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# Medical journal covers

## An analysis of gendered images and how these might influence best practice

### Background

Images convey a concept or message to their audience. In medical communications, social expectations and stereotypes can be transferred through language, images and practices just as they can in the lay press. Most medical journals utilise images on their front covers, with the aim of enticing readers to open the journal.

### Objective

This article explores the use of image on the covers of two medical journals. It investigates the concepts of gender and the patient-doctor relationship used in these images through a content analysis.

### Discussion

While the images investigated are engaging and sometimes amusing, we explore meanings beyond our engagement as a viewer. The discussion focuses on the need for promotion of best practice, in words and pictures, to model best professional practice.

**Keywords:** doctor-patient relationship; patient centred care; periodicals as topic; medicine in art; general practice

Images convey a concept or message to their audience, and images of people can offer us ideas of who and what we are and who and what we might become. Image can also play a role in 'maintaining or subverting established forms of social practice'.<sup>1</sup>

Medicine is no stranger to the power of an image that succinctly conveys a concept or a message. In scientific circles, graphs and illustrations have been used for over a century to demonstrate key points,<sup>2</sup> and the illustration of medical texts has helped disseminate medical knowledge as far back as the 16th century.<sup>3</sup>

In medical media, social expectations and stereotypes can be transferred through language, images and practices just as they can in the lay press.<sup>4-12</sup> Medical journals reflect current values, beliefs and expectations, consequently the language and imagery within them speaks to the values of medicine today. In particular, examination of images in general practice journals can reveal cultural beliefs embedded within this professional group that may not be accessible in other ways. Previous studies have explored this in relation to the gendered nature of written communication and illustrations in textbooks, but these studies are now 10 or more years old and are not specific to medical journals or general practice.<sup>9-11</sup>

Most journals utilise images on their front covers. The principal function of these images is to attract attention and entice readers to open the journal. This is frequently achieved by linking the image to a journal 'theme' in a way that resonates with the reader's cultural knowledge, understanding or implicit beliefs.<sup>7</sup> This often involves the use of culturally embedded meanings within the image that enable a viewer to 'read' and understand the visual communication,<sup>13-17</sup> in much the same way that in Australia we 'read' a stick figure wearing a

skirt as meaning a 'female' only room.

In this article, we explore what the front cover image, chosen to represent a journal's theme, might be conveying about embedded 'cultural knowledge', especially in relation to gender. We examine the roles and values conveyed by images used on the covers of two primary healthcare medical journals: *Canadian Family Physician (CFP)* and *Australian Family Physician (AFP)*.

### Methods

The front covers of *AFP* and *CFP* were collated, along with their theme topics, for the period January 2003 to December 2007. This 5 year period was selected because 2007 was the last full year available when we started the analysis in 2008. To ensure a suitable number of human images for analysis, we selected a 5 year period and the journals were considered as a homogenous group. All covers with recognisable adult human forms were included in the study. The only covers excluded were the 50th *AFP* anniversary edition (it reproduced previous cover images) and covers with unisex images where gender could not be established, eg. organs such as the heart, medical imaging of the limbs, and whole figures where a consensus on gender could not be reached. Images of children were also excluded from the analysis.

The front cover of each issue included in the study was examined independently by each author, all of whom are general practitioners, and coded utilising a coding framework (*Table 1*) created by the first author and based on Gillian Dyer's 1982 checklist for exploring the symbolism of human images in advertising.<sup>15</sup> This framework was modified for a medical context (eg. doctor and patient). In order to ensure a consensus approach this was then modified further following discussions among the authors. Each author

**Table 1. Coding framework for analysing covers of journals examined**

Coding category	Frame of reference used
Adult human forms	Recognised by their outline, shape, facial characteristics, internal or external genitalia, or by external markers such as clothes, shoes, hair, make up and fingernails
Physicians and patients	Recognised largely by their clothes and associated props (eg. a stethoscope); some images were labelled and some were prominent physicians easily recognised from the images; other images were viewed with accompanying text
Active and passive representations	Classified by the behaviours represented in the image. These were analysed using facial expression, direction of gaze and body positioning, clothes and activities. Passive behaviours are symbolised by a lack of physical or professional activity, control, power and/or engagement. In contrast, active behaviours show physical and professional activity, powerful or controlling roles, and engagement directly with the viewer
Mothers and fathers	Identified by obvious pregnancy, holding of a baby, proximity of a child or by being interpreted in conjunction with associated text
Other health professionals	Recognised by clothing and associated text (eg. 'nurse')

recorded the frequency of recurring content themes under the categories outlined in *Table 1*. All covers were digitalised and entered into NVivo 8.0,<sup>18</sup> which enabled sections of each digitalised image to be selected and coded by content and theme. During this process, key recurrent content was identified, such as doctor, patient and gendered roles, the cover images were reviewed and the number of times key content was represented was counted.

### Results

Fifty-four covers from *AFP* (11 issues per year minus the anniversary issue) and 60 from *CFP* (12 issues per year) were analysed. Of these 114 covers, 74 displayed one or more adult human images (*CFP* 30 of 60 covers, *AFP* 44 of 54 covers); 136 were gender identifiable, with men represented slightly more frequently than women (52.2% vs. 47.8%).

### Men and women as doctor, nurse or parent

When the images were analysed using the coding framework, almost half represented patients, with men and women equally represented ( $p=0.61$ ) (*Table 2, 3*). However, in relation to representations of physicians, a male image was twice as likely to be used as a female image, (68.6% vs. 31.4%;  $p<0.05$ ) (*Table 2, 3*).

When images of women as patients were compared with images of women as GPs, a female identifiable image was significantly more likely

to be represented as a patient than as a GP (33 vs. 11;  $p=0.001$ ) (*Table 2, 3*). There was however, no significant difference found when comparing a male identifiable image as a patient with one as a doctor (32 vs. 24;  $p=0.285$ ). As only one image of the 136 was identifiable as a nurse (female), no further conclusions could be drawn in this category. No other health professionals were displayed. The parenting role among patients fell primarily to women, although this difference was not statistically significant (10 mothers, four fathers;  $p=0.13$ ) (*Table 2, 3*).

### Men and women – active or passive

Generally, patients were depicted as passive recipients of care rather than active collaborators in the patient-doctor interaction. *Figure 1* shows a female patient being wound-up like a childhood toy

by her doctor. Female patients were more likely to be depicted as passive recipients compared with male patients (56.3% vs. 43.7%) (*Table 2*).

On the other hand, *Table 3* demonstrates that the image of the male 'take charge' physician predominated (62.5%) while the trait of passivity was standard for all women, including GPs (93.9% of images involving a passive patient were female and only 18.2% of female doctors were represented in an active role).

### Discussion

In 1999, a *British Medical Journal* editorial entitled 'Paternalism or partnership?' questioned the practice of creating and maintaining an unhealthy dependency by assuming the doctor knows best and by not engaging in partnership with patients and communities.<sup>19</sup> Regardless of this, the imagery of the acting alone, generally male family doctor

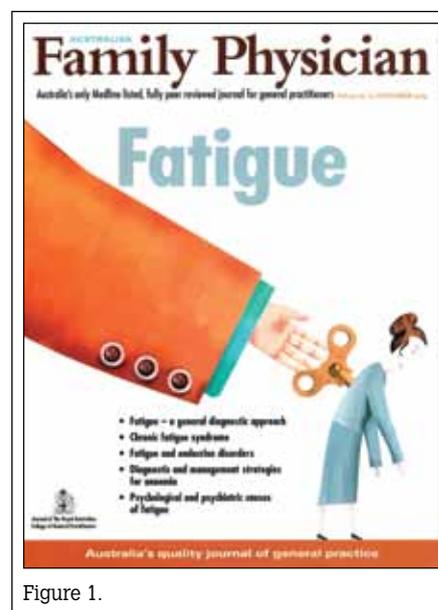


Figure 1.

**Table 2. Analysis of the gendered images on covers of journals examined**

Coding category*	Total	Male	%	Female	%
Number of gendered images overall	136	71	52.2	65	47.8
Images of patients	65	32	49.2	33	50.8
Images of physicians	35	24	68.6	11	31.4
Images of nurses	1	0	0	1	100
Images of parents	14	4	28.6	10	71.4
Images of active roles	26	18	69.2	8	30.8
Images of active physicians	35	15	42.8	2	5.8
Images of passive roles	71	31	43.7	40	56.3

\* These categories are not mutually exclusive and therefore the sum of all the categories is greater than the number of gendered images overall

with the passive dependent patient, prevails in the covers examined.

The two journals in this study (*AFP* and *CFP*) have extensive national and international reach. They are both MEDLINE indexed journals included in Thomson's Citation Index Expanded (SCIE). *Australian Family Physician* has been identified as the third and *CFP* the fifth most highly cited family medicine journals globally.<sup>20</sup> In addition to which the primary readership of both journals extends beyond Canada and Australia's practising GPs to include family medicine residents and general practice registrars, academics, international medical graduates, specialists and medical students throughout the world.<sup>21</sup> The messages conveyed by these journals are thus likely to be highly influential, whether they are in words or pictures.

The current reality is that 55% of doctors in Canada who are under the age of 35 years are women,<sup>22</sup> as were 52.1% of Australian medical graduates in 2007.<sup>23</sup> In Australia in 2007, 37.6% of vocationally registered GPs and 55.8% of general practice registrars were female.<sup>23</sup> By 2015, it is estimated that 40% of the Canadian GP workforce will be women.<sup>24</sup> The proportional representation of male to female doctors in this study may represent current gender ratios within family medicine, however, it does not look ahead to the impact of increasing numbers of young women entering the profession.

Only one of the 114 covers published over a 5 year period depicted a nurse and no other health professionals. This is counter to the way primary care has moved toward team based models and interprofessional, collaborative care. Once again, the imagery of the lone acting, generally male doctor prevails.

Like their patient counterparts, female GPs were represented as more passive than their male colleagues. In *Figure 2* there is a similar hierarchy of position; the white male doctor is represented in the highest most prominent position with the female and black male doctor placed in a lower order position. It is unknown whether such images shape the thinking of medical students as they seek role models and guidance in developing their doctor identities. However, the impact of stereotyping is manifold and can include fear, suspicion, dismissal and undervaluing; reinforcing inequalities or negative messages. The acceptance and integration of these stereotypes into images of male and

	<b>Male</b>	<b>Female</b>	<b>p value</b>
Total representations	71	65	
As patients	32/71	33/65	0.61
As physicians	24	11	0.03
As nurses	0	1	–
As parents	4/32	10/33	0.13
Active roles overall	18/71	8/65	0.08
Passive roles overall	31/71	40/65	0.04
Active physicians	15/24	2/11	0.03
Passive patients	22/32	31/33	0.01



Figure 2.



Figure 3.

female doctors may reinforce the status quo, undervaluing the medical skills of some,<sup>25–28</sup> which in turn may undermine the appropriate progress of gender equity in the workplace.

The journal covers studied displayed equal numbers of male and female patients. While both genders were generally assigned passive patient roles, there was a statistically significant difference between female and male passivity ( $p < 0.05$ ) (*Figure 1, 3*). It is hard to see how a 'Dresden doll' patient (even with perfect skin) is an idealised patient role (*Figure 3*). Moreover, to be acted on like the 'wind-up' patient in *Figure 1*, instead of participating in one's own care, is counter to current best practice, patient centred care, and the evidence that patient participation and engagement in management improves compliance and outcomes.<sup>29</sup> One could surmise that passivity in the patient-doctor relationship may be related to a patient's level of education or age, or arise from the interaction of gender with these factors, but there

is no clear indication to suggest that simply being male or female influences passivity in the medical encounter. More likely this reflects past ideas of hierarchical doctor directed care and stereotypes about women in particular.

Active representation also had implications for patients. *Figure 4* indicates a link with strength, superhero qualities, and the ability to manage without assistance. This representation places unrealistic expectations on what people may be able or want to achieve.

As doctors and viewers of medical journal covers we may engage with, enjoy and even laugh at the images our journals display. However, there is a serious side. Images are powerful conveyers of meaning. Images of patients as passive recipients of care being acted on by doctors, instead of being active participants, convey and therefore can promote outdated models of primary care rather than current evidence based best practice.<sup>6,29</sup> Stereotyping of men as 'in control supermen' may act

to reinforce the difficulties faced by men taking care of their health, engaging with preventive healthcare and seeking medical support when needed.

Medical journal covers are culturally situated, reflecting the values and the ideals of the society in which they are located. The findings of this study are similar to those in advertising and television. It has been suggested that media images reflect idealised and comfortable roles. It may be a more comfortable and a less challenging conceptualisation of patient-doctor relationships after a hard day in the clinic and may tempt GPs to read their journal. However, it is not in keeping with current values and beliefs about the patient-doctor relationship. Instead, such images reinforce stereotypes of the controlling powerful doctor, a role that is known to result in poorer patient care and therefore does not promote best health outcomes.

### Limitations of this study and future directions

The journals examined were published between 2003 and 2007. It is important to note that in this article we examined the final output and not the process for creating and selecting cover images, so we cannot comment on this. In addition, there are more detailed and complex aspects to a gender analysis of the journal covers that were not addressed in this study, including a gender perspective on which medical issues are featured, subgroup analysis within the female and male groups with respect to cultural diversity and other

factors, as well as what audience, male or female, the journals target. Future research could explore current journal cover images and also content, and include analysis of appropriate age representation, cultural diversity and local or national applicability.

### Conclusion

Images, as well as texts, of medical journals can reflect current evidence and best practice. They may also provide insight into accepted values. In subtle ways, images of passive patients, women as primary childcare providers, men as GPs, and nurses as absent from primary care constrain roles for women and men, and reflect the past rather than the future. General practitioners, trainees and students, who experience dissonance between voiced ideals and the unstated values conveyed through, for example, images or role modelling, could feel subconsciously supported if they default to behaving in ways represented by this hidden curriculum. The challenge is to critically reflect on the images we use. They can shape our professional approach and may influence professional practice. Let us use all the tools available to us, including both images and words, to promote healthy behaviours, teamwork, patient agency and to foster the highest quality general practice and medical care.

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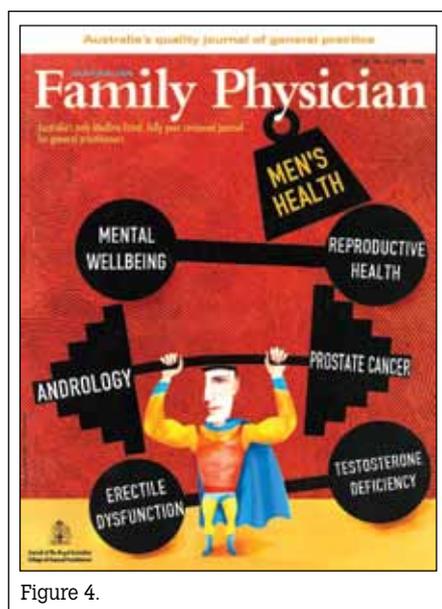


Figure 4.

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