

## “I see you” – Gender representation and unconscious bias in images of surgeons: the South African Journal of Surgery

Over the last fifty years, changes in the demographics of the healthcare workforce worldwide has increased the volume of previously under-represented groups.<sup>1</sup> This has included women entering medical school and continuing into surgical residencies, an increase in the volume of male nurses and allied professionals and increased gender diversity in academia, particularly surgical academia. At present the number of women entering medical schools internationally is greater than 50%,<sup>2,3</sup> and locally the number of women accepted for surgical specialist training is becoming more equal to men in faculties of health sciences throughout South Africa. Despite the advances made in introducing diversity into the health professions globally, there is a well-documented failure to mirror this increasing diversity at the higher levels of surgical academia, and this is evident in most countries,<sup>1,4-6</sup> including South Africa. It is estimated in the USA that women will not achieve gender parity as Full Professors in surgery until 2136.<sup>7</sup>

There is an absence of local literature on this gender diversity in medicine but the international literature on this subject indicates continued barriers to equality in surgical careers and continuing inequity. According to a review of the literature, women in academic surgery are less likely to be promoted, despite being more likely to engage in clinical teaching.<sup>2</sup> Female medical students are more likely to experience sexual harassment from colleagues and be dissuaded from pursuing a career in surgery.<sup>2,8</sup> Other reasons often mentioned as deterring women from surgery are lifestyle and family commitments.<sup>9</sup> Notably the visibility of women in surgery is important for further recruitment. The presence of female surgical role-models is frequently cited as important when present and a lack of role-models is given as a reason for female trainees not to choose surgery.<sup>2,5,9,10</sup> In addition, there is a notable gender pay gap in surgery, documented in the UK as 20% difference between male and female surgeons.<sup>11</sup> A ‘glass ceiling’ can still exist, leading to under-representation of many diverse demographics, and a lack of role-models and mentorship contributes to this.<sup>1</sup> The recent twitter campaign *#ILookLikeASurgeon*, highlighted the divide between the modern surgical workforce and the perception of surgeons that exists in the community (academic or lay). In this campaign, female surgeons and previously underrepresented groups documented occasions where their veracity as a surgeon was questioned because of social stereotypes that surgeons are usually white older men. It then highlighted the diversity of people and situations where any trained specialist might still say “#ILookLikeASurgeon”.<sup>12</sup> Following on from this, the New Yorker magazine put an image of female surgeons on its front cover, inspiring groups of female surgeons and trainees worldwide to recreate it, citing the driving force as “Women surgeons are saying to other women surgeons, ‘I see you’, and to the world, ‘See us’.”<sup>13</sup> Whilst such a modern-day

social media campaign may initially appear trivial, such small steps challenging stereotypes and increasing gender visibility can help initiate the process of improving representation. Conversely, a lack of visible role models can serve to entrench opinion against gender equality in surgical careers, and fosters unconscious bias in male and female medical students and trainees alike.

The South Africa Journal of Surgery is the journal of the Association of Surgeons of South Africa and is the premier journal of surgical research in South Africa. Through peer-review and international recognition, it informs and influences surgical practice and thinking in the country. It is available online and in paper format. The front-page images associated with the journal were evaluated from the last ten years to determine its most recent visual representation of surgeons and surgical care. Over this ten-year period, 47 illustrations were presented on the front page. These are summarised in Table 1.

The front page included 38 people of which 29 were deceased (in memoriam). Of the deceased, 97% (n = 28) were white males and of the living 89% (n = 8) were white males. There were five intraoperative photos of surgeons, three containing two surgeons and two containing three surgeons (12 surgical personnel) of which only one was not a white male. In addition to the front pages, the online content of the journal contains a banner on each page containing the name of the journal and a white male surgeon. There were no illustrations of any female surgeons, and only 5% of people represented were non-white.

The representation of surgeons made visible in the journal front cover remains predominantly male and white, either when viewed as individuals or as operating surgeons in group photos. Although not referenced in the journal information, there may be particular local reasons why this preponderance of white men is present which should be noted. Most of the images are of celebrated local surgeons, often deceased, and may act as an inspiration and tribute in memoriam. Whilst it would be wholly inappropriate to devalue these contributions or disrespect the surgeons who have gained the academic reputation to deserve such an honour, the continued predominance of male surgeons in this visible position can reinforce stereotypes in surgery. Readers (surgeons and trainees in surgery) have only one role-model made visible, that of a male (usually white) surgeon. This representation is present even where grouping of surgeons is represented operating in modern times, as well as through the photos of previous illustrious surgeons.

Improving the visibility of previously under-represented groups as surgeons is important. Consistently, studies show that lack of identification of role-models influences career choices, particularly in women. The lack of visibility of

**Table 1**

Year of publication	Picture on cover		Person on cover			
	Medical illustration	Other	Male (white)	Male (non-white)	Female (white)	Female (non-white)
2016	3		2		1	
2015			4			
2014	1		4			
2013			5			
2012			4			
2011	1	1	1		1	
2010			4			
2009			5			
2008			4			
2007	2	1	3			
Website homepage			1			
<b>TOTAL</b>	<b>7</b>	<b>2</b>	<b>36</b>	<b>2</b>	<b>0</b>	<b>0</b>

female surgeons discourages medical students and trainees from considering a career in surgery.<sup>14,15</sup> In addition, although there is a paucity of medical literature surrounding defining role-models from previously disadvantaged groups, the dialogue around transformation in South Africa highlights that visibility of diversity in senior staff in medicine and subsequent mentorship is integral to the process of change.<sup>16</sup>

As diversity and gender equity is welcomed into surgery and academic surgery in South Africa, the increased availability of role-models should be made visible to encourage consideration of the career by medical students and junior doctors. This could be achieved by placing diverse groups of surgeons, or surgical practices onto the front page, including collaborators or visual abstracts from articles within that issue. Through this practice, we can make visible and encourage the continued improvements in the diversity of our workforce at all levels in surgery, from first-year students upwards and through the glass-ceiling.

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