

## TITLE

How are gender inequality and violence against women related? Findings from a population-level community attitudes survey.

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Associate Professor Michael Flood is a researcher on men, masculinities, and violence prevention at the Queensland University of Technology. He is the author of *Engaging Men and Boys in Violence Prevention* (2019) and the lead editor of *Engaging Men in Building Gender Equality* (2015) and *The International Encyclopaedia of Men and Masculinities* (2007).

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Professor Jenny Morgan, Melbourne Law School, has research interests in the areas of violence against women, homicide, feminist legal theory, and law reform. Jenny coauthored, with Reg Graycar, *The Hidden Gender of Law* published by Federation Press (1990), with a second edition in 2002 and has worked on homicide law reform, particularly reform of the law of provocation. Jenny's most recent publications have focused on media reporting of violence against women.

Associate Professor Anastasia Powell is a criminologist at RMIT University. Her research has specialised in sexual and intimate partner violence, including emerging forms of technology-facilitated violence against women and other cybercrime. Anastasia has published widely in these fields, with recent books including *'Digital Criminology'* (2018), and *'Sexual Violence in a Digital Age'* (2017).

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## TITLE

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## ABSTRACT

Low support for gender equality (GE) predicts attitudes supporting violence against women (VAW). However, little is known about the influence of attitudes towards different manifestations of GE. This study extends knowledge by assessing the relative strength of attitudes to GE across seven theoretically derived dimensions, and their association with attitudes towards VAW. 17,542 Australians participated in the 2017 National Community Attitudes Towards Violence Against Women Survey. Population means were calculated for scales formed from survey questions: the Community Attitudes Supportive of Violence Against Women Scale (CASVAWS), the Gender Equality Attitudes Scale (GEAS), and measures within the GEAS representing the theoretical dimensions. There was variation in support for GE between the measures. The lower the support for GE, the higher the support for VAW. Although all GEAS measures included in regression modelling contributed to variance in the CASVAWS, two accounted for more than half. The study suggests benefits in using a multi-dimensional model of GE to mitigate cultural support for VAW, with emphasis on the private sphere and countering hostility towards women and rigid gender roles and identities.

## KEY WORDS

*violence against women, gender equality, attitudes, theories, surveys*

## 1 BACKGROUND AND INTRODUCTION

Partner and sexual violence perpetrated by men against women are common problems with serious health, social and economic consequences (Lum On et al., 2016). This violence, referred to here as violence against women (VAW), is a barrier to the realisation of women's human rights and to achieving gender equality (GE) (UN, 2017). Many factors increase the probability of VAW, and these extend beyond affected individuals to include norms, structures and practices in communities, organisations and wider social systems (Ourwatch, 2015; WHO, 2019). Among the factors are inequalities in power and resources between men and women (Ourwatch, 2015, WHO, 2019). Accordingly, promoting GE has been identified as a policy goal for governments seeking to prevent VAW (Commonwealth of Australia, 2019).

However, gender inequalities are manifest and sustained in varied ways (Connell & Pearse, 2015). A remaining challenge is to identify the relative significance of different dimensions of gendered social arrangements and their relationship to VAW (Wall, 2016). A widely used schema for understanding gendered social arrangements is Connell's (2005) 'gender order' framework. The four dimensions in the framework are summarised in Table 1, along with how dynamics in each have been implicated in key explanatory theories of VAW (Webster & Flood, 2015).

-insert Table 1 here -

A further distinction is made between gendered arrangements in the private and public spheres (Miller & Borgida, 2016), a distinction applying across dimensions of the gender order (Connell & Pearse, 2015). Although egalitarianism in the public sphere is increasing in most advanced industrialised societies, inequalities persist in household decision-making and time spent in domestic and caring roles (Baxter & Hewitt, 2013; Scarborough et al., 2018). This 'separate spheres' model is salient for theories of partner

and sexual violence, much of which takes place in the private sphere (Bricknell et al., 2014). This violence, or threat of violence, are understood as key mechanisms through which power is exerted over women by men (Brownmiller, 1975, Yodanis, 2004), in turn stifling women's capacity to achieve equality in both spheres. The separation of the spheres can also work against intervention in both VAW and gender inequality (Goldfarb, 2000).

Gendered arrangements influence individuals and society in many ways, yet the precise relationship between attitudes and VAW is contested (Pease & Flood, 2008). However, some research suggests that collectively held attitudes reflect and reinforce broader social and economic arrangements (Luyt, 2015; Sibley et al., 2006; Jost et al., 2004). This is evident in international comparative research showing attitudinal support for GE and VAW is reflected in actual measures of GE (Brandt, 2011; Dotti Sani & Quaranta, 2017) and VAW (Martinez & Khalil, 2012) respectively.

For simplicity, and to clearly distinguish attitudes from gendered social arrangements themselves, here we use the term gender ideology (GI) synonymously with *attitudes* towards these arrangements. While GI has different meanings across literatures, we use it as a neutral term (reflecting the existence of many gender ideologies) and as encompassing *attitudes* across dimensions, spheres and settings.

As shown in the literature review following, there is substantial research exploring GI at the population-level and on the relationship between low support for GE and violence against women supportive attitudes (VAWSA). However, there is a dearth of research assessing the *relative* importance of different dimensions of GI at the population-level and the *relative* influence of different dimensions on VAWSA. This study contributes to addressing this gap by measuring GI and its relationship to VAWSA using a multi-dimensional measure of GI mapped to Connell's (2005) gender order framework and informed by theoretical accounts of the relationship between GE and VAW (Table 1). Public and private sphere GIs are also compared. To the extent that attitudes reflect gendered social arrangements, the findings point to particular dimensions requiring attention in policy and programming. They also provide an initial test of theoretical accounts of the relationship between GE and VAW. Before introducing the study, we turn to a brief overview of key empirical literature investigating attitudes representing the dimensions of the gender order described in Table 1 and the relationship between them and VAWSA.

## 2 LITERATURE REVIEW

### 2.1 Population-level research on GI

Although there are numerous scales to measure GI (Davis & Greenstein, 2009; Halimi et al., 2016), in this section, we focus on findings from population-level surveys which, due to their robust sampling procedures, facilitate population inferences. However, population studies have some limitations when compared with smaller studies as they generally require measurement parsimony (to contain interview length), and continuity in item wording over survey waves (if measuring change over time) (Walter, 2018). Consequently, evolution in the conceptualisation and measurement of GI, may not necessarily be reflected in population-level research (Halimi et al., 2018; Walter, 2018).

While temporal, contextual and measurement variation makes synthesising the literature a challenge, broadly, population-level research in post-industrial societies finds increasingly egalitarian GI from the 1960s, plateauing in the 1990s and early 2000s, followed by improvement (Donnelly et al., 2016; Shu & Meagher, 2018). This research shows widespread support for egalitarianism, alongside a sizeable resistant minority (Evans et al., 2019; IPSOS., 2020).

While GI is understood as comprising multiple dimensions (Pepin & Cotter, 2018; Walter, 2018), most population-level research uses a unidimensional measure. Much of this research focusses on the gendered division of labour and/or power (Walter, 2018). However, two key distinctions are apparent, the first between GI in public compared with private life, and the second between hostile and benevolent sexism (discussed further below). Private sphere GI has been found to be relatively less egalitarian and slower to change than public sphere ideology (Donnelly et al., 2016; Pepin & Cotter, 2018; Scarborough et al., 2018). This research has focussed on attitudes towards gendered decision-making in families (Donnelly et al., 2016; Pepin & Cotter, 2018; Yu & Lee, 2013) and attitudes towards combining employment with mothering (Halimi et al., 2018; O'Sullivan, 2012). The second distinction in population-level research (Glick et al., 2000) was first made in the work of Glick and Fiske (1997) who argued that sexism is ambivalent; being underpinned by the ideologies of both hostile sexism (emphasising men's power over women and negative views towards those challenging traditional gender roles) and benevolent sexism (the seemingly positive idea that it is men's role to protect and provide for women, but which actually disempowers them). Glick and Fiske (1997) propose that hostility



reflects and reinforces a 'backlash' against advances made by women and the women's movement, a claim made by others although writing from different theoretical standpoints (Dragiewicz, 2011; Manne 2018).

In sum, few population-level studies investigate dimensions of GI beyond those discussed above, and to our knowledge, there are no studies (population-level or otherwise) that have systematically delineated dimensions of GI selected for their theoretical relevance to VAW. We turn now to research examining the relationship between GI and VAWSA, drawing on both population-level and smaller-scale studies.

## 2.2 GI and VAWSA

We understand VAWSA as extending beyond the blatant endorsement of VAW to include attitudes which have the effect of supporting or failing to sanction against it, for example by excusing its use or shifting blame from the perpetrator (Webster et al., 2018). The fact that VAWSA were underpinned by a web of attitudes pertaining to gender and sexuality was first recognised in the pioneering work of Burt (1980) and further developed by Lonsway & Fitzgerald (1995). Three meta-reviews conducted in the last decade have investigated the relationship between GI and rape supportive attitudes (Grubb & Turner, 2012; Suarez & Gadalla, 2010; van der Bruggen & Grubb, 2014). They find a consistent relationship between low support for GE and rape supportive attitudes. This pattern is supported in most subsequent research on rape supportive attitudes, as well as on attitudes towards intimate partner violence (Exposito et al., 2014; Haj-Yahia et al., 2015; Lelaurain et al., 2018; Lelaurain et al., 2019; Martinez & Khalil, 2012). In other words, the likelihood of reporting VAWSA is higher among those reporting low support for GE.

A range of measures has been used to investigate the relationship between GI and VAWSA, with Suarez and Gadalla (2010) naming 25 different concepts in their review (e.g., adversarial sexual beliefs, attitudes towards women, hostility towards women). A relationship between low support for GE and VAWSA is confirmed for attitudes representing each of the *separate* gendered patterns in Table 1 (Adana et al., 2011; Austin et al., 2016; de Puiseau & Roessel, 2013; Fabiano et al., 2003; Fox & Potocki, 2016; Fulu et al., 2013; Giovannelli & Jackson, 2013; Haj-Yahia et al., 2015; Hill & Marshall, 2018; Papp et al., 2017; Radke et al., 2018). However, research examining the *relative* contribution of different dimensions of GI to VAWSA is limited to comparing the relative influence of benevolent and hostile

sexism. To our knowledge, there are no studies investigating relationships between VAWSA and private as opposed to public sphere GI.

In Australia, data on VAWSA and GI, are collected via the National Community Attitudes Towards Violence Against Women Survey (or NCAS), a government-funded quadrennial national survey. Regression analyses conducted using data from the 2013 survey (N= 17, 517) found that inequalitarian gender attitudes more strongly predicted VAWSA (55% of  $R^2$ ) than all the demographic inputs combined (17% of  $R^2$ ) (Webster et al., 2019). This is consistent with prior research (Suarez & Gadalla, 2010) and the theorised link between unequal gendered social arrangements and VAW. However, a limitation of the 2013 NCAS was the unidimensional measure of GI used, limiting understanding of the potential *relative* importance of *different* dimensions of GI.

### 2.3 The current study

This study addresses gaps in existing research by using a multi-dimensional measure of GI developed for the 2017 NCAS, the Gender Equality Attitudes Scale (GEAS). It investigates three questions:

- What is the relative support for egalitarianism across different dimensions of GI in the Australian population? (RQ1)
- Is there a correlation between inequalitarianism in each dimension of GI and VAWSA? (RQ2)
- To what extent does inequalitarianism in different dimensions of GI predict VAWSA? (RQ3)

To the extent that attitudes reflect gendered social arrangements, the findings can help to determine if a multi-dimensional approach to promoting GE is necessary when seeking to prevent VAW (RQ1) and, if so, whether dimensions indicated in key theories are relevant to practice (RQs 2 and 3). They may also indicate if an emphasis on particular dimensions of GE is required, either because attitudes in those dimensions are more widely held (RQ 1) or because they are more strongly related to, or predict, attitudes supportive of VAW (RQs 2 and 3). Findings can also be used as a partial assessment of explanatory theories of VAW.

## 3 METHOD

This paper focuses on analyses of two modules in the NCAS instrument concerned with attitudes towards GE and VAWSA respectively.

### 3.1 Participants

The 2017 survey involved a probability-based sample of 17,542 respondents aged 16 years and over from across Australia. Respondents were contacted on both fixed lines ( $n=7,042$ ) and mobile phones ( $n=10,500$ ), the latter to increase the representation of respondents using mobile phones only. Response maximization techniques were used, achieving cooperation and response rates of 48.8% and 16.9% respectively. Interviews took an average of 22.43 minutes. The sample was weighted for the probability of being selected in a household and to align with the Australian population (Webster et al., 2018).

### 3.2 Measures

Scale development involved item selection and reduction using Rasch analysis, followed by scale confirmation and factor analysis with the full sample. Full details of scale development are in Webster et al. (2018). Item selection was based on prior work involving the mapping of key gendered patterns implicated in VAW in the literature (Table 1) to Connell's (2005) gender order framework (Webster & Flood, 2015). Items were selected from the literature to represent these patterns and factor analysis was conducted to determine whether the latent concepts represented in each of the patterns were also reflected in attitudes. The instrument has 19 items measuring GI, 18 of which are included in a scale, the GEAS ( $\alpha = .86$ ;  $N = 17,542$ ). Five factors emerged (Table 2; Appendix 1) and these were compatible with the framework used for item selection with the exception that items concerned with gender *roles* and those concerned with gender *identities* formed a single factor (rather than separating into two as per the framework).

- Insert Table 2 here -

To compare public and private sphere GIs, two constructs were formed by dividing *all* items in the GEAS into those concerned with the public realm ( $\alpha = .72$ ) and those concerned with private life ( $\alpha = .80$ ) (i.e.

not just items concerned with *decision-making* as was the case for the sub-scales. Two items not categorisable by sphere were excluded (Appendix 1).

The 2017 instrument contains 35 items measuring attitudes supportive of sexual violence and partner violence, 32 of which are included in the Community Attitudes Supportive of Violence Against Women Scale (CASVAWS) ( $\alpha = 0.92$ ) (Appendix 2). Revised for the 2017 survey, items were selected *post hoc* from the 2013 instrument and augmented with additional items from the literature (Webster et al., 2018). Item selection and reduction methodology was similar to the GEAS.

### 3.4 Analysis plan

The Rasch measurement model was applied to the sample to calculate scores for each scale. The model derives objective, fundamental, linear measures from stochastic observations of ordered category responses (Linacre 2014). Scores for the CASVAWS and the GEAS and its sub-scales and constructs were calculated for each respondent. Scores ranged from 1 to 100. A high score indicates a high level of endorsement of attitudes supportive of VAW (an undesirable result) and a high level of gender egalitarianism (a desirable result) respectively, relative to other respondents.

To investigate relative levels of support for egalitarianism across dimensions of GI (RQ 1), a population-level mean score was developed for each GEAS sub-scale and construct. Paired t-tests were performed to assess the significance of the differences between each of the sub-scale means and between the means of the two constructs. Cohen's test of effect size (Cohen, 1992) was used to assess the size of any differences.

To gauge the relationship between the CASVAWS and the GEAS and GEAS sub-scales and constructs (RQ 2), bivariate analysis was performed. Pearson's coefficients were calculated, and the strength of correlations determined (Cohen, 1992). Scatterplots were produced for each. Correlations for each GEAS measure were compared with one another and tested for significance using the method of Hittner et al., (2003).

To investigate the extent to which each of the GEAS sub-scales predicts VAWSA (RQ 3), a regression model was constructed including the scores for each GEAS sub-scale as explanatory variables and the CASVAWS score as the outcome measure. For the independent variables in this model, linear, quadratic and cubic terms were tried. For all variables, the linear term provided the best fit, as measured by AIC and by adjusted- $R^2$ . Variance inflation factors were inspected for multicollinearity and were found to be satisfactory (Fox & Weisberg 2011). As is usual practice, coefficients in the regression models are with respect to the reference category for categorical variables and the mean (or intercept) for non-categorical variables.

All analyses were carried out using R (R Core Team, 2020). For linear regression the `lm()` function which applies QR decomposition to solve for the model parameters was used. Demographic controls are not considered here given their minor contribution relative to the GI measure in the study based on 2013 data (Webster et al., 2019), a pattern confirmed with the current data set for the GEAS measures (models available on request).

#### 4. FINDINGS

Gender egalitarianism was lowest (signified by a low mean score) for the sub-scale ‘hostility towards women’ ( $M=60.71$ ;  $SD = 17.14$ ), followed by ‘decision-making in private life’ ( $M=73.96$ ,  $SD = 23.61$ ); ‘rigid gender roles’ ( $M = 78.52$ ,  $SD = 15.83$ ); ‘decision-making in public life’ ( $M = 78.91$ ,  $SD = 18.46$ ) and ‘male peer relations’ ( $M = 79.24$ ,  $SD = 15.22$ ) (Table 3). Differences between the means of each sub-scale were statistically significant. With a few exceptions, the  $d$  for each of the pairs was medium to large (Cohen, 1992) (Table 3). A comparison of the means for the constructs measuring private and public sphere GI shows a relatively higher level of support for gender egalitarianism in public ( $M= 76.32$ ;  $SD = 16.91$ ) than in private life ( $M= 65.52$   $SD = 12.16$ ). The effect size was large (Table 3).

- Insert Table 3 here -

A consistent negative relationship was found between scores for each sub-scale and construct in the GEAS and the CASVAWS (RQ 2). Persons with a low score on each of the GEAS sub-scales (signifying relatively inequalitarian GI) tended to have a higher score on the CASVAWS (signifying a relatively high level of endorsement of VAWSA). This pattern of association, confirmed in the scatterplots (available on

request), was statistically significant and of medium to large effect size (Table 4). There were only two correlations between which there was no significant difference: the construct measuring public sphere GI and the 'rigid gender roles' sub-scale ( $p = 0.152$ ). All other correlations were significantly different at  $p < 0.001$  (data not shown). The relationship was stronger and the effect size larger for the construct measuring private sphere GI versus that measuring public sphere GI.

-insert Table 4 here –

RQ 3 is concerned with the extent to which each GEAS sub-scale predicts CASVAW. The adjusted  $R^2$  was 47.09% (Table 5) and the largest contributions to variance were the mean scores for the 'hostility towards women' and 'rigid gender roles' sub-scales, contributing 40.31% and 21.21% to adjusted  $R^2$  respectively. Smaller contributions were made (in descending order of importance) by mean scores for the 'decision-making in public life'; 'decision-making in private life' and 'male peer relations' sub-scales (Table 5).

-insert Table 5 here-

Those having a relatively high CASVAW mean score (signifying a tendency to endorse VAWSA) had lower scores for each GEAS sub-scale (signifying a tendency towards inequality). The strongest association with the CASVAW mean score was for the 'hostility towards women' sub-scale ( $\beta = -0.39$ ,  $p < 0.001$ ); and in descending order of association the sub-scales 'rigid gender roles' ( $\beta = -0.21$ ,  $p < 0.001$ ), 'male peer relations' ( $\beta = -0.10$ ,  $p < 0.001$ ); 'decision-making in private life' ( $\beta = -0.10$ ,  $p < 0.001$ ); and 'decision-making in public life' ( $\beta = -0.09$ ,  $p < 0.001$ ). (Table 6).

-Insert Table 6 here -

## 5. DISCUSSION AND IMPLICATIONS

This study extends existing research by investigating GI as a multidimensional concept, to determine *relative* levels of egalitarianism in the Australian population across dimensions of GI implicated theoretically in VAW (RQ 1), and the relative strength of the relationship between each dimension and VAWSA (RQs 2 and 3). It is the first known study to compare the relationship between VAWSA and public versus private sphere GI.

The study confirms variability in support for gender egalitarianism across dimensions, with egalitarian attitudes in some being more widely held than in others (Table 3). Egalitarianism was lowest on the measures of hostility towards women and gendered decision-making in private life. A lower level of support for GE in private (versus public) life was further confirmed when comparing the two measures constructed from *all* items representing GI in private and public life respectively (i.e., not just those concerned with decision-making). This extends prior population-level research where investigation of this differential has been limited to measures of household decision-making (Pepin & Cotter, 2018) and conflict between women's roles in the workplace and as mothers (Halimi et al., 2016).

Across GEAS measures participants with a low level of support for GE were more likely to endorse attitudes supportive of VAW (Table 4). Inegalitarianism in the five dimensions included in regression modelling predicted attitudes supportive of VAW (Table 6), confirming prior research (reviewed above) in which dimensions were investigated individually. Together the measures explained a large proportion of variance (Table 5). 'Hostility towards women' and 'rigid gender roles' were the first and second strongest predictors of VAWSA respectively.

### **5.1 Implications for policy and programming**

Although there are many purposes for, and advantages of, promoting GE in communities, organisations and nationally (Woden et al., 2020), research suggests that achieving a sustained reduction in VAW will depend in part on promoting GE overall, along with a gender transformative approach to prevention programming (Ourwatch, 2015; WHO, 2019). In turn, many Australian and international policies and practice guides prescribe a multi-strategy, multi-level and cross-sector approach to prevention, in which priority is given to promoting GE, among the factors that reduce the probability of VAW (Council of

Australian Governments, 2010; Commonwealth of Australia, 2019, Kerr-Wilson et al., 2020; Ourwatch, 2015; WHO, 2019). However, to date identifying *which* dimensions of GE to target or prioritise has been based on a synthesis of theory and evidence from localised and non-representative studies (Ourwatch, 2015). This study provides the first population-based evidence, with findings having implications at four levels.

First, in VAW prevention policy they suggest a multi-dimensional (rather than a generalist) approach to promoting GE is indeed required. The strong relationships between each GEAS measure and VAWSA and the large variance they explain, suggests that together they provide a sound framework for policy. Second, (and similarly), where preventing VAW is among the goals of GE strategies in jurisdictions, communities or organisations, the findings support a multi-dimensional operationalization of GE, and point to the dimensions warranting particular attention. As attitudes endorsing hostility towards women were relatively more likely to be held and low support for gender egalitarianism in this dimension was the strongest predictor of holding VAWSA, gendered hostility requires particular emphasis (e.g., programs to counter on-line harassment or promote respect in intimate relationships). The findings also indicate the need for emphasis on tackling rigid gender roles and identities, with this dimension of GE being the second strongest predictor of VAWSA.

Findings suggest it is possible for individuals to endorse particular forms of GE in public life, whilst still harbouring negative attitudes towards equality in private life. The lower level of support for private sphere egalitarianism (compared with equality in public life), together with its stronger correlation with VAWSA, suggest the need for a distinct emphasis on equality in intimate, family and household relationships. This is especially so given research showing that the practice of GE is lagging in this sphere (Scarborough et al., 2018). Nevertheless, promoting GE in both spheres remains important as these may operate in interrelated and mutually reinforcing ways to maintain gender inequality (Miller & Borgida, 2016) and contribute to VAW (Whitaker, 2014). Although there are particular challenges to promoting GE in intimate and family relationships, some promising approaches have been identified, including community-level communications, school-based interventions and couples programs (Kerr-Wilson et al., 2020).



The third level at which implications lie is program design, with findings supporting gender transformative goals featured in many program logics or ‘theories of change’ (discussed further in section 5.2 below). That is, they suggest there is indeed merit in initiatives that address particular aspects of gender relations understood to be linked to violence (such as reducing adherence to rigid gender roles in negotiations of sexual consent, or challenging male peer relations that tolerate hostility towards women. e.g., see also Willie et al, 2018). The comprehensiveness and effectiveness of such programs might be enhanced through identifying and evaluating the specific dimensions of GE being targeted.

The emphasis required on the GE dimensions in programming is likely to vary with the objectives, population sub-groups and settings of particular approaches. For example, while findings for the ‘negative peer relations’ dimension suggest that negative aspects of male peer relations can be given relatively less emphasis at the *population level*, addressing them in particular male-dominated environments is likely to be important given research suggesting they feature commonly in such contexts (DeKeseredy & Schwartz 2013).

The relative pervasiveness of hostile sentiment in this study supports claims in the literature of the need to anticipate and plan for the possibility of a backlash toward program activity, participants or beneficiaries (Flood et al., 2018).

Finally, the relationships between the GI measures and VAWSA, and their combined contribution to variance, suggest they are useful (among other means), for evaluating and monitoring progress at both the national and program level.

## **5.2 Implications for theory**

As noted above, this study confirms that GI is multi-dimensional. Although trends in attitudes of hostility towards women over time were not investigated, the study shows that that hostile sexism is pervasive in Australia relative to the other dimensions of GI and provides support for theorists proposing a ‘backlash’ effect (Dragiewicz, 2011; Manne, 2018).

There is debate as to whether the public/private divide in GI reflects the gradual liberalisation of attitudes, (with attitudes in the private sphere being the last to liberalise) (Scarborough et al., 2018); revisionism confined to particular cohorts reflecting negatively on their own experiences of gender role liberalisation (Donnelly et al., 2016); or a phenomenon evident across the population, particularly among young people (Pepin & Cotter, 2018). In this third view, the divide represents an intensification of traditionalism in the private sphere which puts a brake on overall gender egalitarianism (Yu & Lee, 2013). Again, while analysis across survey waves would be required to investigate temporal trends, this study confirms that 'separate spheres' are a feature of GI in Australian society.

The variance explained by the regression model supports explanatory theories of VAW implicating inequalitarian gender relations, while the contribution made by each sub-scale suggest that dynamics across all four dimensions of Connell's (2005) gender order are salient. Patterns in the *relative* influence of the dimensions to VAWSA also have important theoretical implications.

The strong influence of the 'hostility towards women' sub-scale within the gender order dimension of 'emotional and human relations', supports theories implicating hostility towards women and attempts to improve the status of women, in VAW. While the other sub-scale in this dimension, 'male peer relations', was the least influential and these attitudes least likely to be endorsed, this may be due to such cultures being particularly influential in male-dominated environments, as opposed to exerting their primary influence at a *population-level*.

Gender asymmetries of power, especially in relationships, are widely implicated in explanatory theories of VAW (Stark, 2009). This is supported in the large, combined contribution to variance (27.11%  $R^2$ ) made by the two measures representing Connell's 'gender relations of power' ('decision-making in public'; 'decision-making in private'). Their similar contributions to variance supports theories of VAW proposing that gendered divisions of power in public life play a symbolic role in legitimising and reinforcing power asymmetries in the private sphere (Whitaker, 2014).

Connell's 'gendered division of labour' and 'gender culture and symbolism' were represented by a single sub-scale 'rigid gender roles' which contained items representing both gender roles and identities, consistent with the factor analysis in the prior scale development study (Webster et al., 2018). Rigid gender roles and/or identities are implicated in several theories, including, sexual script theory (Ryan, 2011), sexual objectification theory (Calogera & Tylka, 2014), and male role stress theory (Baughner & Gazmararian, 2015). Their significance is supported here with this sub-scale having the second strongest influence on the CASVAW (21.21% of  $R^2$ ).

Overall, this study supports the theoretical contention that gender traditionalism in the private sphere has particular implications for VAW. Indeed, the difference in the correlation between VAWSA and the two constructs containing all items concerned with GE in public and private life respectively was among the largest in the study (Table 4). While the differences between the sub-scales 'decision-making in private life' and 'decision-making in public life' were minor in both bivariate and multivariate analysis (Tables 3 and 5), the items in them contain the concept of 'men's control' and this concept may be a more salient influence on VAWSA than the sphere in which it takes place.

The differential in attitudes between the spheres is reflected in the achievement of GE (Scarborough et al., 2018) and is among the conditions proposed to explain the paradox of continuing high levels of violence in Nordic countries despite their strong performance on gender egalitarianism. Specifically, it is argued that Nordic countries have been successful in achieving GE in education, politics and so on, but that inequalities in decision-making in relationships, and the distribution of childcare, domestic work and emotional labour remain (Lister, 2009; Pease, 2015). Others suggest the oppression of women takes new forms as women gain increasing equality in the public sphere. Many of these, such as the rise in 'intensive mothering' (Pepin & Cotter, 2018) and the sexual objectification of women (Loughnan et al., 2015), particularly impact the private realm. Such claims are consistent with the proposition that different dimensions of the gender order may operate in apparently contradictory ways to maintain overall inequality (Connell & Pearse, 2015).

## 6. STRENGTHS AND LIMITATIONS

The survey had a large probability sample weighted to population benchmarks. The response rate, although comparable to other surveys (Kohut et al., 2012; Shih & Fan, 2008), means that a response bias could not be discounted. As with any cross-sectional research, an association between variables does not mean causality. Longitudinal research is needed for assessing this. While all but the 'male peer relations' sub-scale met thresholds in the literature, findings may be, in part, an artefact of measurement variation. The survey instrument was designed in a policy context, necessitating a pragmatic balance between program and theoretical, conceptual and methodological objectives. The GEAS and its sub-scales were formed using items from existing literature and, despite efforts to address them, have many limitations identified elsewhere (Halimi et al., 2018, Walter, 2018).

## 7. FURTHER RESEARCH AND CONCLUSION

The measures used in this study are broad and do not represent all theoretical accounts and more than one explanatory theory may be nested within each measure. Research using yet more refined measures would be useful (e.g., different aspects of masculinity (Murnen et al., 2002)). Measuring 'roles' separately from 'identities' would allow investigation of theoretical claims that oppressive gendered *identities* (e.g. sexualised and motherhood identities) more strongly influence gender inequality (Pepin & Cotter, 2018) and VAW (Pease, 2015) in advanced industrialised societies, than do gendered *role divisions*, especially public sphere role divisions.

Research comparing attitudes condoning violence-supportive male peer relations in the whole population with those in male-dominated occupations and social networks would provide a stronger test of theories implicating male peer relations in VAW (DeKeseredy & Swartz, 2013). Also useful would be studies exploring the influence of GI in regression models containing other theoretically relevant correlates, such as prior exposure to violence (Carlson et al., 2019) or attitudinal dispositions such as support for violence as a practice (Rodriguez Martinez & Kahil, 2017), Social Dominance Orientation or Right-Wing Authoritarianism (Sibley et al., 2007), to determine whether GI is a primary influence or whether these other variables are its antecedents as suggested by others (e.g. see Sibley et al., 2007).

Nevertheless, using attitudes as representations of arrangements sustaining gendered social relations and VAW, this study helps to identify particular gendered patterns requiring emphasis in prevention policy and programming, either because inequality is more likely to be supported within them, and/or because attitudes in particular dimensions more strongly predict VAWSA. It also contributes to understanding the theoretical links between GE and VAW.

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## APPENDIX 1

### Gender Equality Attitudes Scale

pr = items in the private sphere construct. pub = items in the public sphere construct.

#### *Rigid gender roles subscale*

1. If a woman earns more than her male partner, it is not good for the relationship. (pr)
2. A man should never admit when others have hurt his feelings. (pr)
3. When a couple start dating, the woman should not be the one to initiate sex. (pr)
4. I think it is embarrassing for a man to have a job that is usually filled by a woman. (pub)
5. A woman has to have children to be fulfilled. (pr)

#### *Decision-making in private life subscale*

6. Men should take control in relationships and be the head of the household. (pr)
7. Women prefer a man to be in charge of the relationship. (pr)

#### *Decision-making in public life subscale*

8. In the workplace, men generally make more capable bosses than women. (pub)
9. Men, rather than women, should hold positions of responsibility in the community. (pub)
10. On the whole, men make better political leaders than women. (pub)
11. Women are less capable than men of thinking logically. (pr)

#### *Hostility towards women subscale*

12. Many women exaggerate how unequally women are treated in Australia. (pr)
13. Many women mistakenly interpret innocent remarks or acts as being sexist. (pr)
14. Many women fail to fully appreciate all that men do for them. (pr)
15. Women often flirt with men just to be hurtful. (pr)
16. Discrimination against women is no longer a problem in the workplace in Australia. (pub)

#### *Male peer relations subscale*

17. I think there's no harm in men making sexist jokes about women when they are among their male friends.
18. I think it's okay for men to joke with their male friends about being violent towards women.

## APPENDIX 2

### Community Attitudes Supportive of Violence Against Women Scale

1. A lot of what is called domestic violence is really just a normal reaction to day-to-day stress and frustration.
2. Domestic violence can be excused if it results from people getting so angry that they temporarily lose control.
3. Domestic violence can be excused if the violent person was themselves abused as a child.
4. Domestic violence can be excused if, afterwards, the violent person genuinely regrets what they have done.
5. Sometimes a woman can make a man so angry that he hits her when he didn't mean to.
6. Women who flirt all the time are somewhat to blame if their partner gets jealous and hits them
7. Domestic violence is a private matter to be handled in the family.
8. It's a woman's duty to stay in a violent relationship in order to keep the family together.
9. Domestic violence can be excused if the victim is heavily affected by alcohol.
10. Domestic violence can be excused if the offender is heavily affected by alcohol.
11. A man is less responsible for rape if he is drunk or affected by drugs at the time.
12. If a woman is raped while she is drunk or affected by drugs she is at least partly responsible.
13. A female victim who does not leave an abusive partner is partly responsible for the abuse continuing.
14. I don't believe it's as hard as people say it is for women to leave an abusive relationship.
15. If a woman keeps going back to her abusive partner then the violence can't be very serious.
16. It's acceptable for police to give lower priority to domestic violence cases they've attended many times before.
17. Women who stay in abusive relationships should be entitled to less help from counselling and support services than women who end the relationship.
18. If a woman claims to have been sexually assaulted but has no other physical injuries she probably shouldn't be taken too seriously.
19. Women who wait weeks or months to report sexual harassment are probably lying.
20. Women who wait weeks or months to report sexual assault are probably lying.
21. Women who are sexually harassed should sort it out themselves rather than report it.

22. In my opinion, if a woman reports abuse by her partner to outsiders it is shameful for her family.
23. Many women tend to exaggerate the problem of male violence.
24. Women going through custody battles often make up or exaggerate claims of domestic violence in order to improve their case.
25. A lot of times, women who say they were raped had led the man on and then had regrets.
26. It is common for sexual assault accusations to be used as a way of getting back at men.
27. Women find it flattering to be persistently pursued, even if they are not interested.
28. If a woman sends a nude image to her partner, then she is partly responsible if he shares it without her permission.
29. Women often say 'no' when they mean 'yes'.
30. Since some women are so sexual in public, it's not surprising that some men think they can touch women without permission.
31. If a woman is drunk and starts having sex with a man, but then falls asleep, it is understandable if he continues having sex with her anyway.
- 32.** When a man is very sexually aroused, he may not even realise that the woman doesn't want to have sex

**Table 1:** *Dimensions of the gender order and how they are implicated in explanatory theories of VAW*

<b>Gender order dimension (Connell, 2005)</b>	<b>Dynamics implicated in key explanatory theories of VAW</b>	<b>Example of theorised contribution to VAW</b>
Gendered division of power	Male domination of decision-making in public life (e.g. politics, education).	GE in civic society is associated with improvements in women's rights including the right to safety.
	Male dominated decision-making in private life (e.g. families, intimate relationships).	Legitimises control by men over women in relationships. Violence – symbolic and real – may be used to maintain or restore the gender hierarchy.
Gendered division of labour	Rigid adherence to a division of labour whereby men assume primary responsibility for breadwinning and women for nurturing and caring in families. This division is also reflected in public life (e.g. through occupational segregation).	May contribute to masculine role stress, a consequence of perceived failure to fulfil the male role. VAW may be used, justified or excused, to restore a perceived loss of power and status.
Culture and symbolism (how gender identities are defined in culture, language and prevailing beliefs)	Rigidly defined masculine and feminine identities. Despite increasing gender fluidity, hegemonic forms have continuing significance.	Are the basis of a 'sexual script' in which men are cast as naturally active and women as passive. May increase the risk of sexual violence by undermining the need for the ongoing negotiation of consent.

Emotional and human relationships	Male dominated environments in which attachments between men are privileged, and strict conformity to negative expressions of masculinity is expected (e.g. peer groups, some sports codes).	Resistance to speaking out against VAW, or pressure to participate in disrespectful or abusive behavior to seek peer approval and/or avoid rejection.
	Adversarial gender relations in which 'the sexes' strive to maximize advantage over one another. Women positioned as deceitful and 'out to get' men. May manifest as hostility towards women and their social and economic advancement. Sometimes referred to as 'backlash'.	Hostility fosters an environment in which VAW may be justified or excused (as part of a gender adversary) or trivialized (e.g. portrayal of women as lying about violence).

Source: Summarised from Webster & Flood, 2015.

<b>Table 2: GEAS sub-scales: measurement and conceptual properties</b>		
<b>GEAS sub-scale</b>	<b>Cronbach <math>\alpha</math></b>	<b>Gender order dimension/s (Connell, 2005)</b>
'Rigid gender roles'	0.65	Culture and symbolism/gendered division of labour
Men's control of decision-making in public life ('decision-making in public life')	0.75	Division of power
Men's control of decision-making in private life ('decision-making in private life');	0.74	Division of power
Male peer relations emphasizing aggression and disrespect of women ('male peer relations')	0.43	Emotional and human relationships
Hostility towards women and improvement in women's status ('hostility towards women')	0.72	Emotional and human relationships



**Table 3:** Descriptive Statistics and t-test Results for GEAS sub-scales and constructs mean scores.

Pairs of GEAS sub-scales	N	Mean (SD)	95% CI for difference	Significance <sup>†</sup>	Effect size <sup>†</sup> (Cohen's <i>d</i> )
<b>Pairs of GEAS sub-scales</b>					
<b>Hostility towards women</b>	<b>17412</b>	<b>60.71 (17.14)</b>			
Rigid gender roles		78.52 (15.83)	(-18.08, -17.55)	0.001	Large
Male peer relations		79.24 (15.22)	(-18.81, -18.27)	0.001	Large
Decision-making in private life		73.96 (23.61)	(-13.55, -12.87)	0.001	Large
Decision-making in public life		78.91 (18.46)	(-18.47, -17.91)	0.001	Large
<b>Rigid gender roles</b>	<b>17521</b>	<b>78.49 (15.84)</b>			
Male peer relations		79.23 (15.22)	(-1.00, -0.47)	0.001	Small
Decision-making in private life		73.94 (23.61)	(4.26, 4.90)	0.001	Medium
Decision-making in public life		78.90 (18.45)	(-0.65, -0.15)	0.001	Small
<b>Male peer relations</b>	<b>17506</b>	<b>79.24 (15.22)</b>			
Decision-making in private life		73.98 (23.60)	(4.97, 5.67)	0.001	Medium
Decision-making in public life		78.90 (18.45)	(0.06, 0.62)	0.05	Small
<b>Decision-making in public life</b>	<b>17442</b>	<b>73.95 (23.60)</b>			
Decision-making in private life		78.93 (18.44)	(-5.31, -4.66)	0.001	Medium
<b>Pairs of GEAS constructs</b>					
<b>Private sphere GI</b>	<b>17527</b>	<b>65.52 (12.16)</b>			
Public sphere GI		76.32 (16.91)	(-11.01, -10.59)	0.001	Large

<sup>†</sup>Thresholds were 0.2 (small), 0.5 (medium) and 0.8 (large).

**Table 4:** Pearson's correlation coefficients for the relationship between scores on GEAS measures and CASVAWS scores (*n*=17,510)

	R	Effect size <sup>†</sup>
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		(Cohen's <i>d</i> )
<b>GEAS &amp; Constructs</b>		
GEAS – overall	-0.69	Large
Private sphere GI construct	-0.68	Large
Public sphere GI construct	-0.50	Medium
<b>GEAS sub-scales</b>		
Hostility towards women	-0.60	Large
Rigid gender roles	-0.51	Large
Male peer relations	-0.40	Medium
Decision-making in private life	-0.43	Medium
Decision-making in public life	-0.47	Medium

All p-values for testing non-zero R were less than 0.001. <sup>†</sup>Thresholds were 0.2 (small), 0.5 (medium) and 0.8 (large).

**Table 5:** Contribution to variance in the CASVAWS scores by GEAS sub-scale scores

GEAS sub-scale	Absolute	Relative
Rigid gender roles	9.99	21.21
Decision-making in public life	6.77	14.37
Decision-making in private life	6.00	12.74
Male peer relations	5.36	11.38
Hostility towards women	18.98	40.31
TOTAL	47.09	100.00

**Table 6** Regression output for the CASVAWS using scores for sub-scales in the GEAS

	Intercept	Rigid gender roles	Decision-making in public life	Decision-making in private life	Male peer relations	Hostility towards women
Coefficient	0.00	-0.21	-0.09	-0.10	-0.10	-0.39
Standard error	0.01	0.01	0.01	0.01	0.01	0.01
Significance		0.001	0.001	0.001	0.001	0.001