	2005	54	46	282	559	1	14
18	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on curricular integration</i>	2005	0	0	5	10	0	2
19	<i>Gender equality, work and health: a review of evidence</i>	2006	22	22	96	223	2	13
20	<i>Gender analysis of health care access and utilization in Pakistan</i>	2006	23	31	59	91	1	3
21	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on ageing</i>	2006	13	9	121	202	2	4
22	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on poverty</i>	2006	4	7	32	108	0	2
23	<i>Women, ageing and health: a framework for action: focus on gender</i>	2007	11	12	103	452	1	21
24	<i>Integrating poverty and gender into health programmes: a source for health professionals – foundation module on gender</i>	2007	88	77	707	999	3	42
25	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on noncommunicable diseases</i>	2007	18	14	168	266	0	22

26	<i>Integrating poverty and gender into health programmes: a source for health professionals – module on water, sanitation and food</i>	2007	4	10	84	196	0	4
27	<i>Integrating gender into HIV/AIDS programmes in the health sector: tool to improve responsiveness to women's needs</i>	2009	81	36	192	766	0	4
28	<i>Sex, gender and influenza</i>	2010	54	61	68	199	0	2
29	<i>Gender, women and primary health care renewal: a discussion paper</i>	2010	14	19	195	487	10	57
30	<i>Gender mainstreaming for health managers: a practical approach</i>	2011	77	46	480	786	4	30
31	<i>Gender, work and health</i>	2011	8	5	38	103	0	1
32	<i>Human rights and gender equality in health sector strategies: how to assess policy coherence</i>	2011	21	22	108	196	1	22
33	<i>Report on the first international symposium on self-testing for HIV: legal, ethical, gender, human rights and public health implications of HIV self-testing scale-up</i>	2013	5	2	25	11	0	0
34	<i>Increasing access to health care services in Afghanistan with gender-sensitive health service delivery</i>	2013	7	16	47	79	1	5
35	<i>Gender, climate change and health</i>	2014	6	6	119	232	2	3
36	<i>Gender and health in the Western Pacific Region</i>	2014	4	6	65	105	1	3
37	<i>A tool for strengthening gender-sensitive national HIV and Sexual and Reproductive Health (SRH) monitoring and evaluation systems</i>	2016	47	43	228	447	2	5
38	<i>Growing up unequal: gender and socioeconomic differences in young people's health and well-being</i>	2016	2	4	9	5	0	1
	Total	N/A	872	771	4,832	10,304	53	563

NB: All reports are publicly-available in the WHO database (<https://apps.who.int/iris>). Data on use of words 'boy' and 'girl' are not reported because both were used infrequently.

Evidence stream 6: Sex-/gender-specific words in Bulletin of the World Health Organization

BACKGROUND AND METHODS

Another way to explore the potential lack of recognition of men's issues within the WHO is to quantify the use of sex-/gender-specific words in the *Bulletin of the World Health Organization*. The *Bulletin of the World Health Organization* is the WHO's flagship periodical for scholarly articles. According to the WHO website, the *Bulletin of the World Health Organization* is 'an international journal of public health with a special focus on developing countries.' The journal was first published in 1948. The *Bulletin* has published 12 issues per year since 1999. In 2018, the journal's impact factor was 6.818, and it was ranked 7th out of 185 journals in the area of public, occupational, and environmental health.

Use of sex-/gender-specific words in the *Bulletin* can potentially reveal differing levels of attention given to men's and women's issues among scholars (Nuzzo, 2020). Also, analysis of article type might reveal under what circumstances sex-/gender-specific terms are used in the *Bulletin*.

Thus, the archives of the *Bulletin* were searched via PubMed, as PubMed is a database where researchers might perform broad searches for articles on men's and women's health. The search was performed using a combination of the search term for the journal (Bull World Health Org [jour]) and the exact phrase within the title or abstract (men's health [TIAB]). PubMed facilitates the process of identifying article type because each article is categorised by its design/methodology. I recorded the number of articles indexed by PubMed as 'clinical study', 'clinical trial', 'comparative study', 'controlled clinical trial', 'observational

study', and 'randomised controlled trial.' I then collated the results from these types of articles into one broad category called 'original research.' I also recorded the number of articles indexed by PubMed as 'comment', 'editorial', 'letter', 'meta-analysis', 'news', 'review', and 'systematic review.' I collated the results from these types of articles into one broad category called 'non-original research.' I also created a third, broad category called 'other/non-categorised.' The number of articles placed into this broad category was equal to the total number of articles revealed by the keyword search minus the number of articles classified as original and non-original research.

RESULTS AND BRIEF DISCUSSION

A total of 10,571 articles were published between 1948 and 2019 in the *Bulletin* and indexed in PubMed. Table 9 displays the number of times sex-/gender-specific terms appeared in the titles or abstracts of articles published between 1948 and 2019. The words 'male' and 'female' were used in the same number of times. However, the word 'women' was used three times more than the word 'men.' Moreover, the term 'women's health' was used in the title or abstract of 21 papers, whereas the term 'men's health' was used in the title or abstract of two papers. These findings are consistent with results from a previous study (Nuzzo, 2020). Also, the examination of article type revealed the word 'women' was used in a large proportion (23.5%) of non-original articles (e.g., comments, editorials), whereas the word 'men' was not (8.7%). This result suggests there is more commentary about women's health than men's health. Recommendations for moving forward with increasing the number of articles in the *Bulletin of the World Health Organization* that discuss men's issues are provided in the discussion of the current paper.

Table 9

Number of Times Sex-/Gender-specific Terms Appeared in the Titles or Abstracts of Articles Published in the Bulletin of the World Health Organization Between 1948 and 2019

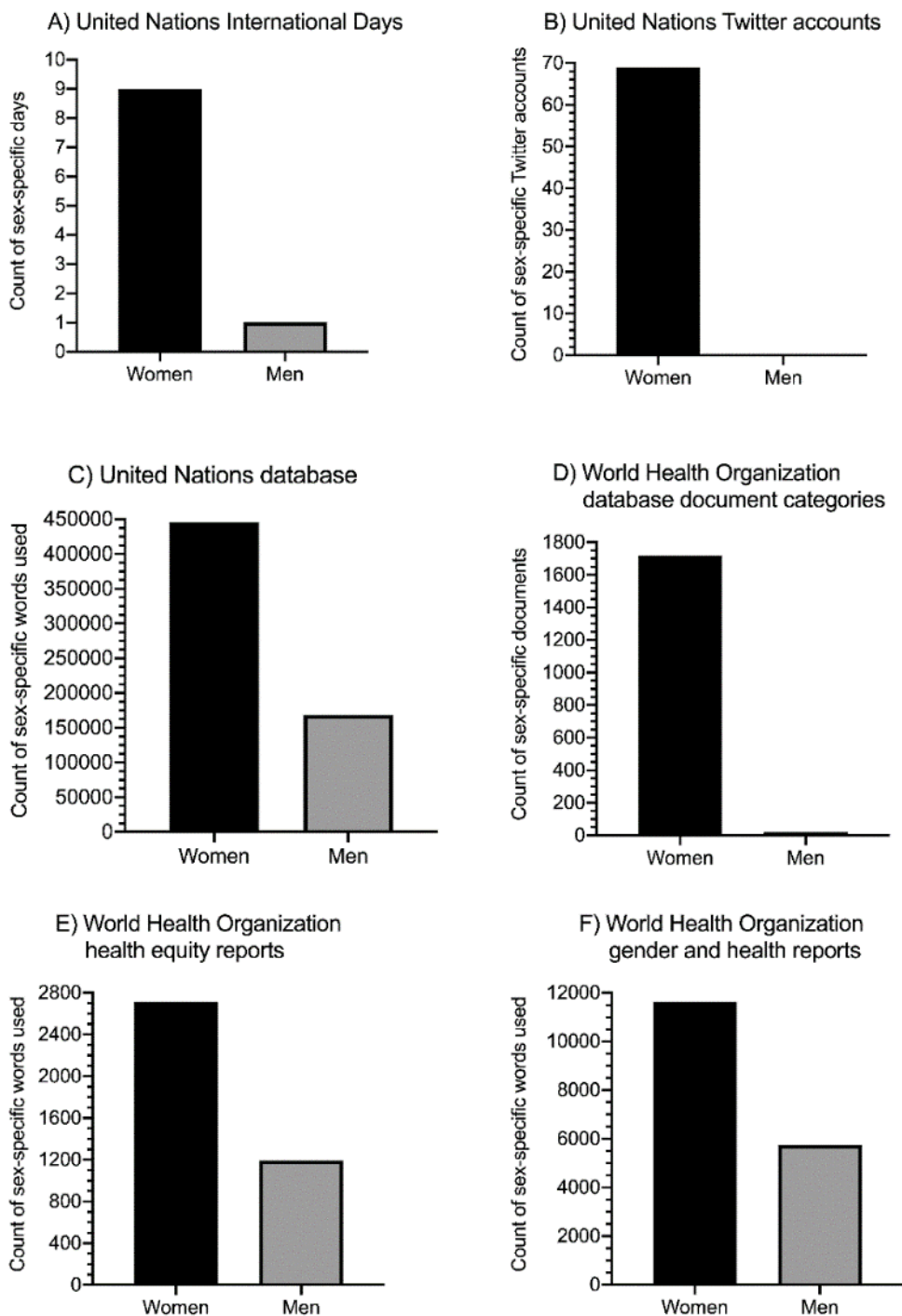
Male terms	Count	% ^a	Female terms	Count	% ^a
'Men'	183		'Women'	592	
<i>Original research</i>	34	18.6	<i>Original research</i>	117	19.8
Clinical study	5	2.7	Clinical study	16	2.7
Clinical trial	5	2.7	Clinical trial	16	2.7
Comparative study	16	8.7	Comparative study	58	9.8
Controlled clinical trial	4	2.2	Controlled clinical trial	14	2.4
Observational study	0	0	Observational study	0	0
RCT	4	2.2	RCT	13	2.2
<i>Non-original research</i>	16	8.7	<i>Non-original research</i>	139	23.5
Comment	0	0	Comment	5	0.8
Editorial	0	0	Editorial	10	1.7
Letter	0	0	Letter	3	0.5
Meta-analysis	1	0.5	Meta-analysis	11	1.9
News	2	1.1	News	21	3.5
Review	12	6.6	Review	69	11.7
Systematic review	1	0.5	Systematic review	20	3.4
'Male'	164		'Female'	164	
<i>Original research</i>	110	67.1	<i>Original research</i>	46	28.0
Clinical study	22	13.4	Clinical study	6	3.7
Clinical trial	22	13.4	Clinical trial	6	3.7
Comparative study	27	16.5	Comparative study	26	15.9
Controlled clinical trial	20	12.2	Controlled clinical trial	5	3.0
Observational study	0	0	Observational study	0	0
RCT	19	11.6	RCT	3	1.8
<i>Non-original research</i>	9	5.5	<i>Non-original research</i>	9	5.5
Comment	0	0	Comment	0	0
Editorial	0	0	Editorial	0	0
Letter	0	0	Letter	0	0
Meta-analysis	0	0	Meta-analysis	1	0.6
News	2	1.2	News	2	1.2
Review	5	3.0	Review	5	3.0
Systematic review	2	1.2	Systematic review	1	0.6
'Men's health'	2	N/A	'Women's health'	21	N/A
'Boy'	1	N/A	'Girl'	2	N/A

RCT = randomised controlled trial. ^a Rows do not total 100% because some articles were indexed in PubMed as an article type that is not listed. Also, some articles were indexed as more than one article type. The most common article type not listed is 'Research Support, Non-US Gov't' Data from this article type are not presented because articles indexed under the 'Research Support, Non-US Gov't' article type were sometimes also indexed as an original research article type, and in other instances, they were also indexed as a non-original research article type. Thus, it was not possible to make this article type a third broad category, and it was also not possible to categorise it under 'original research' or 'non-original research'.

DISCUSSION

Six streams of evidence illustrate bias against boys' and men's issues within the UN and WHO. First, boys and men are not mentioned in the UN's sustainable development goals for 'gender equality.' Second, the UN observes nine International Days for women's issues/achievements and one day for men's issues/achievements. Third, the UN has 69 Twitter accounts dedicated to women's issues and zero dedicated to men's issues. Fourth, more female than male words appear in documents archived in the UN and WHO databases, and substantially more documents are archived under women's health categories than men's health categories, indicating more attention to women's issues. Fifth, in WHO reports where more equal use of male and female words might be expected (e.g., reports on gender and health), more female than male words appear, again indicating more attention to women's issues. Sixth, more female than male words appear in the *Bulletin of the World Health Organization*, with articles on women's health more likely to be non-original research (e.g., editorials). As the UN and WHO are the causal agents directly responsible for most of these outcomes, the results confirm international bias against men's issues and in favour of women's issues. Figure 1 provides a visual summary of the key findings.

Figure 1
Summary of Key Findings



A: Number of United Nations (UN) International Days of Observance for men and women

B: Number of UN Twitter accounts used to disseminate information about men's and women's issues.

C: Number of times male and female words appeared in the UN database.

D: Number of documents in the World Health Organization's (WHO) database indexed under female- or male-specific categories (e.g., 'women's health', 'men's health').

E: Number of times male and female words appeared in WHO reports on health equity.

F: Number of times male and female words appeared in WHO reports on gender and health.

Bias and causes of the observed results

The results show men's issues are given less attention than women's issues by the UN and WHO. However, this difference should not be automatically assumed to be caused by bias. Differences in observational, cross-sectional studies can be impacted by unmeasured confounders. However, in the current study, confounding was not an issue. Confounding was controlled naturally by the experimental model, as the UN and WHO are the causal agents responsible for the outcomes assessed. Therefore, the observed differences could have two possible explanations: (a) lack of awareness of men's issues by UN and WHO staff, or (b) bias (conscious or unconscious) against men's or in favour of women's issues by UN and WHO staff.

Lack of awareness of men's issues by the UN and WHO staff might play a role but it is unlikely to fully explain the UN's and WHO's lack of recognition of men's issues. For one, men's issues are mentioned in passing, as part of 'however statements' in some WHO reports. Also, a small number of men's health reports have been generated by the WHO (WHO, 2010; WHO, Barker, Ricardo, & Nascimento, 2007; WHO Regional Office for Europe, 2000, 2007, 2018a, 2018b; WHO Regional Office for Europe, Gough, & Novikova, 2020). Thus, some staff at the UN and WHO are aware that men's issues exist.

Another possible explanation for the results is a large-scale manifestation of individual-level cognitive bias against men and in favour of women. Recent experimental work in psychology has documented that bias against males and in favour of females exists when study participants are presented with certain scenarios. For example, Stewart-Williams et al. (2020) found men and women from different cultures reacted more positively to research that revealed female-favouring sex differences than research that revealed male-favouring sex differences. When considered in light of other findings, Stewart-Williams et al. (2020) concluded the results are 'consistent with the idea that both sexes are more protective of women than men, but that people tend not to be aware of this.' Similarly, in six experiments, Reynolds et al. (2020) discovered females were more likely to be considered the victims (and males the perpetrators) in scenarios in which the sex of the victim was unknown to the study participants. Finally, the findings from the current study appear to support the construct of gamma bias – that is, magnification or minimisation of a gender issue depending on whether the issue relates to males or females (Seager & Barry, 2019).

Bias beyond the UN and WHO

The current results illustrate bias against boys' and men's issues occurs at an international level. However, the UN and WHO are not the only institutions to exhibit this bias. Nuzzo (2020) documented it within the US government and perhaps within biomedical research more broadly. Moreover, in some instances, individual researchers do not frame certain issues as primarily men's issues. For example, in a *Lancet* commentary about homelessness in the United Kingdom (Aldridge, 2020), the author did not mention the majority of homeless individuals in the United Kingdom are male (Office for National Statistics, 2019). Similarly, in a *BMJ* commentary on global suicide rates (Matthay, 2019), the author never mentioned rates of suicide are higher in males than females in every geographic region of the world (Naghavi & Global Burden of Disease Self-Harm Collaborators, 2019). This lack of framing health outcomes in a sex-/gender-specific when the outcomes are more prevalent in males than females is like how the UN does not name or frame international days in a sex-/gender-specific way when the topic is one that is more relevant to males than females.

Moreover, as mentioned earlier, one reason bias against men's issues by the UN and WHO is worthy of investigation is because the agendas of these organisations influence other organisations, thus multiplying the effects of bias. For example, the International Society for Physical Activity and Health aligned their goals for increased physical activity participation (ISPAH, International Society for Physical Activity and Health, 2017) with the UN's sustainable development goals (UN, 2015, 2020b). The Society called for increased physical activity and sports participation in girls and women (ISPAH, 2017). They did not announce any goals about increasing physical activity and sports participation in boys and men (ISPAH, 2017).

A future focus on both sexes

The UN and WHO appear to have adopted an approach where only one sex can be the focus of their efforts and resources. This approach should be revised. For example, there is no conceptual limitation to the number of sustainable development goals that can be created. Thus, there are no reason boys' and men's issues cannot also be addressed by these goals. A focus on men's issues is likely to be indirectly beneficial to the lives of many women.

Outside of the UN and WHO, researchers and organisations have started to recognise the need for more attention to boys' and men's issues (Baker et al., 2014; Ng, Teo, Ho, & Tan, 2017; Nuzzo, 2020; Richardson & Smith, 2011; Seager & Barry, 2019; Seager, Farrell, & Barry, 2016; Smith, Adams, & Bonson, 2018). Encouragingly, in 2014, the *Bulletin of the World Health Organization* published a commentary by Baker et al. (2014) that concluded men's issue was generally not recognised within the 'global health equity agenda.' Evidence presented in the current analysis supports the conclusion by Baker et al. (2014). Moreover, Seager et al. (2016) have published on the 'gender empathy gap', Nuzzo (2020) has published on the 'national health paradox', and Barry et al. (2019) have edited *The Palgrave Handbook of Male Psychology and Mental Health*.

Potential criticisms of the current paper

One potential criticism of the current paper is that the UN and WHO are primarily concerned with 'developing countries', where women's issues might be more pressing concerns than men's issues (Stoet & Geary, 2019). For a few reasons, this argument is not entirely sound. First, boys and men in developing countries also have health issues that require attention. Second, the UN and WHO do not limit their scope of influence on developing countries. Both organisations create global-wide agendas. They attempt to influence policies in most countries, including developed countries where males appear to be falling behind females on key outcomes, as reflected in scores on the Basic Index of Gender Inequality (Stoet & Geary, 2019). Third, many women's issues are also men's issues, even in developing countries. For example, framing violence against women by men as a women's issue is somewhat misguided because the *causal agent* of the violent act is the male perpetrator. Addressing mental health issues in men might be a solution to preventing such behaviour.

Another possible criticism of the current paper is that inferential statistics were not applied to the data. Inferential statistics were not used because the intent of the study was not necessary to infer or generalize from the data (i.e., inferential statistics) to other international organisations. Instead, the aim was to use descriptive statistics to describe the degree to which the UN and WHO have given different degrees of attention to men's and women's issues. This difference is obvious based on the number of evidence streams assessed (i.e., six streams), the magnitude of difference within each stream (e.g., 69 UN women's Twitter accounts versus zero UN men's Twitter accounts), and the context surrounding the streams (i.e., the UN and WHO are the causal agents directly responsible for the streams/outcomes).

What I am not saying

In recent years, the topic of sex/gender has become contentious in academia and the media. Thus, a few points of clarification about the current paper are warranted. First, I am not saying women's health does not need attention nor am I saying men's and women's issues should necessarily be given equal levels of attention. I am saying boys' and men's issues deserve acknowledgement by the UN and WHO, and they warrant more attention than what they are currently given. Other researchers have also reached similar conclusions (Baker et al., 2014; Ng et al., 2017; Richardson & Smith, 2011; Seager et al., 2016; Smith et al., 2018). Second, I am not saying men's issues are never given attention from national or international organizations. The WHO has generated some reports on boys' and men's issues (Barket et al., 2007; Gough & Novikova, 2020; WHO, 2010; WHO Regional Office for Europe, 2000, 2007, 2018a, 2018b). Instead, I am saying the degree of attention given to boys' and men's issues is less than one might expect based on the epidemiological data (Nuzzo, 2020). Third, I am not saying there are never any biases that work in favour of men. Fourth, I am not saying male and female issues are the same in all geographic regions. Each country and region should be examined separately. Nevertheless, some issues will be similar across regions (e.g., shorter life expectancy, higher suicide rates, and higher substance abuse rates in

males than females) (GBD 2015 Tobacco Collaborators, 2017; Naghavi & Global Burden of Disease Self-Harm Collaborators, 2019; Ng, Freeman, et al., 2014; Wang et al., 2012).

Recommendations for moving forward

UN Sustainable Development Goals

The UN is encouraged to include boys' and men's issues within their sustainable development goals. Several sources, including a small number of reports from the WHO, are available on men's health issues to guide the creation of these goals (Australian Government Department of Health Ageing, 2010; Baker et al., 2014; Barker et al., 2007; Barry et al., 2019; Gough & Novikova, 2020; Ng, C.J., 2014; Ng et al., 2017; Nuzzo, 2020; Richardson & Smith, 2011; Seager et al., 2016; Smith et al., 2018; Teo et al., 2015; WHO, 2010; WHO Regional Office for Europe, 2000, 2007, 2018a, 2018b; Wilkins, 2009).

UN International Days of Observance

The UN is encouraged to adopt a sex-neutral approach to International Days or a fairer and more precise sex-/gender-specific approach. The sex-neutral approach would mean no days would be named after one sex or have a focus on one sex. Instead, the focus would be on the outcome, irrespective of what group is most impacted. Alternatively, the sex-/gender-specific approach would associate an issue or topic with the sex most at risk or in need of attention. If this approach is taken, the UN is encouraged to be fairer and more accurate with their representation of men's and women's issues. The sex-/gender-specific approach is probably not ideal because, unless biologically constrained, most issues (e.g., violence) impact both men and women. A few specific recommendations for the sex-/gender-specific approach are as follows: if International Women's Day is observed then International Men's Day should also be observed; if International Day for the Elimination of Violence against Women is observed then a day for the elimination of violence against men should also be observed; if World Autism Awareness Day is observed then it should be renamed in a sex-/gender-specific way that reflects the epidemiological data (e.g., Boys with Autism Day).

UN Twitter accounts

The UN is encouraged to create a 'UN Men' Twitter account. The purpose of this account should be to disseminate knowledge about boys' and men's issues. Alternatively, the UN could create a sex-neutral account that tweets about *both* men's and women's issues. The UN is also encouraged to create Twitter accounts for men's issues for each of the countries and geographic regions for which there already existing accounts for women's issues.

WHO reports and database

Relatively few reports from the WHO have focused on boys' and men's issues (Barker et al., 2007; Gough & Novikova, 2020; WHO, 2010; WHO Regional Office for Europe, 2000, 2007, 2018a, 2018b; WHO, 2010). Thus, the WHO is encouraged to generate up-to-date reports that summarise boys' and men's issues. Moreover, in reports on the broader topics of health equity and gender and health, the WHO is encouraged to give attention to both men's and women's issues. Finally, the WHO is discouraged from using 'although statements' or 'however statements' in their reports when attempting to bring attention to women's issues. Instead, facts about health issues in both men and women should be stated plainly and given the appropriate coverage based on the epidemiological data.

Bulletin of the World Health Organization

The editors at the *Bulletin of the World Health Organization* are encouraged to put out a call for papers on boys' and men's issues.

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