METHODOLOGY REPORT:

Survey redevelopment and implementation of the

2017 National Community Attitudes towards Violence against Women Survey (NCAS)

ANROWS

AUSTRALIA'S NATIONAL RESEARCH ORGANISATION FOR WOMEN'S SAFETY

to Reduce Violence against Women & their Children

In partnership with:

RMIT UNIVERSITY

Social Research Centre

THE UNIVERSITY OF MELBOURNE

UNSW SYDNEY

Methodology report:

Survey redevelopment and implementation of the

2017 National Community Attitudes towards Violence against Women Survey (NCAS)

Ms Kim Webster, Dr Kristin Diemer, Dr Nikki Honey, Ms Samantha Mannix, Ms Justine Mickle, Professor Jenny Morgan, Ms Alexandra Parkes, Ms Violeta Marticorena Politoff, Associate Professor Anastasia Powell, Professor Julie Stubbs and Dr Andrew Ward

---

Suggested citation

Webster, K., Diemer, K., Honey, N., Mannix, S., Mickle, J., Morgan, J., Parkes, A., Politoff, V., Powell, A., Stubbs, J., & Ward, A. (2018). *Methodology report: Survey redevelopment and implementation of the 2017 National Community Attitudes towards Violence against Women Survey (NCAS)* (ANROWS Insights, 12/2018). Sydney, NSW: ANROWS.

Acknowledgements

This material was produced with funding from the Australian Government. Australia's National Research Organisation for Women's Safety (ANROWS) gratefully acknowledges the financial and other support it has received from the Government, without which this work would not have been possible. ANROWS led the project in collaboration with The University of Melbourne (UOM), University of New South Wales (UNSW), the Royal Melbourne Institute of Technology University (RMIT) and the Social Research Centre (SRC) as research partners. Details of the Implementation Group are in Appendix 1. ANROWS is indebted to all these research partners as well as to the many research, practice and policy experts from across Australia who contributed to the 2017 survey through the project's advisory structures. Although too numerous to name here, they are listed in Appendix 5.

ANROWS acknowledges the Victorian Health Promotion Foundation (VicHealth) for its consistent support, with John Fulcher and Renee Imbesi making particular contributions. Thanks are extended to Dr Stuart Ross and Dr Walter DeKeseredy for their thoughtful review of this report as part of ANROWS peer review processes, and for their helpful suggestions for strengthening it; and to Mark Richardson for his invaluable contribution and unwavering generosity and support.

Acknowledgement of Country

ANROWS acknowledges the traditional owners of the land across Australia on which we work and live. We pay our respects to Aboriginal and Torres Strait Islander elders past, present, and future, and we value Aboriginal and Torres Strait Islander history, culture, and knowledge.

Acknowledgement of lived experiences of violence

It is also important to acknowledge the lives and experiences of the women and children affected by domestic violence and sexual assault.

Caution: Some people may find parts of this content confronting or distressing. Recommended support services include: 1800 RESPECT 1800 737 732, Lifeline 13 11 14

Methodology report: Survey redevelopment and implementation of the 2017 National Community Attitudes towards Violence against Women Survey (NCAS) /
Kim Webster et al.
Sydney, NSW: ANROWS.
Pages ; 30 cm. (ANROWS Insights, 12/2018)

I. Women – Violence against – Australia – Public opinion. II. National Community Attitudes Towards Violence Against Women Survey (Australia : 2017). III. Family violence – Australia – Public opinion – Statistics. IV. Gender mainstreaming – Public opinion – Statistics. V. Social surveys – Methodology.
I. Webster, Kim. II. Diemer, Kristin. III. Honey, Nikki. IV. Mannix, Samantha. V. Mickle, Justine. VI. Morgan, Jenny. VII. Parkes, Alexandra. VIII. Politoff, Violeta Marticorena. IX. Powell, Anastasia.
X. Stubbs, Julie. XI. Ward, Andrew.

ISBN: 978-1-925372-97-7

Please note that there is the potential for minor revisions of this report.
Please check the online version at http://ncas.anrows.org.au for any amendment.

The findings and views reported in this paper are those of the authors and cannot be attributed to the Australian Government, or any Australian state or territory government.

Contents

List of figures

List of tables

List of Appendices

Appendices referred to in this report can be found in a separate document at http://ncas.anrows.org.au/findings/

1 Introduction

1.1 About this report

This report has been written to document the methods used in the redevelopment of the survey instrument, data collection and analysis. It has been written for an audience with an interest in the detailed methodology used and assumes a knowledge of basic research and statistical concepts. The methodology has been summarised in plain English in other project publications for policy, practitioner and lay audiences (see below).

This report documents methodological detail relevant to the main community sample as well as samples of Aboriginal people and Torres Strait Islanders, people from non-English speaking backgrounds and young people, including

- the redevelopment of the survey instrument for the 2017 *National Community Attitudes towards Violence against Women Survey* (NCAS);
- fieldwork execution;
- data weighting and coding;
- confirmation of constructs using the full data set; and
- data analysis and reporting conventions.

This work was undertaken by a team led by Australia's National Research Organisation for Women's Safety (ANROWS), comprising researchers from the Social Research Centre (SRC), Royal Melbourne Institute of Technology (RMIT) University, University of New South Wales Sydney (UNSW) and The University of Melbourne (UOM), as well as ANROWS. The team is referred to herein as the Implementation Group (IG) (see Appendix 1). The SRC undertook data collection and cleansing and weighting of the database.

This report is among a suite of resources being produced by ANROWS drawing on data from the 2017 NCAS. At the time of writing, other resources in this suite include:

- A high level summary of the NCAS 2017 findings
- A report for policy makers and service providers containing more detailed findings, as well as conceptual detail and evidence underpinning the survey, measures and specific items. This report also outlines the implications of the findings for policy and practice.
- Separate reports for the samples of Aboriginal people and Torres Strait Islanders, people from non-English speaking backgrounds and young people (aged 16-24 years) (forthcoming)
- Video, info-graphic and other materials designed to support others to communicate the findings of the survey to relevant audiences.

NCAS 2017 publications and resources are available on the ANROWS website anrows.ncas.org.au.

1.2 Project background

The NCAS is a periodic telephone survey of Australians' knowledge of, attitudes towards and responses to violence against women, and their attitudes towards gender equality. It is funded by the Australian Government via the Department of Social Services (DSS) as one of two key surveys under the *National Plan to Reduce Violence against Women and their Children 2010-2022* (Council of Australian Governments, 2011) (herein the *National Plan*), the other being the *Personal Safety Survey* led by the Australian Bureau of Statistics.

The objectives of the survey are:

- **Objective One:** gauge contemporary attitudes towards violence against women and gender relations and track changes in these attitudes in the community, including among Aboriginal and Torres Strait Islander communities, people with disabilities, culturally and linguistically diverse (CALD) communities, and young people;
- **Objective Two:** improve understanding of factors leading to the formation of community attitudes about violence against women and gender relations; and
- **Objective Three:** provide a foundation for continued monitoring of the outcomes of the *National Plan.*

The survey was developed from a 1995 instrument commissioned by the then Australian Government Office of the Status of Women. In 2006 the Victorian Health Promotion Foundation (VicHealth) and its partners undertook further development of the instrument for implementation in Victoria. Two further national waves, funded by the Australian Government, were implemented by VicHealth in 2009 and 2013. ANROWS was contracted by DSS to implement the survey in 2017, recognising ANROWS's pivotal role in the *National Plan*. There is a commitment to one more wave of the survey in the life of the current plan (2021).

The survey has a focus on interpersonal forms of violence as perpetrated by men against women. Its primary focus is on partner violence and sexual violence, including stalking and harassment. Together these forms of violence are referred to in this report as violence against women. Key methodological features are that the survey:

- involves telephone interviews that are on average 20 minutes duration (with this being the upper limit of average interview length for ethical and data quality reasons);
- uses a "dual frame" approach, contacting people on both land lines and mobile telephones;
- derives samples of special interest (see Objective One above) from the main sample (rather than using targeted sampling approaches);
- interviews Australians 16 years and older;

- has a sample size large enough to support population and sub-population inferences (N >17,500); and
- uses a split sampling approach. This involves having a larger number of questions than would be possible to ask all respondents in 20 minutes with subsets of the total question set being "split" across half or a quarter of the survey sample. This enables a larger number of questions to be asked in total.

Prior to the 2009 survey, work was commissioned to identify and review the theoretical and evidence base on the role of attitudes in violence against women, and the factors influencing their formation (Flood & Pease, 2006; Pease & Flood, 2008). This work provides the basis for a theoretical model for the survey, and has been progressively augmented with insights from the 2013 survey, and work undertaken to develop the national framework to guide the primary prevention of violence against women (discussed further in section 1.6 below). This model is summarised in section 2.

1.3 Overview of program of work

A substantial development in the reporting of the 2013 survey was the use of measures formed from survey instrument items to measure two constructs – understanding what constitutes violence against women (the Understanding Violence Against Women Scale or UVAWS) and attitudes towards violence against women (the Violence Supportive Attitudes or VSA). These two new measures complemented the existing scale to gauge attitudes to gender inequality (the Gender Equality Scale), introduced into the survey in 2006.

Findings from individual items in the NCAS are important as together they help build a picture of the range of attitudes supportive of violence against women and provide specific illustrations of these. They also enable attitudes towards specific issues of policy interest to be gauged (e.g. being monitored through digital media by a partner or stalking by a stranger). The development of the measures described above substantially increased the analytical power of the survey by grouping non-homogenous items measuring similar concepts (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012). This enabled:

- more valid measurement of the overall constructs (compared with previous surveys, where individual item-level reporting had made patterns difficult to discern or defend as valid);
- relationships between constructs and between them and demographic factors in the survey to be investigated;
- change over time in each of the constructs to be gauged; and
- a more effective means of communicating overall constructs.

A review of the 2013 survey instrument was undertaken in preparation for the 2017 survey. It was submitted to DSS in May 2016. This included work to establish whether it was possible to

use a process of item reduction and scale validation to develop a post-hoc scale from the existing items gauging attitudes that (a) contained fewer items and (b) had stronger measurement properties than the construct used in 2013 (discussed further in section 4.2). Responding to the findings of the review, it was agreed, following consultation with DSS, that substantial redevelopment of the survey instrument was required. Among other things, this included the need:

- to redevelop the VSA scale – while the new scale developed in the review (comprising 18 items) had acceptable measurement properties, it was felt they could be improved;
- for a revised Gender Equality Scale to measure more aspects of attitudinal support for gender inequality implicated in violence against women in the literature;
- to include a larger number of explanatory variables to meet the survey's objective of increasing understanding of factors contributing to attitudes – multivariate modelling in 2013 showed that a large proportion of variance remained unexplained by factors in the survey;
- to redevelop the pro-social responses (bystander) component of the survey instrument so that it provided more useful data to inform prevention of violence against women and was more clearly aligned with frameworks to understand pro-social behaviour in the literature (Ajzen, 2011; Clarke, 2003; Dovidio, Piliavin, Schroeder, & Penner, 2006; Latané & Darley, 1970);
- to include a larger number of items addressing sexual violence;
- to introduce items addressing emerging issues (e.g. image-based abuse); and
- to develop a consistent nomenclature to be applied across the survey instrument to the extent possible without comprising the capacity to make comparisons across time.

The work to address these recommendations is recorded in this report. Although a range of theoretically relevant comparator variables was identified in the review, it was agreed, following consultation with DSS and key stakeholders, that priority would be given to the development of:

- a measure of the gender composition of a respondent's social network, reflecting findings in the literature of an association between violence supportive attitudes and male-dominated social contexts, as well as the significance of normative influences in male peer networks (DeKeseredy, 1990; Murnen 2015);
- measures of prejudice on the basis of other attributes (e.g. race, ethnicity) to enable investigation of the influence of intersecting forms of prejudice on attitudes to violence against women; and
- a measure of support for other forms of violence.

Responding to a further recommendation of the review, a framework was developed for the survey. A tentative framework was first developed to guide the redevelopment and this was adjusted based on the outcomes of the testing described in this report. The final framework is summarised in Figure 1.

The core of the questionnaire (represented in the centre cells) involves four **components** made up of items (or questions). These respond to the four concepts apparent in the survey scope: knowledge of violence against women, attitudes towards gender inequality, attitudes towards violence against women, and intentions if witnessing abuse or disrespect towards women.

Each component is further divided into **themes**. These reflect different aspects of knowledge and different ways attitudinal support for gender inequality and violence against women can be expressed. These are based on theoretical and conceptual work undertaken in prior waves of NCAS and the *Change the Story* Framework (see section 4). Some adjustment to the *NCAS Questionnaire Framework* has been made based on analysis of the NCAS 2017 data and described in detail in later sections of this report. The themes in the 'bystander' component reflect the conditions known to increase the chances that people will take positive action as bystanders to violence and disrespect (see section 4.4).

As well as measuring people's responses to individual questions, overall concepts are gauged using **composite measures** (these may also be referred to as scales or constructs). These are made up from selected questions using statistical methods (Rash analysis and factor analysis) to ensure they measure the concept as accurately as possible. The processes involved in developing these measures are described in this report.

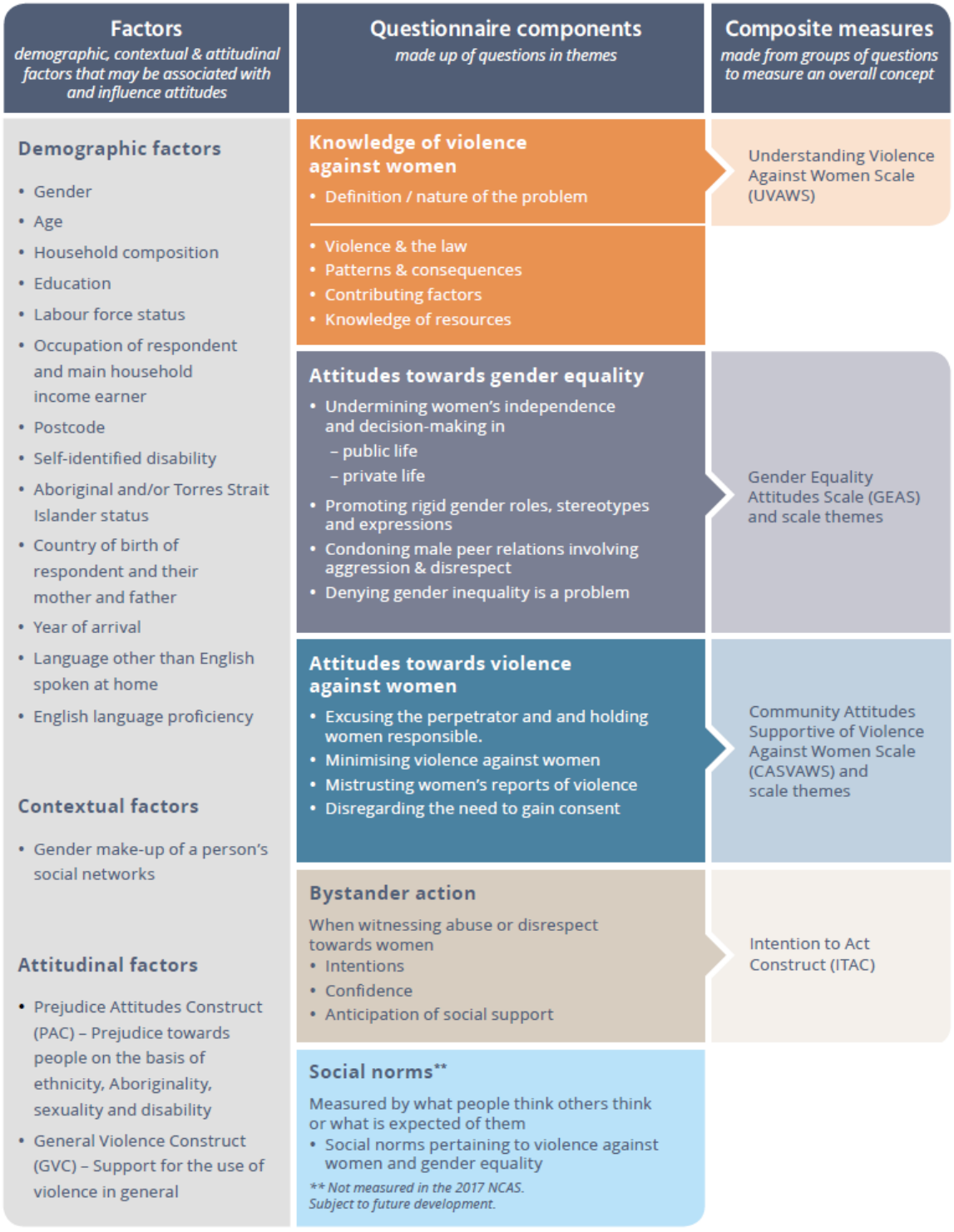
The first component in the NCAS Questionnaire Framework, the knowledge component, has one composite measure that gauges people's overall understanding that violence against women extends beyond physical violence to also include psychological, social and financial means of control and intimidation (developed for the 2013 survey; Webster, Pennay, Bricknall et al., 2014). Composite measures were developed in 2017 to gauge attitudes towards violence against women (section 4.2), gender inequality (section 4.3) overall, as well as the themes in each of these components (sections 4, 6 and 12). Drawing on questions from the bystander component, there is a composite measure of people's overall intention to take positive action if they witness violence or disrespect towards women.

Many factors influence knowledge and attitudes. Increasing understanding of these factors is an aim of the NCAS. The factors included in the 2017 NCAS are shown in the far left cells in the *NCAS Questionnaire Framework*. Information is collected from survey participants to measure each of these factors and is used in analysis of their responses. This information includes questions about themselves such as their age, occupation, education and whether they have a disability, as well as the three new factors introduced earlier: a measure of people's levels of prejudice on the basis of other attributes (sexual orientation, Aboriginality, ethnicity and disability), their support for violence in general, and the gender composition of their friendship networks.

As indicated, the NCAS framework includes measurement of social norms at the individual level (i.e. a respondent's beliefs about the attitudes of influential others, or what they believe influential others expect of them) (Alexander-Scott, Bell, & Holden, 2016). International research suggests that social norms may be stronger indicators of cultural support for violence against

women and may have more influence on individual behaviour than individually held attitudes. Owing to the limited time available for the 2017 redevelopment and the complexity of developing social norms items for a population-based survey, a decision was made to recommend to DSS that this development take place after the completion of the redevelopment of the 2017 survey instrument in preparation for the 2021 survey.

Figure 1: The NCAS survey instrument (questionnaire) framework[1]



[1] The terms 'survey instrument' or 'questionnaire' are used when referring to the survey instrument, whereas the term 'survey' is used when referring to the conduct of the survey.

1.3.1 Additional items asked of Aboriginal people and Torres Strait Islanders

The questions in the NCAS are asked of all respondents (except for split sampled questions as discussed in section 7.3.1). The sample includes a small, yet none the less representative, number of Aboriginal people and Torres Strait Islanders. Early in the planning stages, it was established that it would be possible to ask additional items of respondents who identified as Aboriginal people or Torres Strait Islanders. Stakeholders from Aboriginal communities agreed that this would be useful. The process of developing these items and analysing the data from them in consultation with community stakeholders is described in this report.

1.4 Redevelopment and implementation design

An overview of the survey instrument redevelopment and fieldwork execution processes is shown in Figure 2. Further detail on each stage is contained in this report. The redevelopment process was informed by best practice including both inductive and deductive reasoning item selection (Hinkin, Tracey, & Enz, 1997), expert panel face validity reviews (Hardesty & Bearden, 2004) and cognitive testing (Collins, 2015; Willis, 2005), followed by scale validation in Stage 3 (Hinkin et al., 1997; Hardesty & Bearden, 2004; Diamantopoulos et al., 2012; Morgado, Meireles, Neves, Amaral, & Ferreira, 2017). Deductive reasoning was employed to construct some items to measure contemporary and emerging forms of violence not represented in existing scales (Getty & Thompson, 1994; Hinkin, 2005; Schwab, 1980). Scale validation comprised two rounds of testing with a smaller sample (n = 599 and n = 278) prior to final data collection in Stage 6 (n = 17,542 in 2017). Two-stage scale validation was designed to ensure that the final instrument contained the best possible combination of items required to form the scales to measure overall constructs. Nevertheless, it is still necessary to determine whether the findings for the full sample are consistent with those found in the testing stage. This is referred to as the confirmation stage.

Figure 2: Summary of survey instrument redevelopment, implementation, and analysis and reporting phases

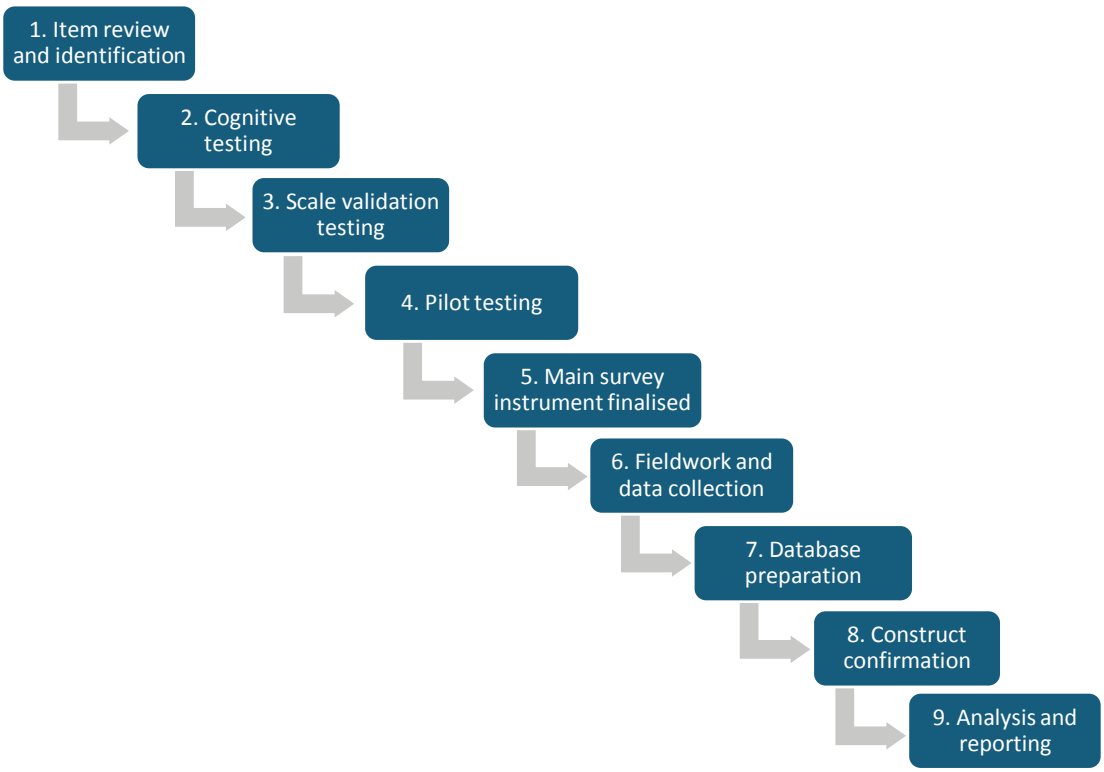
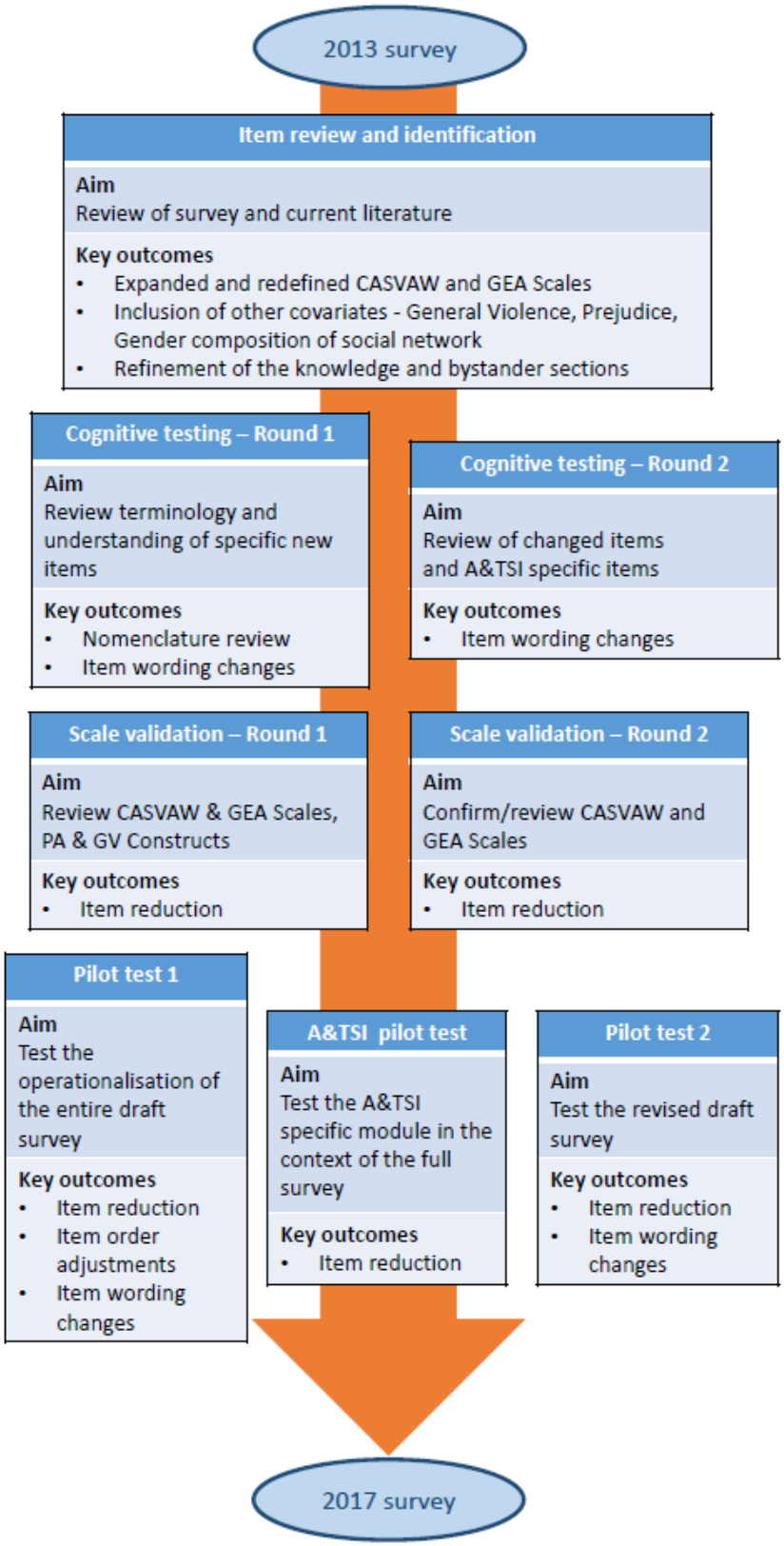


Figure 3 provides a more detailed summary of each phase of the redevelopment stages (Stages 1-4) and their outcomes. Redevelopment was iterative, with each phase identifying key changes to the survey instrument. The outcomes for individual items can be found in:

- Appendix 2 – this shows the review and redevelopment outcome for each item in the 2013 survey instrument; and
- Appendix 3 – this shows the list of items in the final 2017 instrument by component, construct or scale and, where relevant, subscale. It also notes the surveys (since 1995) in which an item has been included.

The final 2017 survey instrument is attached as Appendix 4.

Figure 3: Detailed summary of survey instrument redevelopment phase



Note: A&TSI (Aboriginal people and Torres Strait Islanders); CASVAW (Community Attitudes Supportive of Violence Against Women); GEA (Gender Equality Attitudes); GV (General Violence); PA (Prejudice Attitudes).

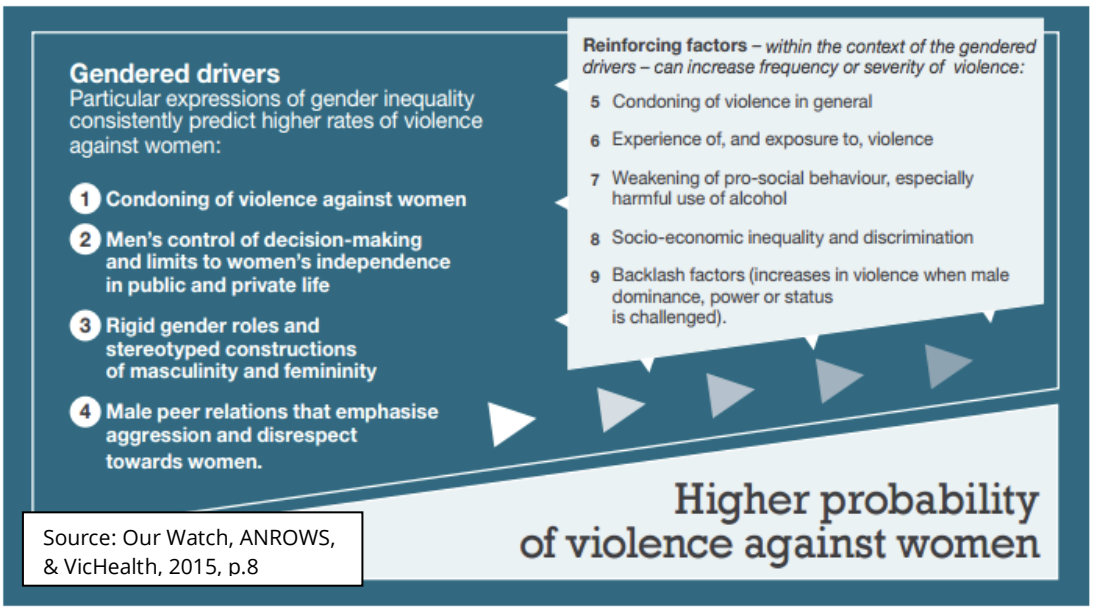
1.5 Alignment with the National Plan and the national primary prevention framework

The NCAS is a monitoring mechanism of the *National Plan*, which has six outcomes against which progress is measured:

- **Outcome One:** communities are safe and free from violence;
- **Outcome Two:** relationships are respectful;
- **Outcome Three:** Indigenous communities are strengthened;
- **Outcome Four:** services meet the needs of women and children experiencing violence;
- **Outcome Five:** justice responses are effective; and
- **Outcome Six:** perpetrators stop their violence and are held to account.

While the NCAS findings are relevant to all six outcomes, they are specifically identified as a source of data for monitoring Outcome One and Outcome Two. Since the release of the 2013 NCAS, Our Watch and ANROWS (as key implementation partners to the *National Plan*) have developed (with VicHealth as a third partner) a national framework to support planning to address these outcomes: *Change the Story: A Shared National Framework for the Primary Prevention of Violence Against Women and their Children in Australia* (Our Watch, ANROWS, & VicHealth, 2015; referred to herein by its short title, *Change the Story*). An overarching aim in the survey instrument redevelopment was to maximise alignment with the *National Plan* and *Change the Story.* Specifically, the aim was to align measures in the NCAS with the gendered drivers of violence against women and reinforcing factors identified in *Change the Story*, as shown in Figure 4.

Figure 4: Gendered drivers and reinforcing factors in violence against women



Source: Our Watch, ANROWS, & VicHealth, 2015, p.8

1.6 An intersectional approach

The NCAS takes an intersectional approach (Crenshaw, 1991). There is some variation in the literature in the way in which this approach and its implications are understood (Davis, 2008; Dhamoon, 2011; McKibbin, Duncan, Hamilton, Humphreys, & Kellet, 2015; Potter, 2015; Winker & Degele, 2011). In this report an intersectional approach is understood as one that recognises the need to take into account the *combined* influences of gender and other identities or determinants of inequality (especially race, disability, ethnicity, social class and sexuality), and the ways in which these overlap and interact with one another to shape experiences and outcomes for individuals and groups. Such an approach is especially important given the greater prevalence and/or impact of violence against women on women in communities likely to be exposed to more than one form of discrimination (Sokoloff & DuPont, 2005). This approach is consistent with both the *National Plan* and the *Change the Story* framework.

Population-based surveys have some inherent limitations in gauging attitudes among groups experiencing intersecting forms of inequality (see section 14). Within these limitations, the NCAS aims to:

- adopt an intersectional approach in all aspects of the research process (e.g. by providing translations and interpreters, and seeking direction and advice from groups affected by intersecting forms of inequality);
- produce knowledge that will be useful to a diverse range of affected groups, policy-makers and service providers to address violence against women;

- take into account the ways in which gender and other intersecting forms of inequality may influence findings; and
- assess impacts for women and men experiencing intersecting forms of inequality when identifying the implications of findings.

1.7 Ethical considerations

Approval for the research documented in this report was gained through The University of Melbourne Human Ethics Research Committee (ID 1647276), ensuring that for all project phases, among other things:

- informed consent was obtained before interviews commenced;
- the voluntary nature of participation was clearly understood;
- the privacy and confidentiality of respondent information was protected; and
- interviewers were appropriately supported to work on this sensitive survey over an extended time period.

Information was available to participants on services they could access if the research content raised issues for them. Primary responsibility for securing ethics approval and ensuring that ethics requirements were met rested with Dr Kristin Diemer, The University of Melbourne, in partnership with ANROWS and the SRC. During the project, two amendment submissions were made to gain approval to:

- interview respondents aged 16-17 years who do not have a parent or guardian without the consent of a legal guardian (as was required for all other minors in the initial application); and
- collect data via an online survey from respondents aged 16-17 years to boost the number of respondents in this age group (see section 10 for further information).

1.8 Consultation and expert advice

The NCAS is funded by DSS and is implemented in the context of the *National Plan*. Further, ANROWS conceptualises the survey as part of a rolling program of knowledge translation, communications and research (consistent with its broader mission). The success of this approach depends on collaboration with "end-users" of research. ANROWS has a strong commitment to research quality and rigour. Accordingly, consultation was undertaken at key points in the project. This included:

- formal face-to-face and telephone consultations with DSS on project materials (on 14 occasions);

- three meetings with the Project Advisory Group (comprising DSS, representatives of state and territory governments, and other national stakeholders);
- two meetings of the Project Expert Panel (comprising individuals with research expertise relevant to the survey; the expertise of individual members of the panel was also sought from time to time as required);
- face-to-face and telephone meetings of specialist groups formed to provide advice to ANROWS on survey instrument design and methodology relevant to Aboriginal people and Torres Strait Islanders and people from CALD backgrounds; and
- establishing a Review Group (from the Project Expert Panel) comprising individuals with expertise in particular areas to review key documents.

Membership of these groups is provided in Appendix 5.

1.9 Reporting of findings

ANROWS has an agreement with DSS to produce five formal reports on data collected via the processes described in this report:

- an overview report of findings for the main community and each population group of interest; and
- summary reports for the main community and three sub-population groups: Aboriginal people and Torres Strait Islanders, young people and people from non-English speaking backgrounds (forthcoming).

These are in addition to this methodology report.

2 Theoretical basis for the survey

Prior to the 2009 survey work was commissioned to develop a theoretical and evidence base for NCAS (Flood & Pease, 2006; Pease & Flood, 2009). On the basis of this work, a model was developed for understanding the role of attitudes in violence against women (VicHealth, 2014; Webster et al., 2014). Adjustments have been made to this model in 2017 to take into account insights gained in the implementation of the 2013 survey and from the development of the National primary prevention framework, *Change the Story*.

The NCAS is based on the understanding that multiple factors contribute to violence against women and that these can be found in the characteristics of individuals (e.g. personality, conflict resolution skills), but also lie in wider family, community, organisational and institutional environments (European Commission, 2010; Heise, 1998; Our Watch, ANROWS & VicHealth, 2015; VicHealth, 2007; World Health Organization 2002, 2010). Since many of the factors in these wider environments can be modified, there is the potential in doing so to prevent violence against women from occurring in the first place, to reduce recurrence, to contain the harms from this violence and to promote long term recovery of those affected (see Figure 5). Key relevant factors have been identified in *Change the Story* and have been documented in the previous section in Figure 4. Norms, structures and practices pertaining to gender inequality are identified as key factors, since they provide the underlying social conditions that enable violence against women to occur (Our Watch, ANROWS & VicHealth, 2015).

Figure 5: Possibilities for the prevention of violence against women and its impacts: A continuum

In this approach attitudes towards violence against women and gender inequality are understood to play a role in an overall strategy to reduce violence against women as they are:

- among the factors contributing to this violence; and
- a means of monitoring progress in reducing and preventing violence.

There is an extensive and complex body of literature on attitude formation and on the link between attitudes and behaviour, and a lack of consensus between experts (Howarth, 2006). While it would be impossible to do justice to this body of literature here, the key, relevant theoretical positions are summarised and the model guiding the development and implementation of the NCAS is described.

2.1 Attitudes, behaviour and actions

Studies on attitudes toward a range of phenomena, (not just violence against women), show that attitudes play a part in behaviour, but that this role is not always a direct causal one. Some studies show an *association* between the attitudes people hold and their behaviour. Some studies have found that perpetrators of violence against women are more likely than others to hold attitudes supportive of this violence or of gender inequality (see for example Baugher & Gazmararian, 2015, Fulu, Jewkes & Roselli & Garcia-Moreno, 2013; Yassour-Borchowitz & Goussinsky, 2006; Loveland & Raghaven, 2017; Zinzow & Thompson, 2015). Likewise there are studies showing that violence against women is more common in communities in which violence-supportive attitudes are held (WHO, 2010). This was once thought to be because individually held attitudes 'caused' people to behave in certain ways (for a brief historical review see Ajzen & Fishbein, 2005). However, more recent studies suggest that people adopt certain attitudes in order to justify or rationalise their own or other's behaviour, or at least that the relationship is a reciprocal one (see for example Rebellon, Mariasse, Van Gundy, & Cohn, 2014).

Still other research has shown that the relationship between an individual's behaviour and their attitudes is relatively weak, and this has led some theorists to reject altogether the notion that attitudes have any role in understanding complex human behaviours (Chaiklin, 2011). However, other theorists maintain that there is an indirect relationship, exercised through informal social norms (or rules of conduct and models of behaviour expected by a society or group) (Ajzen & Fishbein, 2005). In this view, attitudes are understood to be among the factors contributing to informal social norms, especially if they are held by many people in a particular context, or by individuals who are powerful or influential (Ajzen, 2015; Ajzen & Fishbein, 2005, Berkowitz, 2004, Fishbein & Ajzen, 2010). This approach is based on the understanding that people's behaviour is not primarily influenced by their own attitudes but rather:

- What they believe other people believe or expect of them in a particular environment (often referred to as informal social sanctions) (Ajzen & Fishbein, 2005). Such expectations may vary from context to context (e.g. they may be different in a person's sports club, than in their workplace);
- Expectations communicated through other formal social controls such as the rules of an organization or laws and law enforcement, referred to as formal social sanctions (Flood & Pease, 2006).

This understanding suggests that changing attitudes is likely to have some impact on changing behaviour via informal social norms, but that it is not the only way. Another important way to change behaviour is to do so more directly through strengthening formal social sanctions against it (e.g. laws, regulations, policies and practices). In this view, attitudinal change is understood to follow behavioural change (Chaiklin, 2011).

As shown in Figure 5 above, reducing violence against women will in involve interventions along a continuum. This involves focussing not only on the behaviour of those who use violence, but also on cultures in organisational, institutional, community and broader societal environments, the behaviours of professionals when responding to those affected by violence, others who may witness or become aware of violence (e.g. neighbours, friends or work colleagues of those affected) as well as women who experience violence themselves.

Attitudes supportive of violence against women are relevant across this continuum:

- They may contribute to the development of a culture in a community or organisation in which violence and disrespect towards women and gender inequality are not socially sanctioned against, and may even be encouraged (Flood & Pease, 2006, 2008). This is especially the case if these are held by a large number of people or by individuals with particular influence (Bohner, Siebler, & Schmelcher, 2006; Pease & Flood, 2008; Mackie, Monetti, Shakya, & Denny, 2015).
- Negative attitudes can serve as a barrier to women seeking safety from violence (Egan & Wilson, 2012; Giles, Cureen, & Adamson, 2005; Gracia, García, & Lila, 2008; Weiss, 2009), or to approaching family, friends or professionals for help (Ahrens, 2006).
- People who think others hold negative attitudes towards women and violence are less likely to take helpful action if they witness violence or disrespect, because they are less confident that they will be supported by those around them (Brown & Messman-Moore, 2010; Powell, 2011).
- Men who use violence often call upon violence-supportive attitudes to justify or excuse their behaviour, and this may increase the likelihood of recurrence and decrease their chances of becoming violence free (Lila, Herrero & García, 2008; Scott & Straus, 2007; Meyer, 2018; Weldon & Gilchrist, 2012).
- Women may adopt attitudes to minimise or excuse their partner's use of violence if they experience dissonance; that is an inconsistency between the beliefs they hold and their actions. Women may be well aware that violence is wrong and harmful, but be concerned that if they report it, there will be other serious consequences for them, their partners or their children (e.g. homelessness, police involvement).
- Negative attitudes of others can inhibit the recovery of women and their children who have survived violence, by undermining their senses of safety and of being respected (Herman, 2015). If expressed, negative attitudes may potentially trigger upset or trauma caused by past experiences of violence (Herman, 2015).
- If negative attitudes are thought to be widely held in a particular context, such as community or organisation, this may reduce motivation among key decision-makers in those contexts to take action to address violence against women (Stimson, MacKuen, & Erikson, 1995).

'Condoning violence against women' is one of the four gendered drivers in the *Change the Story* framework. This reflects the evidence that some of the impacts previously described are more likely in circumstances in which norms, structures and practices do not clearly condemn, and may even condone or encourage violence (e.g. where laws and regulations against violence are weak). The attitudes reflecting these cultures are referred to in this report as 'community attitudes supportive of violence against women'. The ways they do this have been conceptualised in various ways in the literature. In NCAS, a four theme typology is used based on theoretical and empirical material synthesised during prior NCAS waves, and confirmed through work documented in this report. In brief these include attitudes that:

- excuse the perpetrator and hold women responsible by shifting responsibility for violence from the perpetrator and/or to the victim by holding women responsible for the violence occurring or for not preventing it;
- minimise violence against women by denying its seriousness, downplaying the impact on the victim or making the violence and its consequences seem less significant or complex than they really are;
- mistrust women's reports of violence by suggesting that women lie about or exaggerate reports of violence in order to 'get back at' men; and

- disregard the need to gain consent by denying the requirement for sexual relations to be based on the presence and ongoing negotiation of consent.

Attitudes to gender inequality have been found to underpin attitudes to violence against women (Pease & Flood, 2008; Suarez & Gadalla, 2010) and some studies show a link between attitudes towards gender inequality and the perpetration of violence against women (Gallagher & Parrott, 2011; Yamawaki, Ostenson, & Brown, 2009). Like gender inequality itself, these attitudes form the underlying conditions that in turn can shape cultures supportive of violence against women. Particular aspects of gender inequality linked to violence against women have been identified in *Change the Story*. In NCAS, a five theme typology is used to describe these as attitudes that:

- undermine women's independence and decision-making in public life;
- undermine women's independence and decision-making in private life;
- promote rigid gender roles and expressions;
- condone male peer relations that emphasise aggression and disrespect towards women; and
- deny gender inequality is a problem.

Notwithstanding the above, the NCAS is based on the understanding that attitudes, and indeed norms, are only one of many factors contributing to violence against women and attitudes are but one factor contributing to the development of social norms. This means that to achieve sustained change in behaviours, there is a need for change in the structures and practices that shape attitudes and behaviours in the first place. Change in these structures and practices is also needed because they influence whether attitudes are manifest in norms and behaviours. That is, attitudinal change, while relevant, is just one part of a larger strategy to reduce violence against women.

2.2 Attitudes as mechanisms to monitor progress

Attitudes are shaped by, and reflect the world around us, including through our families and friends, communities and organisations and institutions such as schools and the media (Pease & Flood, 2008. As a reflection of this world, attitudes can serve as a barometer, telling us whether progress is being made and where we may need to focus future effort.

At the societal level, studies show a relationship between attitudes toward violence and the prevalence of violence against women (European Commission, 2010; Fulu, Warner, et al., 2013) as well as other indicators such as laws to sanction against violence against women. Likewise research comparing attitudes to gender inequality at the national level with key indicators of gender inequality show that the two are related; countries with a low level of equality between women and men, also tend to have a low level of attitudinal support for gender equality (Brandt, 2011). As there is a link between gender inequality and violence against women, measuring attitudes toward gender inequality is a key way of monitoring progress in reforming the conditions that increase the risk of violence against women.

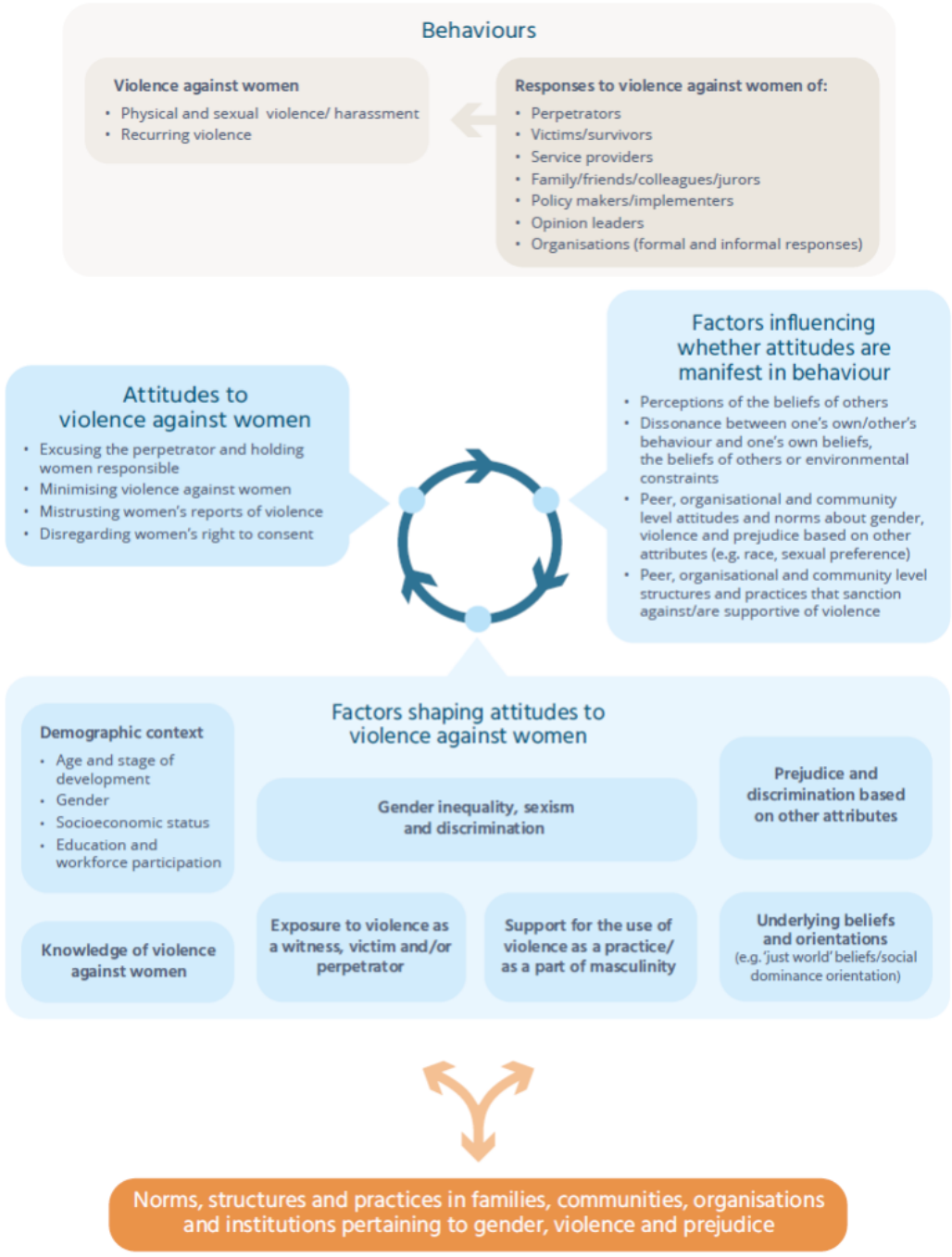
This does not necessarily mean that there is a direct and immediate change between attitudinal and behavioural change. As note above many other factors influence behaviours. Further, as the influence of attitudes is indirect changes in attitudes may take some time to manifest in changes in behaviour.

Monitoring the achievement of gender equality is of course also important because equal and respectful gender relationships are beneficial for men, women and Australian society as a whole (Australian Human Rights Commission, 2010; Organization for Economic Cooperation and Development, 2015).

2.3 Factors shaping attitudes

Like violence against women itself, attitudes are shaped by many factors, and these lie in many different environments: in families and relationships, organisations, communities, institutions and wider societal institutions. Key factors are summarised in Figure 6.

Figure 6: The role of attitudes supportive of violence against women in the perpetration of, and responses to, violence against women



Adapted from Flood & Pease (2009) and VicHealth (2014).

2.4 Knowledge

Research on attitudes toward a range of social issues shows that knowledge is among the factors influencing attitudes (Ajzen & Fishbein, 2005; Chaiken & Trope, 1999; Fazio, 1990), although the relationship is widely regarded as a modest one (Kollmuss & Agyeman, 2002; Visser, Holbruck, & Krosnick, 2008).

Also, a well-informed community is better able to help prevent violence against women (Carlson & Worden, 2005; McMahon & Baker, 2011; O'Neill & Morgan, 2010), and to respond appropriately when they witness violence and its precursors (Powell, 2012).

The law can play an important role in shaping social norms towards issues such as violence (Bilz & Nadler, 2014). Knowledge of the law is important to enable this to occur (Salazar, Baker, Price, & Carlin, 2003).

How women understand violence has also been shown to influence women's responses. For example, women who have experienced rape and who have an accurate understanding of the law have been found to be less likely to blame themselves than those whose understanding of the law is poor do not (Miller & Summers, 2007). Evaluation of efforts to address other social issues suggest that raising knowledge and awareness, while in some cases a necessary condition for behavioural change, is generally not sufficient on its own (Fah & Sirsena, 2014; Snyder, et al., 2004; Visser et al., 2008).

3 Cross-cutting issues in instrument review and redevelopment

In this section of the report aspects of development that cut across instrument components are reported. In the following section, specific developments in each component of the 2017 survey instrument are described.

3.1 Instrument nomenclature

The NCAS instrument was developed in 1995 and there have been minor changes and additions to it with successive iterations. As a consequence, there are a number of inconsistencies in terminology, and some language has become outdated or its meaning has changed over time. New items have been taken from a variety of sources and use different terminology for similar concepts. Changes to wording and expression have been limited in each survey wave because change disrupts time-series and hence the capacity to monitor change over time at either the scale or item level. There is no simple solution that enables time-series to be preserved while optimising language. Drawing on the outcomes of cognitive testing (section 5), the following approach has been taken with the aim of achieving a balance between these two objectives:

- a common language has been applied across all *new* items (see below); and
- unless there are compelling reasons to the contrary, the wording of existing NCAS items has been retained for the purposes of time-series comparisons.

Script changes have also been used to signpost definitions of "relationship" to the respondent. A "relationship" is defined as including married, de-facto and dating couples. It is also noted that the survey instrument is concerned with men and women of all ages (see Domestic Violence section, item DV2, of the 2017 survey instrument in Appendix 4). This is because, at present, the term "domestic violence" is used in existing items and cognitive testing suggested that respondents may interpret this in different ways. For instance, they may:

- have a range of forms of family violence in mind in this terminology, such as violence perpetrated by siblings;
- have a narrow perception of a relationship as being marital relationships only; and
- may see the items as pertaining to older people in established relationships, a particular concern for young respondents.

A definition of "sexual assault" has also been added to the survey instrument script, as cognitive testing suggested that the term had different meanings for different people. There is also national variation in the terminology used in legislation to refer to sexual violence (Australian

Law Reform Commission & New South Wales Law Reform Commission, 2010) and this may in turn contribute to variation in understanding.

Language conventions applied to new items include:

- specifying the gender of both victim (female) and perpetrator (male), unless the framing of the item works against doing so;
- using the terms “man“ or “woman“ (rather than “guys” or “girls“; “victim” or “offender”) when referring to people who are or may be victims or perpetrators of violence;
- using the terms “abuse” or “violence” (as appropriate) or describing the particular form of abuse/violence or behaviour, as opposed to using generic terminology (violence against women, domestic violence);
- using the term “sexual assault” rather than “rape” unless the term “rape“ is specifically relevant to the framing and meaning of the item; and
- using only one of the terms “alcohol” or “drugs” in a single item.

3.2 Response bias and sample variation

In the May 2016 instrument review, it was noted that a relatively large number of items had poor sample variation. That is, a large proportion of the sample (85%+) responded in a similar way (i.e. indicating a high level of understanding of violence against women, a low level of attitudinal support for violence against women and a high level of preparedness to take pro-social action). Poor sample variation may occur in the NCAS because people do actually believe the way that they have responded. However, there is evidence from the literature that this is more likely to be due to:

- the inherent difficulties in measuring attitudes towards sensitive issues like violence against women, about which attitudes may be subtle and difficult to measure (McMahon & Farmer, 2011); and
- social desirability bias – that is, people giving responses they believe are socially approved rather than those reflecting their actual views. Social desirability bias is more likely to occur in surveys gauging attitudes towards issues that are very topical and sensitive (Brenner, 2017; Näher & Krumpal, 2012; McMahon, 2010; Tourangeau & Yan, 2007).

It is also possible that people who hold negative attitudes are disproportionately represented among those refusing to participate in the survey.

Poor sample variation is a problem for the NCAS because over time it works against monitoring (as there is limited latitude for improvement) and distinguishing groups for the purposes of targeting action. This issue is not confined to the NCAS. A literature review was undertaken about means to counter social desirability bias. Although no solution emerged to eliminate such

bias altogether, several strategies to moderate it were identified and have been applied in the redevelopment, including:

- framing items using contemporary language and in specific, neutral terms (Krumpal, 2013; McMahon & Farmer, 2011; Yount, Halim, Hynes, & Hillman, 2011);
- framing items involving more nuanced manifestations of cultural support for violence against women (Krumpal, 2013; Näher & Krumpal, 2012; Neville, Lilly, Lee, Duran, & Browne, 2000; Swim & Cohen, 1997; Tourangeau & Yan, 2007); and
- using scenarios or "hypotheticals" as they allow circumstances to be described more specifically and for situational factors to be manipulated. In prior research, responses have been found to vary markedly when context, time, action and target are varied (Exner-Cortens, Gill, & Eckenrode, 2016; Taylor & Sorenson, 2005).

Introducing a measure of social desirability into the survey instrument was considered but, on balance, it was deemed inappropriate to include such a measure, given that the usefulness, validity and reliability of existing social desirability measures is contested (McMahon, 2007; Tourangeau & Yan, 2007; Visschers, Jaspaert, & Vervaeke, 2017) and that no short and definitive measure is available (Barger, 2002). A social desirability measure would introduce uncertainty in the results based on an unproven measure of bias. It would also introduce complexities in managing time-series data because a social desirability measure was not used in previous waves. This would make comparisons with previous waves (in which a social desirability measure was not used) difficult.

3.3 Monitoring change over time

Objective Three of the survey (see section 1.2) concerns monitoring change over time. As this involves continuity in items and item wording between surveys, there is tension between retaining items and item wording and introducing new items to improve the policy and practice relevance and measurement properties of the survey instrument as a whole. In the redevelopment this tension was addressed in two ways:

- by retaining as many items from the 2013 survey instrument as possible that met the requirements of sensitivity, currency of language and content; and
- by structuring the scales so that monitoring could be reported at the scale level. This was achieved statistically by retaining sufficient items from the 2013 survey instrument in each of the scales and using responses to these items to impute the extent of change across the scale as a whole. This is described in greater detail in section 13.3 of this report. The existing items to be retained to measure change over time were identified for the Community Attitudes Supportive of Violence Against Women (CASVAW) and Gender Equality Attitudes (GEA) Scales as part of the process described in the following section of the report.

Coverage of violence types across the survey instrument was a further consideration.

4 Item review and identification

4.1 Introduction

In this section, the process used to review and redevelop the individual sections of the 2013 NCAS instrument and to develop scales to measure the key constructs is described. The NCAS instrument has five components gauging knowledge of violence against women, community attitudes supportive of violence against women, gender inequality attitudes, intended actions as bystanders to violence against women and social norms (with development of the latter deferred to the 2021 NCAS). In addition, it includes demographic and other variables to explore factors related to the key constructs (see the NCAS survey framework in Figure 1 p.7).

An initial review of the survey instrument as a whole was undertaken and a number of items were removed to make way for new items, with priority given to removing:

- items with limited sample variation (see section 3.2); and
- items identified as mis-fitting in the May 2016 item review (described in section 4.2), unless they were assessed to have particular policy or practice significance or relevance to sub-populations of interest.

The remainder of this section of the report concerns areas of the survey instrument that are new or involved substantial redevelopment. Its *primary purpose* is to describe the process for *selecting* items for each of the redeveloped areas. However, to orient the reader to the entire process of forming each scale or set of items, a summary of the outcomes of cognitive testing and scale validation is also provided, along with the final outcomes. The detail of each of these later stages is described in Sections 5 (cognitive testing), 6 (validation) and 7 (pilot testing).

A process of testing and validation was used to redevelop the measures used in the 2013 survey to gauge overall support for gender inequality (referred to as the Gender Equality Scale in 2013 reports) and violence against women (referred to as the Violence Supportive Attitudes Scale in 2013 reports). Rasch analysis was used for validation (see section 6.2.1), a form of analysis in which approximately 20-30 items are required to gauge an attitudinal concept (Linacre, 1994). It was possible to include this number of items for these two core survey constructs.

The measures of attitudinal support for general violence and prejudice on the grounds of ethnicity, Aboriginality, sexual preference and disability were formed as constructs, rather than fully validated scales. This was because there was insufficient space in the survey to include the required 20 items to form each of these constructs using Rasch analysis. This approach was thought to be appropriate given that these measures were to be used as comparator variables, rather than constructs in their own right. Nevertheless, to optimise their measurement properties, the items were selected on conceptual and psychometric criteria, including data obtained from the Round 1 validation survey (see below) and confirmation using the full data

set. While the outcomes for these measures are reported where relevant using the same metrics as the two scales, these outcomes should be interpreted having regard to the purpose of the measures in the survey and the different approach used to form them. The UVAWS was developed in 2013 and since its measurement properties were assessed as acceptable in analysing the 2013 data, it was not included in the 2017 validation. The UVAWS was included in the scale confirmation using the whole data set (see section 12).

4.2 Community Attitudes Supportive of Violence Against Women Scale (CASVAWS)

Questions gauging attitudes towards violence against women are the core of the survey instrument and cover (a) intimate partner violence and sexual violence, including stalking and sexual harassment, and (b) different dimensions of attitudes condoning violence against women, discussed further in the following sections.

4.2.1 Rationale for review and redevelopment

While there is some variation in the way dimensions of condoning violence are conceptualised in the wider literature, in prior NCAS reports five key themes (herein referred to as domains) have been discerned. These domains, which draw on successive reviews of the literature, are attitudes justifying, excusing, minimising and trivialising violence against women and shifting blame from perpetrator to victim (see section 4.2.2). These have underpinned the CASVAW component of the NCAS and together constituted the theoretical framework to guide item selection in the redevelopment of the CASVAW Scale.

Combining the various aspects of violence supportive attitudes into an overarching construct, or scale, can assist in understanding the *overall* pattern between selected characteristics and violence supportive attitudes. The scale construct provides a summary variable that encapsulates all those attitudinal elements that contribute to an overarching measure of support for violence.

Assessing the responses within domains across the population is also important as it can help to gauge how strongly the various types of attitudes are held and by whom. This information can guide and frame the detail of future violence prevention work, both in the population as a whole and among particular groups. To date, however, items within the construct have been allocated to domains on the basis of theory, but the domains have not been tested empirically (i.e. using factor analysis). This has worked against using overall domains in statistical analysis.

As indicated in section 1.3, development of the scale commenced in the 2013 survey with a construct containing all 38 items gauging attitudes. As part of a review of the NCAS instrument

early in 2016, an exercise was undertaken to review the scale, primarily to reduce items and improve its psychometric robustness.

The review demonstrated that it was possible to create a scale to measure violence supportive attitudes with 18 pre-existing items from the survey instrument which had acceptable measurement properties. However, many of the items in the original scale had limited sample variation (see section 3.2). While the scale was able to identify people holding attitudes at the extremes (i.e. positive or negative attitudes), it lacked the precision required to distinguish respondents within categories, and especially among those whose attitudes lay between the extremes.

As indicated in section 3.3, an overriding aim of the redevelopment was to retain as many existing items in the NCAS as possible. The purposes of the further work recorded herein were to strengthen and augment the existing items measuring attitudes supportive of violence against women by:

- increasing the number of items attracting a divergent response across the sample (i.e. items that are not subject to limited sample variation), thereby increasing the measurement precision of the scale – this requires items that are less susceptible to social desirability bias;
- introducing new items addressing contemporary themes identified through the literature;
- strengthening the psychometric properties of the scale; and
- re-testing the NCAS domains statistically with the new items to provide a basis for finalising the theoretical framework described above.

4.2.2 Conceptual framework

As indicated above, to date the CASVAW component of the survey instrument has been underpinned by a five-domain framework grounded in the literature, including attitudes that support violence by justifying, excusing, trivialising or minimising it, or shifting blame for it or responsibility for preventing it from the perpetrator to the victim (VicHealth, 2014; Webster et al., 2014). This five-domain framework is also adopted in *Change the Story* in describing the condoning of violence against women, the first gendered driver of violence against women (Our Watch et al., 2015, pp. 23-24; see Figure 4 p.12 in this report).

As a first step, the five-domain framework was reviewed, validated and updated against the literature. This process broadly affirmed an alignment between the framework and the evidence and theory in the literature. A decision was made at this stage to exclude items concerned with stalking and sexual harassment (other than when these forms of violence take place in the context of an intimate relationship). Evidence suggests that these forms of violence against women are underpinned by attitudes that are conceptually similar to those underpinning sexual assault and intimate partner violence (Powell & Webster, 2016). However, it was felt that confining the scope to sexual assault and partner violence would eliminate the risk of

compromising the scale in the event that Australians' attitudes vary by type of violence. In the extant literature, attitudes towards these types of violence tend to have been gauged through separate scales. For the purpose of this exercise, partner violence was broadly defined to include violence in dating, de-facto and marital relationships, and partner sexual abuse.

4.2.3 Identifying potential items

An iterative process of review of national and international literature for potential new items has been undertaken with each survey wave. Building on each review, a comprehensive compendium of measures of attitudinal support for violence against women has been compiled and sequentially updated. The latest scale review included the following key selection criteria: scales were included if they (1) had been used in empirical studies within the period of 1978-2016; (2) were published in peer-reviewed journals with psychometric properties reported; (3) were not study-specific modifications of existing scales (such as for purposes of program evaluation); (4) sought to measure attitudes, beliefs, perceptions or social norms; and (5) tapped one or more CASVAW framework theme developed within previous survey waves as described in section 4.2.2 (justifying, excusing, trivialising, minimising and blaming women).

Scale redevelopment included first reviewing the 18-item scale developed in the May 2016 review to (a) identify and exclude poorly performing items; (b) identify gaps within domains (e.g. some domains have very few items concerned with sexual assault); and (c) reduce items likely to be particularly subject to social desirability bias.

A pool of 450 items from existing scales was identified through a review of the literature that was applicable for use in the CASVAWS, as outlined above, and suitable for an Australian context. The items were categorised on the basis of inductive reasoning (see section 1.4) and face validity prior to scale validation (by type of violence and the five themes of justifying, excusing, trivialising, minimising and blaming women) (Hardesty & Bearden, 2004; Hinkin et al., 1997). A single validated scale addressing all five domains and both forms of violence was not identified. Further, most scales had a large number of items, making them inappropriate for inclusion in the NCAS. Along with the need to retain some previous items for time-series comparability, the IG decided that it would not be possible to include a full version of a previously validated scale. It was also identified that newly emerging forms of violence were not represented in the scales. A process of deductive reasoning was used to modify or construct a small number of new items (Getty & Thompson, 1994; Schwab, 1980).

Once a shortlist was generated, psychometric assessment was undertaken. Items extracted from scales with low measures of internal consistency or tested with very specific populations (e.g. prisoners, college students) or individual items that were poorly correlated with the scale as a whole were excluded unless there were other compelling reasons to retain them. Frequency distributions were also considered in this assessment. However, it is of note that very few sources report frequencies.

Item review and identification

A key strategy for reducing the influence of social desirability bias is the use of scenarios (see section 3.2). A search was undertaken for prior research using scenarios to gauge attitudes towards partner violence and sexual assault. Five scenario studies were identified. The approach taken in the Attitudes to Violence Against Women in Scotland Survey (Reid, McConville, Wild, Burman, & Curtice, 2015) was adopted as being most compatible with the NCAS methodology and filling the necessary conceptual gaps.

This involved two scenarios designed to investigate whether or not Australians would justify certain behaviour in the context of negotiating sex in different circumstances. Specifically, the scenarios were used to investigate two concepts: first whether Australians were more likely to justify sexual coercion in the context of a marital relationship, as opposed to between acquaintances; second whether Australians were more likely to justify coercion in circumstances in which a woman had initiated intimacy (e.g. by kissing a man), as opposed to where she did not). The married and non-married scenarios were included to assess the extent to to which the community supports the belief that women forgo their sexual autonomy after marriage (as was once understood to be the case at law). The variations with and without the woman kissing the man were included to explore community perceptions of the consequences for consent of women exercising sexual agency, and when assertive consent is required.

The 30 scales identified, and the types of violence attitudes that they are designed to measure, are summarised in Table 1.

Table 1: Scales measuring attitudinal support for violence against women

Scale name	***Author, year*** in order of year first published
Domestic violence	
Sex-Role Ideology Scale	Kalin & Tilby, 1978
Acceptance of Interpersonal Violence, 6-items	Burt, 1980
Inventory of beliefs about wife beating	Saunders, Lynch, Grayson, & Linz, 1987
Attitudes to Wife Abuse Scale	Briere, 1987
Domestic Violence Blame Scale	Petretic-Jackson & Genell, 1994
Adolescent attitudes to abuse of women, Attitudes to Wife Abuse (AWA) scale (Briers)	Falchikov, 1996
Perceptions of and Attitudes toward Wife Abuse Questionnaire (PAWAQ)	Ahn, 2002; Gharaibeh, Abu-Baker, & Aji, 2012
Domestic Violence Myth Acceptance Scale (DVMAS)	Peters, 2008
Revised Attitudes Toward Wife Abuse (RAWA)	Yoshioka, DiNoia, & Ullah, 2001; Ahn, 2002
Attitudes and Beliefs About Domestic Violence	Worden & Carlson, 2005
Intimate partner violence against women is a private issue and tolerance of the use of violence in relationships (Factor 2)	Frye, 2007
Intimate Partner Violence Responsibility Attribution Scale (IPVRAS)	Lila, Oliver, Catalá-Miñana, Galiana, & Gracia, 2014
Domestic Violence Myths Scale, scale on minimising violence against women and victim blame scale	Yamawaki, Ostenson, & Brown, 2009; Yamawaki, Ochoa-Shipp, Pulsipher, Harlos, & Swindler, 2012
Acceptance to contribute	Ventura, Lambert, White, & Skinner, 2007
Demographic Health Survey (DHS)	Pierotti, 2013
Scottish Social Attitudes Survey 2014: Attitudes to violence against women in Scotland	Reid et al., 2015
Sexual assault	
Rape Myth Acceptance (RMA)	Burt, 1980
Sexual Beliefs Scale (SBS)	Muehlenhard & Felts, 1998
Rape-Supportive Attributions Scale (RSAS)	Langhinrichsen-Rohling & Monson, 1998
Illinois Rape Myth Acceptance Scale (IRMAS)	Lonsway & Fitzgerald, 1994
Rape Attitudes and Beliefs Scale (RABS)	Burgess, 2007
The Acceptance of Modern Myths About Sexual Aggression Scale (AMMAS)	Gerger, Kley, Bohner, & Siebler, 2007
Modified (IRMAS)	McMahon & Farmer, 2011
SIAMA	Powell, Henry, & Flynn, 2016
Sexual harassment and stalking	
The Sexual Harassment Attitude Scale	Lott, Reilly, & Howard, 1982
Stalking Myths Scale	Sinclair, 2006; 2012
Illinois Sexual Harassment Myth Acceptance (ISHMA) Scale	Lonsway, Cortina, & Magley, 2008
Stalking Related Attitudes Questionnaire (SRAQ)	McKeon, McEwan, & Luebbers, 2014
Stalking Myth Acceptance	Dunlap, 2010; Dunlap, Lynch, Jewell, Wasarhaley, & Golding, 2015
Beliefs about victim responsibility	Alfredsson, Ask, & von Borgstede, 2015

4.2.4 Item reduction, testing and validation

The process for item reduction, testing and validation included:

- **Stage 1:** two project Chief Investigators reviewed all potential 450 items to generate a short list of 120 items through a process of inductive and deductive reasoning. During initial review, decisions were made to remove items that could not be asked of everyone in the population (i.e. were too culturally, age or setting specific), were convoluted or outdated in their expression, or were worded similarly to an item already included in the survey instrument (with the current item exhibiting greater clarity of expression retained).
- **Stage 2:** the short list (120) was considered by the IG and reviewed to confirm conceptual alignment to the domains and to assess for face validity. Some minor item wording changes were made during this process in order to adapt the short list of items for the Australian context, as many existing items were developed in the United States (US), strengthen face validity or use contemporary language. This resulted in a preferred list of 54 items.
- **Stage 3:** the preferred list of items evolving out of Stage 2 was reviewed and confirmed for item and scale validity using psychometric data from the original studies where provided, as well as populations with which the questions had been used (e.g. general population or university sample).
- **Stage 4:** selected items were subject to cognitive testing (see section 5 of this report). The list was then considered by the NCAS Review Group (formed from the Expert Panel; see Appendix 5).
- **Stage 5:** two rounds of scale validation were undertaken with 54 items included in Round 1 and reduced to 40 items in Round 2 on the basis of item and scale fit statistics (see section 6 of this report). The final CASVAWS consisted of 32 items (see Table 2). Exploratory factor analysis (EFA) was also conducted (see section 6.3.2) at this stage and did not illustrate any distinct or clearly delineated factor clusters. This result suggested that the scale worked together as a whole without any subscales or factors. Further EFA was undertaken with the full NCAS sample after the completion of fieldwork and is reported below.

4.2.5 Outcome following fieldwork and confirmation

Upon completion of the main fieldwork, confirmatory Rasch analysis was undertaken using the full sample. To maximise the number of items in the scale (and therefore its measurement precision), a decision was taken to test, in the first instance, a scale including all items in the CASVAW component. That is, to include items that:

- were identified as part of the scale at the completion of the validation;

- had been identified as mis-fitting in the validation survey but retained in the survey instrument for their policy significance; and
- had been previously excluded from scale development because they were framed to gauge attitudes toward stalking and sexual harassment.

Following this, EFA was again undertaken to examine whether any meaningful factors appeared within the larger full sample. An initial set of models involving three, four and five factors showed statistical alignment to four broad factors. The scenario items, (described in section 4.2.3) fell into factors separate from one another and appeared as conceptual outliers. Accordingly, these were removed from the scale (but retained in the questionnaire) and confirmatory factor analysis was undertaken with a 4-factor model with the remaining 32 items.

With some minor exceptions, this model had good statistical and conceptual fit (see Appendix 7 and Table 2). Reflecting this model, the Rasch analysis was re-run without the data from the scenarios (see Appendix 8). The final scale has 32 items (see Table 2).

One item, though meeting statistical fit measures for the CASVAWS as a whole, was an outlier. The item, "If a woman is raped while she is drunk or affected by drugs she is at least partly responsible", aligned statistically with Factor 2: Minimising violence against women, rather than the factor with which it was aligned conceptually and on the basis of face validity (Factor 1: Excusing the perpetrator and holding women responsible for abuse and managing its consequences). As such, in public reporting of findings it has been included in its conceptual subdomain (Factor 1). However, in this report and the multivariate analyses in public reporting, it is retained in its statistical domain. This decision is noted by way of a table footnote in public reporting of this item.

Table 2: Final CASVAW Scale items and statistical factors

Item label	Item text
Factor 1: Excusing the perpetrator and holding women responsible for abuse and managing its consequences	
DV6ff	A lot of what is called domestic violence is really just a normal reaction to day-to-day stress and frustration.
DV6zz	Domestic violence can be excused if it results from people getting so angry that they temporarily lose control.
DV6f	Domestic violence can be excused if the violent person was themselves abused as a child.
DV6h	Domestic violence can be excused if, afterwards, the violent person genuinely regrets what they have done.
DV6r	Sometimes a woman can make a man so angry that he hits her when he didn't mean to.
DV6u	Women who flirt all the time are somewhat to blame if their partner gets jealous and hits them.

Item label	Item text
DV6d	Domestic violence is a private matter to be handled in the family.
DV6o	It's a woman's duty to stay in a violent relationship in order to keep the family together.
DV6j	Domestic violence can be excused if THE VICTIM is heavily affected by alcohol.
DV6k	Domestic violence can be excused if THE OFFENDER is heavily affected by alcohol.
Sv3j	A man is less responsible for rape if he is drunk or affected by drugs at the time.
Factor 2: Minimising violence against women	
DV6cc	A female victim who does not leave an abusive partner is partly responsible for the abuse continuing.
DV6z	I don't believe it's as hard as people say it is for women to leave an abusive relationship.
DV6t	If a woman keeps going back to her abusive partner then the violence can't be very serious.
DV6bb	It's acceptable for police to give lower priority to domestic violence cases they've attended many times before.
DV6v	Women who stay in abusive relationships should be entitled to less help from counselling and support services than women who end the relationship.
Sv3t	If a woman claims to have been sexually assaulted but has no other physical injuries she probably shouldn't be taken too seriously.
Sv3k	If a woman is raped while she is drunk or affected by drugs she is at least partly responsible.
Sv3p	Women who wait weeks or months to report sexual harassment are probably lying.
Sv3s	Women who wait weeks or months to report sexual assault are probably lying.
Sv3d	Women who are sexually harassed should sort it out themselves rather than report it.
DV6s	In my opinion, if a woman reports abuse by her partner to outsiders it is shameful for her family.
Factor 3: Mistrusting women's reports of violence	
DV6ee	MANY women tend to exaggerate the problem of male violence.
Sv3l	A lot of times, women who say they were raped had led the man on and then had regrets.
Sv3y	IT IS COMMON FOR sexual assault accusations to be used as a way of getting back at men.
dv6n	Women going through custody battles OFTEN make up or exaggerate claims of domestic violence in order to improve their case.

Item label	Item text
	Factor 4: Disregarding the need to gain consent
Sv3r	Women find it flattering to be persistently pursued, even if they are not interested.
Sv3bb	If a woman sends a nude image to her partner, then she is partly responsible if he shares it without her permission.
Sv3c	Women often say 'no' when they mean 'yes'.
Sv3dd	Since some women are so sexual in public, it's not surprising that some men think they can touch women without permission.
sv3v	When a man is very sexually aroused, he may not even realize that the woman doesn't want to have sex.
sv3x	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.

The factor analysis has some overlap with the theoretical framework. However, items reflecting the concepts of excusing the perpetrator and blaming the victim fall into a single factor (rather than separate factors as was the case in the theoretical framework). This group also included items that, although not directly blaming women, attributed responsibility to them to manage the consequences of the violence (e.g. "Domestic violence is a private matter to be handled in the family"). Items that could be said to be minimising and trivialising violence against women similarly fall into a single factor. However, there was a group of items that had been allocated to the "minimise" domain on theoretical grounds that divided into a separate factor, with an underlying theme of women lying about violence or reporting violence for tactical or vexatious purposes (see Table 2 p.32). The fourth factor is a new factor and concerns issues of consent to sexual advances and sexual relations (most of these items had been allocated in the theoretical framework to the "blame" domain). As emerging themes, Factors 3 and 3 are a significant finding of the scale development and confirmation. They suggest that these are important constructs underlying attitudinal support for violence against women in the Australian community.

The only items that survived the item reduction and validation in the theme of justifying violence (the remaining theme in the original five-domain theoretical framework) were the scenario questions. As indicated above, these were conceptual outliers in an initial factor analysis and the different items in the scenarios did not fall into the same factor. This may be due in part to people responding to the *behaviours* and *relationships* described in the scenarios rather than the idea of violence against women being *justified*. It is not possible to discern whether the lack of an identifiable factor of justifying violence against women is due to insufficient appropriate items to measure the concept, or because justifying this violence does not tend to underlie attitudinal support for violence against women in Australia. The possibility of the latter is indicated by the consistently low level of support for items in the justifications theme in prior waves of the NCAS. In the development of the 18-item scale, items justifying and excusing violence tended to load

together, suggesting the further possibility that the community may not distinguish between justifying violence (i.e. violence as a legitimate response) and excusing it (violence as wrong but explicable in certain circumstances) (data not shown in this report).

The four factors emerging from the factor analysis have been adopted for the CASVAW component of the survey framework and in reporting the 2017 findings, including in the subdomain analysis. Each theme is described below, drawing on the relevant literature. Rasch statistics and Cronbach alpha were calculated for each of the domains and are reported in section 11.

Factor 1: Attitudes excusing the perpetrator and holding women responsible for the abuse or managing its consequences

Excuses for violence against women are characterised by admissions that actions are wrong or inappropriate but are linked with claims that the violent person could not prevent their conduct (Scott & Lyman, 1968; Pepin, 2016). Excuses do not legitimise violence but they are one of the most powerful forms of sanctioning violence. For example, the excuses of provocation or "loss of self-control"[2] are partial legal defences for murder in many countries, including the US, Sweden and some states of Australia, and are frequently used by men to excuse the murder of an intimate partner; when the partial defence is accepted by the court, it results in a conviction for manslaughter rather than murder (Burman, 2014).[3]

Media coverage of violence against women (including social media) is another powerful public forum that can both reveal, reproduce and shape community attitudes and beliefs about violence against women (Carll, 2003; Morgan & Politoff, 2012; Sutherland et al., 2015). How events are portrayed in the media can have a profound influence on people's attitudes, beliefs and behaviours (Centre for Advancing Journalism, 2017).

A recent review of media presentations of violence against women and children (Sutherland et al., 2015) identified that, although improving, journalists frequently generate violence against women stories around the excuses of "love" described as passion killings or jealousy; substances (drugs and alcohol); or mental illness. The same excuses are also reversed to blame women for their experiences of violence.

Cultural and legal excuses for violence confirm rationalisations and justifications for men's violence against women and blame women for the violence they experience (Burman, 2010; Edin & Nilsson, 2014).

[2] In England and Wales, the partial defence of provocation was replaced by a partial defence of 'loss of self-control' (*Coroners and Justice Act 2009*, s. 55).

[3] The partial defence of provocation has only recently been abolished in three Australian states and New Zealand. Some jurisdictions in the US have introduced exclusions to this defence; for example, the discovery of a spouse's infidelity is not adequate to claim provocation. New South Wales has limited the partial defence to 'extreme provocation', which must be in the form of conduct by the deceased that is a serious indictable offence (*Crimes Act 1900*, s. 23(2)(b). , and some jurisdictions in the US have introduced exclusions to this defence; for example, the discovery of a spouse's infidelity is not adequate to claim provocation.

Victim and perpetrator accounts of violence also illustrate the dual attitude of both excusing the perpetrator and blaming the victim. Mullaney (2007) explored men's verbal accounts of their violence to their female partners, which they gave to her as a researcher, alongside the accounts they gave to their partners. While excuses were given to Mullaney, she also found equally strong justifications for the violence relating to men's presentations of masculinity; for example, men would admit to violent acts, saying that "she deserved' it because of her actions (e.g. she had an affair and therefore she deserved it). These interviews illustrate clear excuses bound up in justification by blaming the victim for the behaviour. Conversely, the accounts given to the partners included apologies which might serve to persuade victims to also accept the excuse and blame (Mullaney, 2007,).

Narratives from the National Crime Victimization Survey in the US also show that some women who experience sexual victimisation excuse or justify their experiences by drawing on social vocabularies suggesting male sexual aggression is natural and normal in dating relationships, or that an assault was the victim's fault (Weiss, 2009). These findings demonstrate the considerable influence that cultural beliefs and rape myth acceptance has on a victim's own perception.

Research by Yamawaki (2007) offers further explanation of Mullaney's (2007) and Weiss's (2009) findings. Benevolent sexism and gender role traditionality (Glick & Fiske, 1996), which feed into cultures of masculinity, have been shown as significant moderators to perpetrator-excuse and victim-blame measures when the perpetrator knows and is involved with the victim (e. g. partner or date) (Yamawaki, 2007).

When victims adopt the culture of perpetrator excuse, it more often leads them to a placating response, and is likely to support remaining in the relationship. This compares with victims who actively blame the perpetrator, which more often leads to active safety planning (Meyer, Wagner, & Dutton, 2010).

It is important to consider and respond to public rationalisations and excuses that perpetuate myths and misrepresentations presented in contexts such as the law and media, which can skew public perceptions. Excuses for violence indirectly shift blame from male perpetrators of violence by focusing on the trigger behaviour of men (e.g. use of alcohol) rather than the perpetration of violence, and assign responsibility for violence to women by focusing on the behaviour of women and their role in the violence (e.g. ending the relationship or being alcohol affected). Research on men who are aggressive with alcohol consumption shows that their aggression does not stop completely with successful treatment for alcohol misuse (Leonard, 2005).

Dispelling myths, unsupported cultural beliefs and excuses is important to build appropriate accountability mechanisms for violent men, as well as response and support services for women who are victims. For example, police attitudes and beliefs about violence against women have been shown to be highly influential to their responsiveness, with many police holding negative attitudes blaming female victims of domestic violence (Diemer, Ross, Humphreys, & Healey, 2017; Page, 2008; Segrave & Wilson, 2011; Segrave, Wilson, & Fitz-Gibbon, 2016). A discourse analysis of psychologists working with perpetrators of rape reveals that both the perpetrators

and psychologists framed the discussion in a discourse of attribution of blame and responsibility towards victims. Victims were perceived as inspiring uncontrolled sexual desire in the perpetrator, which became his excuse (Lea, 2007).

Nine of the 11 items in the CASVAW subscale for excusing the perpetrator and blaming the victim align closely with the themes present in the literature, including the perpetrator or victim being alcohol affected or the perpetrator losing control because *she* (the victim) provoked him (see Appendix 7). The remaining two items aligning with this theme statistically were "It's a woman's duty to stay in a violent relationship in order to keep the family together" and "Domestic violence is a private matter to be handled in the family". Both these items could be said to reflect a sentiment that excuses inaction in response to violence and/or shifting responsibility to women for dealing with its consequences.

Factor 2: Attitudes minimising violence against women

International research literature uses the label "minimisation" to describe attitudes where violence against women is considered less serious than other forms of violence and/or the impact of the violence is perceived as not serious or as exaggerated (Dunham & Senn, 2000; Easteal, Bartels, & Bradford, 2012; Harned, 2005; Henning, Jones, & Holdford, 2005; Lim, Valdez, & Lilly, 2015). Easteal et al. (2012) point out ways in which the language used to describe violence against women creates a false reality of minimising the violence in the eyes of others that does not match the reality of the seriousness of the violence as experienced by the victim.

Minimising leads to normalisation (Lim et al., 2015; Schick, 2014; Fakunmoju, Bammeke, Oyekanmi, Temilola, & George, 2016; McCarry & Lombard, 2016) and subsequently has multiple effects. Harned (2005) identified that many women simply do not recognise their partners' behaviour as violent. Further, minimisation has been linked to coping mechanisms among women who have experienced violence (Francis, Loxton, & James, 2017).

Minimisation has been identified as a common tactic used both by victims and perpetrators to make sense of violence (Easteal et al., 2012; Harned, 2005; Lim et al., 2015). Women who have or are experiencing violence in intimate relationships may utilise strategies of minimisation, such as omission of information, when disclosing to service providers, friends and family. This may be to manage confidants' reactions, or it may also be due to normalisation of the violence and disclosing only enough information to test the waters and see how it will be received (Dunham & Senn, 2000; Francis et al., 2017).

Treatment and recovery outcomes for victims of rape have been linked to the perceptions and responses received when telling someone about the assault. Positive reactions from family and friends have a strong association with better recovery outcomes, while negative social reactions, such as minimising the incident, lead to psychological distress and delayed recovery (Ullman, 1996; Ullman & Siegel, 1995).

It is the specific role of minimisation in the perception of rape that is of interest here. Yamawaki (2007) explored the ambivalent sexism scale (Glick & Fiske, 1996; discussed elsewhere in this

report) with perpetrators' perceptions of rape, finding that hostile sexism was strongly associated with attitudes minimising rape.

Research with victims of violence identified that victims who do not label accurately their experience of violence typically minimise it as something less serious (Harned, 2005) and are less likely to seek help or report to the police (Layman, Gidycz, & Lynn, 1996; Pitts & Schwartz, 1993). Accurate labelling evolves as a gradual process, often through the course of talking to someone else about the experience (Harned, 2005; Pitts & Schwartz, 1993).

In the factor analysis, 11 items loaded together to reflect the sentiment of minimisation (see Appendix 7).

The strongest correlated factors in the CASVAWS "minimise" subscale were items related to believing that if a woman does not leave a violent relationship or report the experience of violence, then either the violence was not serious or she did not really need any help.

Factor 3: Attitudes indicating mistrust of women's reports of violence and its impacts

Disbelieving or mistrusting a woman's report of abuse exists at both the individual and institutional level. Disbelief has been explored most extensively in the rape myth literature (Brownmiller, 1975; Edwards, Turchik, Dardis, Reynolds, & Gidycz, 2011). Most research has identified that false rape allegations are very infrequent (Patton & Snyder-Yuly 2007; Lonsway et al., 2008); nevertheless, community attitudes surveys internationally and within the NCAS have found that a sizeable portion of men and women believe that women lie about being raped (Burt, 1980; Kahlor & Morrison, 2007; Victorian Law Reform Commission, 2004). The culture around false reports is often due to myths and misconceptions about sexual assault and rape (Lonsway & Archambault, 2012; Jordan, 2004; Lisak, Gardinier, Nicksa, & Cote, 2010). Similar views are held about women's experiences of other forms of abuse compounded by the lack of understanding of the barriers women have when considering leaving an abusive relationship (Dobash & Dobash, 1979; Ehrensaft, 2008; DeKeseredy, 2011; Easteal, Holland, & Judd, 2015).

Attitudes of disbelief are important to measure because they have significant impact on the way that victims of abuse are treated by service providers, responders and likely confidants such as counsellors, health professionals, family and friends. One of the most significant impacts of disbelief of women's reports of violence involves situations leading to prosecution of victims for false reporting or being accused of vexatious litigation. Cases where women are at greater risk of being prosecuted for false reports are more likely to involve vulnerable women (including those who are alcohol affected), be more complex and difficult to investigate, have questions raised about a woman's "reputation" or her demeanour, or where the incident has been concealed for a period of time (Avalos, 2017; Jordan, 2004; Weiser, 2017; Weiss, 2010).

The two strongest items in this CASVAW subscale relate directly to the myth that women make up false allegations of rape as a way of getting back at men, and that women often make up

claims of domestic violence when going through custody battles (see Appendix 7 and Table 2 at p.32).

Factor 4: Attitudes disregarding the need to gain consent

The final factor in our current model is an emerging theme around negotiating sexual consent. Most items are moderately to weakly associated with the factor; however, combined, they form a consistent message around the uncertainty of the boundaries of consent.

The legal literature is increasingly engaged in the discussion around ability to give consent; forms of consent, including consent by deception (Rubenfeld, 2013); and victim testimony and belief (Dwyer, Easteal, & Hopkins, 2012; Flynn & Henry, 2012; Fraser, 2015; Levanon, 2012). In addition, there is a question of blurred boundaries and at what stage a woman moves from expressing sexual agency to becoming a victim (Alcoff, 2009; Fraser, 2015; Hust, Rodgers, & Bayly, 2017). Issues that most often blur the consent boundaries, from a legal perspective, are similar to those linked to disbelief of women's reports of violence and include alcohol and drug use, the level of affectedness, and the time between when an incident occurred and when it was reported (Dwyer et al., 2012).

Despite progressive change in definitions of consent and public dialogue about the importance of consent, the traditional stereotype that women are being coy when they say "no", and the belief that "no" really means "yes", is still pervasive. Verbal non-consent is often ignored (Berkowitz, 1992; Harned, 2013; Power 2012) and, in fact, women need to say "no" multiple times before a man will accept her refusal (Mills & Granoff, 1992).

Negotiating consent for newer forms of sexual offences, such as sexting or distributing images online, is framed by the same beliefs and attitudes as those around flirting and sexual assault. In a systematic review of the discourse on sexting, Krieger (2017) identified four themes. The primary discourse was framed around harm minimisation and as "risky behaviour" (Draper, 2012; Karaian, 2012; Karaian, 2014; Salter, Crofts, & Lee, 2013). The second most common theme across two-thirds (68%) of the articles constructed sexting with a heavy emphasis on victim blame and minimisation, rather than a focus on the person redistributing images in a way that had not been consented to, or as a form of revenge. Sexting was also commonly minimised or downplayed as less serious and framed around young people's indiscretions (Barkacs & Barkacs, 2010; Nunziato, 2012). This discourse was most often present in the legal literature. The third conceptualisation was as a form of bullying rather than sexual offence. The bullying discourse removes gender from the conversation and is present most prominently in the education literature. It was only in the fourth most common discourse that non-consensual sexting was conceptualised as a form of violence against women, noting that this term encompasses a continuum of violent and abusive behaviours (see glossary). This mostly occurred in the psychology literature followed by the legal literature. Gender framing of sexting was largely absent in the educational literature.

Research into forms of consent (implied or verbal) and non-consent, ranging from physical resistance, avoidance/moving away, verbal non-consent and silent non-consent, reveals that the negotiation of consent is more complex than simply whether consent has been given or not and whether a person is in a state capable to give consent. Women and men use many different verbal and nonverbal cues to communicate willingness to participate in sexual activity (Humphreys, 2004; O'Bryne, Hansen, & Rapley, 2008; O'Bryne, Rapley, & Hansen, 2006; Walker, 1997). It is also likely that the negotiation of sexual consent is informed by culturally determined sexual scripts (Bay-Cheng & Eliseo-Arras, 2008; Conroy, Krishnakumar, & Leone, 2015; Ryan, 2011) and these are different for women and men (e.g. Jozkowski, Peterson, Sanders, Dennis, & Reece, 2014). In addition, a number of researchers have identified the influence of gender stereotypes and the degree to which women and men subscribe to these stereotypes (e.g. passive women subservient to men) when negotiating consent (Bay-Cheng & Eliseo-Arras, 2008; Fantasia, 2011; Hust et al., 2014; Hust, Marett, Lei, Ren, & Ran, 2015; Hust, Rodgers, & Bayly, 2017; Ward, 2003; Warren, Swan, & Allen, 2015).

The CASVAW component included questions on disregarding sexual consent, which reflected elements of the common discourse related to consent across the literature and evident in the fields of practice. Having them cluster together in the factor analysis illustrates this as a newly emerging theme important to include in future surveys (see Appendix 7 and Table 2 p.32).

4.3 Gender Equality Attitudes Scale (GEAS)

The survey instrument has a component made up of items gauging attitudes towards gender inequality. The GEAS is derived from this set of items (see the NCAS questionnaire framework in Figure 1 at p.7). It is a measure for overall support for gender equality.

The inclusion of a measure of attitudes towards gender equality in the NCAS serves two key purposes. First, research literature internationally has repeatedly identified that individuals' endorsement of attitudes that are supportive of violence against women may be associated with an underlying set of attitudes that undermine or call into question women's equality with men (see Powell & Webster, 2016 for a review). Second, attitudinal support for gender equality and, indeed, equal respect for women and men has been identified as a potential indicator of progress in efforts towards the primary prevention of men's violence against women (see Our Watch, 2017).

4.3.1 Rationale for review and redevelopment

The 2013 wave of the NCAS used an 8-item gender equality measure. Most of these items were adapted from the World Values Survey and had been tested in a previous Victorian community attitudes survey (Taylor & Mouzos, 2006; VicHealth, 2006). The previous 8-item measure performed reasonably well as an explanatory construct for attitudes supportive of violence

against women, with participants who scored low in support for gender equality tending to endorse violence supportive attitudes more strongly (McGregor, 2009; VicHealth, 2006; 2010; 2014). The findings from previous waves also showed that, in general, the Australian community was more likely to agree with statements supporting women's equality in areas of public life (such as employment and education) than to agree with statements supporting equality in private life (such as women's equal control of decision-making in relationships). This suggested there might be different dimensions, or subdomains, of attitudes towards gender equality, which may, in turn, better explain differences in support for men's violence against women. However, the previous 8-item measure was not sensitive enough to explore different dimensions of attitudinal support for gender equality. As such, the NCAS team sought to review and redevelop a more comprehensive measure, the GEAS, which would better meet five key objectives. The GEAS is intended to be:

- *comprehensive,* so as to allow for examination of a potential correlation between attitudes supportive of violence against women and multiple subdomains of attitudes towards gender equality;
- *consistent* with the *National Plan* and the *Change the Story* framework, so as to support the benchmarking of progress towards primary prevention of violence against women;
- *comparable* at the scale level with the previous 8-item measure for time-series (meaning that a minimum of 4 items from the previous measure would need to be retained);
- *contemporary* in its language and social context (recognising that many items in existing scales were developed in the US and in the 1970-80s, and may not reflect contemporary Australian society); and
- *concise* enough for inclusion in the 2017 NCAS wave within the time constraints of a 20-minute telephone survey.

4.3.2 Conceptual framework

Substantial research into the underlying gendered drivers of violence against women had already been undertaken and is represented in *Change the Story*, the national framework for the primary prevention of violence against women. This was used as a guiding framework to inform initial item reduction. The framework identifies four gendered drivers of violence against women, which it defines as "expressions of gender inequality" (see Figure 4 p.12).

The framework also identifies five reinforcing factors. Among these are "backlash factors" (referring to increases in violence that may occur when male dominance, power or status is challenged) (Our Watch, 2017). According to international research, "Backlash" may also be manifest in attitudes that emphasise a denial of gender inequality and/or a hostility towards women and the gains made by the women's movement. These attitudes are widely referred to in international research as examples of 'modern sexism' (Swim et al., 1995) and 'hostile sexism' (Glick & Fiske, 1997) respectively.

The NCAS IG prioritised items from existing gender inequality measures, which, on the basis of face validity, aligned with the concepts drawn from *Change the Story* (above). In the literature, a distinction is typically made between gendered identities and gender roles. Accordingly, for the purposes of this exercise, "rigid gender roles" and "stereotyped constructions of masculinity" were treated as separate constructs.

In summary, then, the framework included five themes labelled as follows:

- condoning of violence against women (attitudes reflecting this are addressed in the CASVAWS above);
- men's control of decision-making and limits to women's independence in public and private life;
- rigid gender roles and stereotyped constructions of masculinity and femininity;
- male peer relations that emphasise aggression and disrespect towards women; and
- attitudes that emphasise denial of gender inequality and/or hostility towards women.

4.3.3 Identifying potential items

A review of national and international literature was conducted, in consultation with the NCAS team, to develop a compendium of potential measures of attitudinal support for gender inequality. The review was conducted according to the following key selection criteria for identifying scales: scales were included if they (1) had been used in empirical studies within the 10-year period of 2006-16 (some studies cited original scales that predated this period and these were included); (2) were published in peer-reviewed journals with psychometric properties reported; (3) were not study-specific modifications of existing scales (such as for purposes of program evaluation); (4) sought to measure attitudes, beliefs, perceptions or social norms, and; (5) tapped one or more constructs of gender roles, masculinity, femininity, sexism, sex discrimination, hostility towards women, and male peer relations emphasising sexism, aggression and/or disrespect towards women. The key scales identified, and the types of attitudes supportive of gender inequality that they are designed to measure, are summarised in Table 3 (p.43).

Table 3: Scales measuring attitudinal support for gender equality/inequality

Scale name	Author credited with development
Rigid gender roles	
Attitudes Towards Women Scale	Spence & Helmreich, 1972; Spence, Helmreich, & Stapp, 1973
Sex-Role Ideology Scale	Kalin & Tilby, 1978
Sex-Role Stereotyping Scale	Burt, 1980
Sex-Role Egalitarianism Scale	Beere, King, Beere, & King, 1984; King & King, 1986
Gender Attitude Inventory	Ashmore, Del Boca, & Bilder, 1995
Social Roles Questionnaire	Baber & Tucker, 2006
Gender Role Attitudes Scale	García-Cueto, et al., 2015
Traditional masculinity and femininity ideology	
Male Role Norms Scale	Thompson & Pleck, 1986
Male Role Attitudes Scale	Pleck, Sonenstein, & Ku, 1994
Male Role Norms Inventory Scale	Levant, Hirsch, Celentano, & Cozza, 1992
Femininity Ideology Scale	Lehman, 2000; Levant, Richmond, Cook, House, & Aupont, 2007
Bem Sex Role Inventory	Levant et al., 2007
Hostility/aggression towards women	
Ambivalent Sexism Inventory (Hostile Sexism Subscale)	Glick & Fiske, 1996; 1997; 2001; 2011
Hostility Towards Women	Check, Perlman, & Malamuth, 1985; Check, 1988
Modified Hostility Towards Women Scale	Lonsway & Fitzgerald, 1994
Sexist and sex discriminatory attitudes	
Old Fashioned and Modern Sexism Scales	Swim & Cohen, 1997
Neosexism Scale	Tougas, Brown, Beaton, & Joly, 1995
Ambivalent Sexism Inventory (Benevolent Sexism Subscale)	Glick & Fiske, 1996; 1997; 2001; 2011
Male sexist/aggressive peer relations	
Discomfort with Sexism Scale	Kilmartin, Conway, Friedberg, McQuoid, & Tschan, 1999
Sexual Social Norms Inventory (Comfort with Sexism Subscale)	Bruner, 2002
Peer Support for Aggression	Brown & Messman-Moore, 2010

A list of all items from each of the 21 scales identified was compiled and reviewed for (a) applicability within the purposes of the GEAS within the NCAS and (b) suitability to the Australian context. During review, consideration was given to whether there was a short version of the scale available and how and under what circumstances the scale had been tested and validated

previously (e.g. whether it had been used in a general population sample), as well as the face validity of items in relation to the key subdomains of policy relevance as identified in *Change the Story.* As with the CASVAW Scale discussed previously, with many of the existing scales comprising 30 or more items, and with no single validated scale addressing multiple dimensions of attitudes towards gender inequality, it was decided by the IG that there would not be space in the survey instrument to include a previously validated scale. As such, the research team proceeded to construct a set of items from these existing scales, as well as some newly developed items, to include statements relevant to each of the five theoretical domains from *Change the Story* (as described above). As before (see CASVAW above), items were categorised in these themes on the basis of inductive reasoning and face-validity prior to validation (Hardesty & Bearden, 2004; Hinkin et al., 1997).

4.3.4 Item reduction, testing and validation

The process for item reduction, testing and validation included:

- **Stage 1:** two project Chief Investigators reviewed all identified items to generate a short list through a process of inductive and deductive reasoning (see section 1.4). During initial review, decisions were made to remove items that could not be asked of everyone in the population (i.e. were too culturally, age or setting specific), were convoluted or outdated in their expression, or were worded similarly to an item already existing in the NCAS (with the item exhibiting greater clarity of expression retained).
- **Stage 2:** a short list (36) of the full set of potential items (380) was considered by the NCAS IG and reviewed for face validity, including some recommendations made by the Chief Investigators during Stage 1 review. Some minor item wording changes were made during this process in order to adapt the short list of items for the Australian context (as many existing items were developed in the US).
- **Stage 3:** the preferred list of 36 items from Stage 2 was reviewed for item and scale validity, using psychometric data from the original studies where provided, as well as populations where the questions had been used (e.g. general population or university sample). The list was then considered by the NCAS Review Group (formed from the Expert Panel; see Appendix 5).
- **Stage 4:** Two rounds of scale validation were undertaken with 41 items included in Round 1, and further reduction to 24 items in Round 2, based on item and scale fit statistics. This resulted in a 19-item GEA Scale that went into the field. At this stage of pilot testing several potential factor models were examined as part of the scale validation. This scale development and testing process is reported in greater detail in section 6. Factor analyses suggested a potential 4-factor model that reflected key theoretical themes of "Gender stereotypes and roles in private life", "Gender stereotypes and roles in public life", "Condoning male peer relations involving aggression and disrespect of women", and "Denying gender inequality is a problem".

However, a final decision as to the factor structure of the GEA Scale was not confirmed until fieldwork had been conducted with the complete population sample (see below).

4.3.5 Outcome following fieldwork and confirmation

Upon completion of the main fieldwork, confirmatory Rasch analysis on the 19-item GEA Scale was undertaken using the full survey sample. A further single item was removed on the basis of item and scale statistical indicators, which suggested a lack of alignment with the remaining scale items. This resulted in an 18-item final GEA Scale, with the 19th item included in frequency reporting but not used in subsequent whole-of-scale scores and subdomain analyses.

Also at this confirmatory stage, a set of 2-, 3-, 4- and 5-factor models were re-examined in order to determine whether some items within the GEA Scale continued to group together as meaningful subdomains (or smaller thematic constructs) within the overall concept of endorsement of gender inequality that was being measured. The best model, determined based on a combination of both statistical and conceptual fit, was a 5-factor model inclusive of the final 18 items (see Appendix 7 and Table 4). Two of these final factors remained consistent with those that had emerged in the piloting and validation stage, namely "Condoning male peer relations involving aggression and disrespect of women" (Factor 4 below) and "Denying gender inequality is a problem" (Factor 5). The trend towards survey participants' holding differing beliefs about gender in public versus private life also continued to emerge, though this was more apparent in the items that reflected beliefs about men's control over decision-making (Factor 2 and 3 below). The remaining GEA Scale items that grouped together in the factor analysis all related to different aspects of rigid gender roles or stereotypical expressions of masculinity and femininity (Factor 1 below). The labels for each of these final five statistical factors were re-aligned in the scale confirmation stage to reflect the aspirational and positively framed language from *Change the Story*.

The final outcomes are arranged in Table 4 by their factors. A fuller explication of the themes follows, drawing on the wider literature.

Table 4: GEAS items by subdomain

Item label	Item text
	Factor 1: Promoting rigid gender roles, stereotypes and expressions
ATT4j	If a woman earns more than her male partner, it is not good for the relationship.
ATT4cc	A man should never admit when others have hurt his feelings.
ATT4v	When a couple start dating, the woman should not be the one to initiate sex.

Item label	Item text
ATT4o	I think it is embarrassing for a man to have a job that is usually filled by a woman.
ATT4d	A woman has to have children to be fulfilled.
Factor 2: Undermining women's independence and decision-making in *public* life	
ATT4m	In the workplace, men generally make more capable bosses than women.
ATT4n	Men, rather than women, should hold positions of responsibility in the community.
ATT4a	On the whole, men make better political leaders than women.
ATT4aa	Women are less capable than men of thinking logically.
Factor 3: Undermining women's independence and decision-making in *private* life	
ATT4g	Men should take control in relationships and be the head of the household.
ATT4h	Women prefer a man to be in charge of the relationship.
Factor 4: Condoning male peer relations involving aggression and disrespect towards women	
ATT4dd	I think there's no harm in men making sexist jokes about women when they are among their male friends.
ATT4gg	I think it's okay for men to joke with their male friends about being violent towards women.
Factor 5: Denying gender inequality is a problem	
ATT4nn	Many women exaggerate how unequally women are treated in Australia.
ATT4oo	Many women mistakenly interpret innocent remarks or acts as being sexist.
ATT4pp	Many women fail to fully appreciate all that men do for them.
ATT4qq	Women often flirt with men just to be hurtful.
ATT4f	Discrimination against women is no longer a problem in the workplace in Australia.

Factor 1: Promoting rigid gender roles, stereotypes and expressions

The first factor in the GEA Scale measures attitudes that endorse traditional and rigid gender roles, stereotypes and expressions. Support for rigid gender roles indicates agreement with the idea that men and women are naturally suited to "do" different tasks and responsibilities. For

example, endorsement of rigid gender roles might reflect views that women are naturally better parents, while men are naturally better income earners.

Support for gender stereotypes and expressions, furthermore, indicates agreement with the idea that men and women have naturally distinctive, and often oppositional, personal characteristics. These might include views that associate women with stereotypically "feminine" traits such as patience, emotional sensitivity, passivity, dependence, and moral or sexual purity. Meanwhile men might be associated with stereotypically "masculine" traits such as strength, independence, confidence, assertiveness and aggression.

Factor 2: Undermining women's independence and decision-making in *public* life

In the GEA Scale, Factor 2 measures an individual's endorsement of men's suitability to control decision-making in public life – as compared to women. The items contained within this factor each express attitudinal support for men's greater "natural" authority, capability and leadership in public settings such as government, employment and the community, at the same time as presuming women's lesser suitability for these same positions of responsibility and control. Agreeing with these items does not mean that an individual necessarily believes that women are not at all capable of undertaking public positions of decision-making and responsibility, but indicate an attitude that – given the option of either a man or a woman – a man would do a better job in such roles.

Factor 3: Undermining women's independence and decision-making in *private* life

This factor is conceptually related to Factor 2, and indeed in *Change the Story* it appears as a single theoretical concept: "Men's control of decision-making and limits to women's independence in public life and relationships" (Our Watch et al., 2015). However, in our GEA Scale confirmatory factor analysis, the following two items were statistically distinct from those described under Factor 2 above:

- Men should take control in relationships and be the head of the household; and
- Women prefer a man to be in charge of the relationship.

These items indicate an individual's endorsement of men's greater "natural" authority, decision-making and control in the private realm of intimate relationships. They express an agreement with a relationship model and household structure in which men have the ultimate say over what happens in the relationship or how the family is run. Again, this does not suggest that women do not contribute to these tasks – indeed, Australian data indicates that women continue to carry a larger share of day-to-day household and child-rearing responsibilities – but, rather, that when it comes to decision-making in private life, women ought to defer to men's leadership. Such control in private life can have flow-on effects on women's independence and ability to participate in other aspects of public life. For example, if the man of the house has the final say in who works and who stays at home to take a greater share of parenting, this clearly impacts a

woman's capacity to participate in the workforce and maintain economic independence within the relationship.

In the context of heterosexual intimate relationships, attitudes that normalise male control of decision-making and limit women's independence may also normalise controlling behaviours such as restricting women's contact with friends and family, access to finances and participation in the workforce. Such controlling behaviours are a common feature of intimate partner violence. Again, this is not to suggest that an individual who agrees with these items will necessarily engage in violent behaviours. But, rather, community support for these attitudes may make it (a) more difficult for individuals to recognise when men's control over decision-making might constitute abuse and (b) more difficult for women who are experiencing multiple forms of abuse to be in a position to leave a violent relationship.

Factor 4: Condoning male peer relations involving aggression and disrespect towards women

There is an established body of research that suggests that negative male peer group cultures that reinforce aggressive masculinities and either tolerate or condone disrespect and hostility towards women may be associated with both greater attitudinal endorsement of violence against women and, in some cases a higher probability of perpetration of violence against women (DeKeseredy, 1990; DeKeseredy & Schwartz, 2013; Flood & Pease, 2009; Schwartz & DeKeseredy, 1997). Such male peer relations may be measured in two key ways. The first is through an examination of the gender composition of individuals' peer networks and whether these impact on other attitudes towards women (discussed in section 4.7). The second is through specific attitudes that normalise male peer group interactions emphasising aggression, sexism and disrespect towards women.

Factor 5 of the GEA Scale provides a measure of attitudinal support for male peer relations that tolerates or condones sexism or violence towards women. Agreement with these items indicates attitudes that normalise "locker room talk", or "boys will be boys" behaviours, that treat women as unequal and/or with disrespect.

An additional item from the 2013 NCAS, "Discrimination against women is no longer a problem in the workplace in Australia", also aligned statistically with Factor 4. This item, though meeting statistical fit measures for the GEA Scale as a whole, was an outlier in the factor analysis – aligning with Factor 4, rather than Factor 5 (below) – despite the latter having greater face and conceptual validity. As such, in public reporting of findings it has been included in its conceptual subdomain of 'Denying gender inequality is a problem' . However, in this report and the multivariate analyses in public reporting it is retained in its statistical domain.

Factor 5: Denying gender inequality is a problem

A small number of international studies have investigated a potential "backlash effect" of women's rights and increasing participation in public life since the 1970s and 80s. Such backlash

can be seen in attitudes that deny that gender inequality remains a problem requiring public action, that endorse sexism, discrimination or are hostile against women, or that express a resentment towards women's rights. Indeed, various studies into "modern sexism" examine more subtle attitudes supporting gender inequality (including sexism and sex discrimination) as well as resentment towards the gains made by the women's movement (Glick & Fiske, 1996, 1997; Swim, Aikin, Hall, & Hunter, 1995; Swim & Cohen, 1997; Tougas et al., 1995).

Factor 4 of the GEA Scale, *Denying Gender Inequality is a Problem,* likewise measures attitudes that express a denial of continued gender inequality, an antagonism or resentment towards the women's movement, and/or hostility towards women. Understanding the concept of a 'backlash effect', can help to postulate why it might be that despite progress in other community attitudes towards gender equality, community-level endorsement of these particular examples of sexism might initially *increase* rather than *decrease* in response to actual or perceived gains of the women's movement.

4.4 Pro-social responses (bystander) items

4.4.1 Rationale for review and redevelopment

A bystander is somebody who observes an act of violence, discrimination or other unacceptable or offensive behaviour. Within crime prevention and much psychological research, the terms "active" or "pro-social" bystander are commonly used to refer to an individual who takes action to intervene in response to an observed incident. "Passive" bystander refers to individuals who observe an unacceptable or offensive behaviour and fail to act or intervene.

Bystander action refers to actions taken by a person or persons not directly involved as a subject or perpetrator of violence against women, or abuse or disrespect, to identify, speak out about or seek to engage others in responding to specific incidents of violence or behaviours, attitudes, practices or policies that contribute to violence. Pro-social or bystander interventions are identified as a promising approach in the national and international literature (see, for example, Cares, Moynihan, & Banyard, 2014; Powell, 2014). Although, to date, evaluations have been rare and there is a dearth of evidence demonstrating their effectiveness, bystander approaches hold promise because they provide a means of engaging the community – in particular, non-violent men – in prevention. An advantage of involving men as pro-social bystanders is that this can help to address aspects of male peer cultures implicated in violence against women (Powell, 2014). Given this, it is important to measure and monitor the preparedness and capacity of the community to take action.

In 2013 the bystander items were framed to ascertain respondents' intended responses to an acute incident of violence against women. These questions were reworded from the 2009

iteration of the instrument in an attempt to overcome the problem of poor sample variation. However, this objective was not achieved, and an analysis of the reworded items showed that sample variation remained poor.

Further, since much violence, especially physical violence, occurs behind closed doors, the opportunities for pro-social behaviour are limited and intervention in these circumstances may carry risks for all involved. For these reasons, increasing attention has been given recently to supporting bystander intervention in antecedents to physical violence, such as disrespect of women and abusive behaviour. Such behavioursoccur in day-to-day social and workplace settings.

Accordingly, and consistent with the recommendation of the May 2016 instrument review, this component has been redeveloped to ascertain respondents' intentions when witnessing known *antecedents* to physical violence and forced sex.

4.4.2 Conceptual framework

Although a number of conceptual frameworks guide understanding of pro-social behaviour in the literature, the framework developed by Latané and Darley (1970) was used to guide selection of the NCAS bystander items, which, although developed nearly 50 years ago, is still widely used. The model has six steps:

1. **Noticing the situation**, which relies on individuals having knowledge of violence against women, its signs (such as potential impacts on victims) and its associated causes.
2. **Interpreting the event as requiring intervention**, which relies on individuals forming the view/attitude that violence against women is a community and social problem, rather than a private and individual problem.
3. **Assuming individual responsibility**, which requires that individuals believe that they can and should take action if they notice something.
4. **Deciding how to help**, which requires that individuals know the specific actions to take.
5. **Confidence in one's capacity to help**, which requires that individuals are confident that they have the skills or capacity to take action safely, and that their action will improve (rather than escalate) the situation.
6. **Normative beliefs (perceptions of the behaviours/expectations of others).**

4.4.3 Developing potential items

Initially, three scenarios were developed, subject to cognitive testing, and piloted – one concerned verbal abuse by an intimate partner, one involved a sexist joke and the third involved persistent unwanted sexual advances. There was ultimately space for only two scenarios and the scenario concerning unwanted sexual advances was dropped. The items were developed using the Latané and Darley model as a guide and were adapted from a prior survey (Pennay & Powell, 2012). The two scenarios incorporated into the survey instrument appear in Table 5 below.

4.4.4 Outcome

Table 5: Pro-social responses scenario items

Item label	Item text
	I am now going to read out a number of behaviours that you might encounter when you are socialising with friends. I would like you to tell me how you feel about each of these behaviours and what you might do if you were in this situation.
BS1a	To start with – if a male friend told a sexist joke about women? Do you think… 1. It wouldn't bother you 2. You'd feel a bit uncomfortable, but not say or do anything 3. You'd like to say or do something, but wouldn't know what to do, or 4. You'd say or do something to show you didn't approve 5. (Don't know) 6. (Refused)
BS1b	Suppose you did say or do something to express disapproval, do you think you would have the support of your friends? Would you say you'd have the support of… 1. All or most of your friends 2. Some or 3. Few, if any 4. (Don't know) 5. (Refused)
BS3a	And how about if you noticed a male friend was insulting or verbally abusing a woman he was in a relationship with? Do you think… 1. It wouldn't bother you 2. You'd feel a bit uncomfortable, but not say or do anything 3. You'd like to say or do something, but wouldn't know what to do, or 4. You'd say or do something to show you didn't approve 5. (Don't know) 6. (Refused)
BS3b	Suppose you did say or do something to express disapproval, do you think you would have the support of your friends? Would you say you'd have the support of… 1. All or most of your friends 2. Some of your friends, or 3. Few, if any of your friends 4. (Don't know) 5. (Refused)

These four items in Table 5 were formed into a derived variable to aid in the descriptive and statistical analyses in the main report[4]. As with the constructs of key interest, the Rasch model was used to derive measures for each person answering one or more of the Intention to Act Construct (ITAC) items. Although not explicitly designed as a scale, the items worked very well

[4] *Australians' attitudes to violence against women and gender equality. Findings from the 2017 National Community Attitudes Towards Violence against Women Survey (NCAS)* released November 2018 available at www.ncas.anrows.org.au

together, exhibiting good fit to the Rasch model and showing a clear hierarchy among statements. Compared to the main constructs, which contained more items, discrimination between persons was reduced. Nonetheless, the other good properties of ITAC made it a useful variable to include in the analyses.

4.5 General Violence Construct (GVC)

4.5.1 Rationale for development

The General Violence Construct (GVC) is used in the NCAS as an explanatory measure (see the NCAS questionnaire framework in Figure 1 p.7). For reasons discussed earlier (scope and length of questionnaire), it was agreed that the measure could comprise no more than six items.

There is evidence of an overlap between violence against women and other forms of violence, including overlap in the offending trajectories and criminogenic risks between domestic violence offenders and other violent offenders (Hilton et al 2004; Olson and Stalans 2001; Gover, Richards and Tomsich 2015); in addition, some domestic violence offenders have careers in both domestic and non-domestic violence crimes (Boxall, Payne & Roseveer, 2015; Coghlan & Milsteed, 2017; Feder & Dugan 2002; Olson and Stalans 2001; Richards, Jennings, Tomsich, and Gover 2012). Violence against women has also been found to coincide withincluding the use of violence against children in the family (Fleming, et al., 2015b; Fulu, Jewkes, Roselli, & Garcia-Moreno, 2013; Hagemann-White, Kavemann, Kindler, Meysen, & Puchert, 2010; WHO, 2010), violence in the community (Hagemann-White et al., 2010; Heise, 2011) or particular subcultures (Fulu, Jewkes, et al., 2013; Hagemann-White et al., 2010), violence in organisational contexts such as prisons (Debowska, Boduszek, Dhingra, & DeLisi, 2015) or the military (Cockburn, 2010; Roberts, 2004), as well as among communities and nations affected by war and civil conflict (Marsh, Purdin, & Navani, 2006; Sety, James, & Breckenridge, 2014; Stark & Ager, 2011; United Nations Security Council, 2002). The causes of these forms of violence are complex and include both individual and social drivers. However, as is the case for violence against women, there is evidence of an association between these other forms of violence and structures, practices and norms supportive of them (WHO, 2002). This suggests the possibility of a common link between cultures of support for violence against women and cultures of support for other forms of violence. Indeed, an association between attitudes towards other forms of violence and attitudes towards violence against women has been found in some studies (see Suarez & Gadalla (2010) for a review).

Three contrasting perspectives can be found on this common link in the literature and are presented in this section below. The purpose is not to endorse or critique any particular theory, but to illustrate the contrasting explanations present in the research and policy communities that need to be considered when developing a measure of general violence

The first of these is that attitudes towards violence against women are a subset of broader cultural support for violence *as a practice* (Anderson & Anderson, 1997; Anderson, Benjamin, Wood, & Bonacci, 2006; Ferreira, Lopes, Aparicio, Cabral, & Duarte, 2014; Malamuth, 1998; Velicer, Huckel, & Hansen, 1989). Cultures/subcultures of violence theory was first proposed in the 1960s (Wolfgang, Ferracuti, & Mannheim, 1967; Wolfgang & Ferracuti, 1982). It hypothesises that cultures of violence lead to the normalisation of violence and desensitisation to it, predisposing individuals to use violence as opposed to other means (e.g. mediation or persuasion) to resolve problems or achieve goals (Funk, Elliott, Urman, Flores, & Mock, 1999; Funk, Elliott, Bechtoldt, Pasold, & Tsavoussis, 2003).

It should be noted that Wolfgang, Ferracuti & Mannheim (1967) did not substantiate their theory of 'subcultures of violence' and Elliott Currie (1985) reported that "No one has yet been able to find the subculture of violence – and not for lack of trying" (p. 164). Many criminology researchers say this is true still today. A number of researchers have attempted to substantiate the research of Wolfgang and colleagues over the years with mixed results (see for examples Erlanger 1974; Felson et al 1994; Ousey and Wilcox 2005; Berburg and Thorlindson 2005; Surratt, Inciardi, Kurtz and Kiley 2004).

Cultures of violence theory has subsequently been expanded through four additional frameworks:

- Social learning theory (Bandura, 1977), whereby the processes of witnessing and experiencing violence, particularly as a child, can lead to supporting the use of violence. Such exposure may occur in the family, community or other institutions such as sports clubs and the media. Behaviours are learned and precipitated by a combination of contextual and situational factors (Barak, 2003; O'Leary, 1988; Owens & Straus, 2006; Straus, 1991; Widom, 1989).
- Intergenerational or cultural transmission, which holds that attitudes towards violence may be learned may be learned through exposure to violence being represented in ways in which it is rewarded or excused (Akers 1973; Gover, Richards, & Patterson 2017) that attitudes towards violence are learned through exposure to violence in the family and passed through the generations (Hotaling & Sugarman, 1986; Kalmuss, 1984; Straus, 1983; Straus, Gelles, & Steinmetz, 1980; Vold, Bernard, & Snipes, 1998).
- Attitudes, values and norms construction, which seeks to explain social differences in violence, attributing them to particular attitudes towards courage, toughness and retribution among cohorts (Cohen & Short, 1971; Wolfgang, Ferracuti, & Mannheim, 1967; Wolfgang & Ferracuti, 1982).
- Social disorganisation theory, which holds that norms that function to control the use of violence deteriorate in the face of community and societal level adversity (Browning, 2002; Frye, 2007). Although the theory is most commonly associated with explaining violence in the context of neighbourhood deprivation (Sampson & Groves, 1989; Sampson & Wilson, 1995), other influences may also impinge on norms, including war and natural disasters (Bolin, Jackson, & Crist, 1998; Dasgupta, Sriner, & Partha, 2010;

Enarson & Meyreles, 2004), colonising influences (Wundersitz, 2010) or migration and the refuge and asylum experiences (in the case of diaspora communities) (Yoshihama, 2009). Social disorganisation is understood to create a climate in which violence can be perpetrated with impunity (Browning, 2002; Frye, 2007).

Drawing on the theories above, some argue that a culture of violence is more likely to exist among people experiencing social disadvantage (Markowitz, 2001; 2003).

Nevertheless it should be noted that the concept of social disorganisation is contested with some scholars noting the value judgements inherent in determining what constitutes disorganisation. Others point to the fact that not all communities experiencing deprivation have relatively high rates of violence (McCausland & Vivian, 2009). They also maintain that an organisation-disorganisation continuum fails to capture the multiplicity of social arrangements in a given place. These scholars argue for a focus on how power and inequality play out at the local level in different ways that may contribute to or constrain violence against women, with implications too for whether violence is reported and the availability of support for victims (Donnermeyer & DeKeseredy 2013). An alternative model is to consider how a seemingly disorganised community often contains a hidden order, or orders, organised around expected social roles within the community, or place. This may often be an order underpinned by and reinforcing masculine power and control. At the same time, social disorganisation theory is being reinvigorated and further developed by other scholars who examine disadvantage and community level differences in the prevalence of violence against women, and protective factors that may reduce the levels of violence (see, for example, Kubrin & Wo, 2016).

The second perspective for a relationship between attitudes supportive of violence against women and attitudes supportive of other forms of violence draws on evidence indicating that almost all forms of violence are more likely to be perpetrated by men than by women (Fleming, Gruskin, Rojo, & Dworkin, 2015a). In this explanation, it is suggested that contemporary forms of masculinity (and the norms, cultures and practices supporting them) are among the root causes of violence perpetration by men and underlie both violence against women and other forms of violence (e.g. community violence, violence in sport) (Fleming et al., 2015a).

The third perspective maintains that violence against women reflects and reinforces inequalities in relationships between men and women and needs to be understood as a distinct form of violence (Stark, 2007; World Health Organization, 2010). In this view violence against women is understood to vary from violence perpetrated by men against other men in that it has different motivations and is more likely to be repeated, to involve more than physical violence, to occur in the context of an existing relationship and to occur in a place familiar to the victim, such as her family home or workplace (Houry et al., 2008).

An implication of the cultures of violence approach is that addressing cultural support for the use and acceptance of violence *as a practice*, and the conditions leading to it (e.g. deprivation and disorganisation), is likely to reduce cultural support for violence against women. In contrast, the

second and third perspectives suggest that this is unlikely to be sufficient *on its own*. Rather, there is a need to integrate messages addressing violence with those addressing negative aspects of masculinity and/or gender relations. This is increasingly referred to in the literature as a gender transformative approach (Pederson, Greaves, & Poole, 2014). The *Change the Story* framework draws on each of these explanations, emphasising the gendered drivers of violence against women and identifying the experience of and exposure to violence (and other forms of inequality) as reinforcing factors (Our Watch et al., 2015).

Eigenberg and Policastro (2016) argue that if we gauge relationships between attitudes to violence against women and attitudes to gender equality, we should also do the same for other constructs that may be associated with violence against women, including attitudes towards the use of violence. The benefit is that we may identify a net of community attitudes and norms linked to violence against women that can be a focus of prevention strategies to reduce violence against women. Understanding the links between the constructs can be helpful to influence educational programming and public campaigns addressing attitudes about violence against women through broader messages on issues such as violence in the community. It is possible that if attitudes in these other related domains shift, the benefits will flow on to improve attitudes towards violence against women. Further, if different forms of violence share some underlying cultures in common, efficiencies can be achieved by designing programs that address more than one form of violence in a single program (e.g. community violence and partner violence). This understanding may also broaden the repertoire of options for framing messages for particular subcultures that may "tune out" from, or not identify with, specialist messages on specific forms of violence. Messages on violence against women or violence against minority communities may not be seen as relevant, but these groups may respond to more generalised messages (e.g. about the use of violence as part of masculinity). On the other hand, if a relationship is not found to exist between other relevant constructs and violence against women, or is weak relative to other factors, this information can help to make sure that action is not inappropriately focused on them at the expense of other more relevant factors.

4.5.2 Conceptual framework

There are many constructs underpinning attitudinal support for violence identified in the literature (e.g. retaliatory violence, violence as a form of catharsis). Further, scale development to address attitudes has focused on different types of violence (e.g. capital punishment, child abuse) and violence in different settings (e.g. sport settings, the media). It was agreed by the IG that the most appropriate constructs to measure in the NCAS were those concerned with attitudes towards (a) the seriousness of violence and (b) whether the use of violence is legitimate in certain circumstances as a form of punishment or retaliation. Further, the measures should include items gauging both attitudes towards interpersonal forms of violence (in the community and the family), as well as the representation of violence in institutional settings.

4.5.3 Identifying potential items

A measure of attitudes to general violence was considered in the development of the 2013 survey instrument , drawing on and augmenting a compendium of existing national and international survey tools (Flood, 2008). This was further updated by the NCAS team in 2016. Both inductive and deductive reasoning (see section 1.4) were used to select items from existing scales. Like the selection criteria used for CASVAWS and GEAS, the review was conducted with the following key selection criteria for identifying scales: scales were included if they (1) had been used in empirical studies in the period 1970-2016 (this extended timeframe was used to capture the period in which most development of GVCs occurred); (2) were published in peer-reviewed journals with psychometric properties reported; (3) were not study-specific modifications of existing scales (such as for purposes of program evaluation), and (4) sought to measure attitudes, beliefs, perceptions or social norms gauging the perceived seriousness of violence or the legitimacy of using it as form of punishment or retaliation. Measures *excluded* from the review included:

- dating or partner violence, sexual assault or sexual harassment (due to overlap with CASVAWS);
- those addressing attitudinal support for men using violence as an expression of masculinity (due to the overlap with GEAS);
- child abuse;
- conflict resolution; and
- attitudes to bullying.

The literature review identified 14 scales used to measure attitudes towards violence that fit selection criteria. These scales and the types of violence they were designed to measure are summarised in Table 6. Two scales (shaded in the table) were excluded at an early stage as they measured specific forms of violence. The scales developed by Polaschek, Collie, and Walkey (2004) and de Vargas, Luis, Soares, and Soares (2015) were excluded because they were designed to measure attitudes among convicted criminals and management and aggression among a patient population respectively.

Table 6: Scales measuring attitudes supportive of violence as a practice

Scale name	Author credited with scale development
Beliefs Supporting Aggression	Bandura, 1977
Measuring Attitudes Toward Violence	Caprara, Cinanni, & Mazzotti, 1989
Normative Beliefs about Aggression Scale (NOBAGS)	Huesmann & Guerra, 1997
Attitudes and Beliefs Regarding Aggression	Vernberg, Jacobs, & Hershberger, 1999
Attitude Towards Violence	Blevins, 2001
Beliefs about Aggression and Alternatives	Farrell, Meyer, & White, 2001
Attitudes Toward Violence Scale, Child Version (ATV-C)	Funk et al., 1999; Funk et al., 2003
Attitude Towards Violence (ATV)	Dahlberg, Toal, Swahn, & Behrens, 2005
Attitudes Toward Violence Scale (ATV)	Velicer et al., 1989; Anderson et al., 2006
Violence-Related Attitudes and Beliefs Scale (V-RABS)	Brand & Anastasio, 2006
Justification for Violence Scale (JFV)	Kelty, Hall, & Watt, 2011
Attitudes Toward Violence Scale (ATV)	Davidson & Canivez, 2012
Criminal Attitudes to Violence Scale (CAVS)	Polaschek et al., 2004
Management of Aggression and Violence Attitude Scale (MAVAS)	de Vargas et al. 2015

A list of all items from each of the remaining scales was compiled and reviewed for (a) applicability within the purposes of measuring attitudinal support for violence in the NCAS and (b) suitability to the Australian context. During review, consideration was given to whether there was a short version of the scale available, how and under what circumstances the scale had been tested and validated previously (e.g. whether it had been used in a general population sample), the theme of the violence being measured (e.g. aggression legitimation, retaliation etc.), and the setting in which the violence was portrayed or enacted (e.g. war, interpersonal, sport). Each item in each scale was reviewed for potential inclusion in the NCAS.

4.5.4 Item reduction, testing and validation

The process for item reduction, testing and validation included:

- **Stage 1**: two project Chief Investigators reviewed all items to generate a short list. During initial review, decisions were made to remove items that could not be asked of everyone in the population or were possibly measuring other constructs. For example, items on capital punishment and law enforcement officer use of weapons were excluded as there was a risk that responses to them may be complicated by beliefs about issues other than violence (e.g. towards sentencing, civil liberties, or law and order).

- **Stage 2**: a short list of the full set of items (207) was considered by the NCAS IG through a process of inductive reasoning and consideration of face validity (see section 1.4), including some recommendations made by the Chief Investigators during Stage 1 review. At this stage, it was decided by the IG that there was no existing fully validated scale that contained six or fewer items while also meeting conceptual requirements. To narrow the conceptual focus of the construct, a decision was taken to exclude items gauging state-sanctioned violence (other than penal code violence) and violence in war, and to focus on items concerned with interpersonal contexts and day-to-day settings. In addition to penal code violence, these included:
    - the use of interpersonal violence;
    - the use of violence in sports settings;
    - child punishment; and
    - the portrayal of violence in the media and the community.
- **Stage 3**: a preferred list of 40 items from Stage 2 was reviewed for item and scale validity using psychometric data from the original studies where provided, as well as populations where the questions had been used (e.g. general population or university sample) and reduced to 16 items for the validation survey. Some minor item wording changes were made during this process to adapt the short list of items for the Australian context (as many existing items were developed in the US). The list was then considered by the NCAS Review Group (formed from the Expert Panel; see Appendix 5).
- **Stage 4**: 16 data items were included in the Round 1 validation study from which the strongest six items were chosen. The detail of this process is described in section 6 of this report.

4.5.5 Outcome

The items included to gauge attitudinal support for violence are shown in Table 7.

Table 7: GVC items

Item label	Item text
Gv1e	If people threaten my family/friends, they deserve to get hurt.
Gv1c	If a person hits you, you should hit them back.
Gv1h	Playing violent games or watching violent movies can prevent violent behaviour by helping people get their frustrations out.
Gv1m	It is okay to hit children if they have done something wrong.
Gv1k	When children misbehave a quick slap is the best way to quickly end trouble.
Gv1p	Violence among fans in sporting arenas is just 'part of the game' and should not be taken seriously.

4.6 Prejudice Attitudes Construct (PAC)

4.6.1 Rationale for development

The Prejudice Attitudes Construct (PAC) is used in the NCAS as an explanatory measure (see the NCAS questionnaire framework in Figure 1 p.7). For reasons discussed earlier, it was agreed that the measure could comprise no more than eight items.

Although occurring across Australian society, violence against women is more prevalent and/or more severe or prolonged among certain groups. This includes young women, Aboriginal women and Torres Strait Islanders, women from CALD backgrounds and women of lower socio-economic status (Our Watch et al., 2015). Many experts understand this to be due to the influence of intersecting forms of discrimination and disadvantage to which both women and men in these groups are subject (i.e. because of their race, ethnicity, Aboriginality, social class and so on) (Our Watch et al., 2015). There are a number of pathways through which this might operate, each suggesting that attitudes or social norms may be implicated:

- Violence perpetrated against women in these groups may be motivated by the combined influences of both gender- and race-based prejudice. Examples of this are online "trolling" of prominent Aboriginal women involving racialised and sexualised threats or the harassment of women wearing the hijab.
- Men in these groups may be more vulnerable to factors that challenge their capacity to fulfil socially prescribed male roles, a condition understood to increase the risk of violence perpetration (see, for example, Day, Jones, Nakata, & McDermott, 2012).
- The groups may have greater exposure to other forms of violence and the cultures supporting them (e.g. community violence, war-related violence, child abuse), which in turn has been found to be linked to a higher risk of violence against women (see section 4.5.1 for further discussion).
- Discriminatory treatment of men in these communities, particularly within the law enforcement system, may act as a barrier to women seeking help once violence has started, and hence increase the risk of repeated and escalating violence (Crenshaw, 1991; Nash, 2005).
- Discriminatory attitudes towards these groups may result in less sympathetic support when women seek help. This is suggested in a US study comparing participants' responses to scenarios involving two victims in the same circumstances, with only the race of the victim altered. Participants were more likely to attribute culpability to the victim in the scenario involving an African-American woman victim than when the victim was of an Anglo-American background (Esqueda & Harrison, 2005).
- Discrimination can be embedded in the policies, practices and structures of institutions, making them inaccessible to women and men seeking support to address violence

against women and its impacts (e.g. services may be culturally insensitive, language assistance may not be offered) (Murdolo & Quiazon, 2015).

Prior research indicates a relationship between attitudes supportive of violence against women and attitudes supportive of prejudice on the basis of other attributes (e.g. social class, gender orientation, race) (Webster et al., 2014).

A measure of other forms of prejudice was included in the NCAS to:

- Determine the extent to which other prejudices are associated with attitudes to violence against women in Australia. To the extent that attitudes are a barometer of responses to such violence, this will in turn contribute to knowledge about the influence of intersecting forms of prejudice and disadvantage in the formation of cultures supportive of violence against women.
- Determine whether there is value in addressing other prejudices and inequalities as associated with negative attitudes towards gender equality and violence against women in Australia.
- Determine whether there is value in addressing gender-based prejudice, violence supportive attitudes and other prejudices as "common causes" in policy and practice to address each of these phenomena.
- Identify segments in the population holding attitudes supportive of violence against women, gender prejudice and other forms of prejudice for the purposes of targeting measures to reduce violence against women.
- Strengthen the capacity of the NCAS to monitor the *National Plan* and the *Change the Story* framework.

4.6.2 Conceptual framework

Intersecting forms of oppression are identified in the *Change the Story* framework in terms of the way in which they shape gender equality and gender relations among particular groups (Our Watch et al., 2015, p. 24). Social inequality and discrimination based on attributes such as race, ability, sexual orientation or gender identity are among the eight reinforcing factors in the *Change the Story* framework. Promoting broader social equality and addressing structural discrimination and disadvantage is one of the ten supporting actions to reduce violence against women.

4.6.3 Identifying potential items

There were a number of challenges involved in identifying a suitable measure, including that the measure needs to be:

- parsimonious (including eight items or less);
- as psychometrically robust as possible given the small number of items;

- conceptually relevant and coherent, a challenge given that there are multiple conceptual drivers of prejudice for some of the attributes above (in particular, ethnicity and race);
- acceptable to survey respondents, in particular those from groups affected by prejudice;
- amenable to the telephone survey mode; and
- inclusive of prejudice on the range of attributes of interest to the NCAS.

An initial search was undertaken to identify an existing short form measure with the intention of reducing the number of items further through the validation exercise. Several short forms were identified. However, these were assessed as unsuitable on conceptual grounds, their limited relevance to the Australian context, or because they were not inclusive of all the attributes of concern to the NCAS. Accordingly, work was undertaken in collaboration with Dr Anne Pedersen, a social psychologist recognised for her expertise in prejudice measurement in the Australian context, to arrive at a measure specifically for the NCAS. The following draws on Dr Pedersen's work.

In summary, as for the GVC, both inductive and deductive reasoning (see section 1.4) were used to select items from existing scales. For reasons discussed below, two separate approaches were used – a measure of ethnocentrism and a measure of other specific forms of prejudice.

A measure of ethnic and race-based prejudice

One way to measure attitudes towards groups from diverse ethnic and racial backgrounds is to use questions designed to gauge ethnocentrism. In this context, ethnocentrism is a "strong sense of ethnic group self-centredness" (Bizumic & Duckitt, 2012, p. 887). The advantage of such a measure for the NCAS is that it:

- enables assessment of attitudes towards more than one group of concern to the NCAS (Aboriginal people and Torres Strait Islanders and people from CALD backgrounds);
- avoids the need to gauge prejudice on the basis of the multiple attributes that may drive ethnic and racial prejudice (e.g. religion, race, ethnicity, refugee status, cultural difference); and
- includes items that are less likely to offend groups affected by, or concerned about, ethnic and racial prejudice, since they are all framed from the vantage of the respondent's own culture, rather than in the form of negative statements about the "other".

Bizumic, Duckitt, Popadic, Dru, and Krauss (2009) constructed a 58-item ethnocentrism scale consisting of six reliable and valid subscales – In-group Preference, Superiority, Purity, Exploitativeness, Group Cohesion and Devotion. These six scales were used in an Australian study by McWhae, Paradies, and Pedersen (2015). It was found in that study that ethnocentrism formed one general ethnocentrism scale rather than six subscales; furthermore, it had excellent reliability ($\alpha = 0.96$). Indeed, reliability was so high in the original 58-item scale that it was

predicted that reliability for a subscale derived from it would be satisfactory regardless of which items were chosen, especially if taken from the same subscale.

It was decided by the IG that the best approach for the NCAS was to use one subscale. Of these, In-group Preference was identified as the most appropriate. In-group Preference is defined by Bizumic et al. (2009) as "an expression of group self-centeredness [which] should be seen as seeing the in-group as more important for oneself than outgroups, but not as necessarily superior to outgroups" (pp. 872-873). As pointed out by Bizumic et al. (2009), ethnocentrism is often assumed to involve In-group Preference. Using the McWhae et al. (2015) data set, the 8-item scale was highly reliable (α = 0.91). For the NCAS the number of items was reduced based on face validity, with six in total being selected for testing (with the aim being to select four for the survey proper). With this aim in mind, the reliability of two shortened In-group Preference scales was measured: one had four items, the other had six items. Both versions of the scale were still highly reliable (α = 0.85 for the 4-item scale; α = 0.87 for the 6-item scale). A further analysis of the data involving both 6- and 4-item versions found modest correlations in both cases with age, political position, gender and education in the expected direction

A measure of other forms of prejudice

There are two limitations in using the In-group Preference measure alone:

- it does not gauge prejudice on the full range of attributes of interest to the NCAS (as outlined above); and
- although a conceptually and psychometrically sound approach, it does not distinguish In-group Preference with reference to particular minority ethnic and racial groups. The failure to distinguish prejudice towards Aboriginal people and Torres Strait Islanders as a distinct form of prejudice has been a source of concern among some stakeholders in the past, given this group's unique status as Australia's first people.

Accordingly, it was proposed that the measures of ethnocentrism be supplemented with a second approach to prejudice measurement based on the "attitudes thermometer". This involves asking respondents how positively they feel about the groups of concern on a 5-point scale from "not positive at all" to "very positive". Attitudes thermometers have been successfully used in many studies both outside Australia (e.g. Bizumic et al., 2009; Watt, Maio, Rees & Hewstone, 2007 (Study 1)) and within it (e.g. Markus, 2017; Watt, et al., 2007 (Study 2)). They have also been used to successfully test the effect of antiprejudice interventions (e.g. Pedersen, Paradies, Hartley, & Dunn, 2011). In a recent study by Fozdar and Pedersen (2014), the authors took the general idea behind attitudes thermometers and turned them into a Likert scale. This scale was found to be reliable (α = 0.81).

Studies comparing the performance of attitudes thermometers with multi-item prejudice scales show that the higher the prejudice score on a multi-item scale, the higher the prejudice score with a single thermometer. For example, in an unpublished study, a strong relationship was found between an 18-item Attitudes Towards Indigenous Australians Scale and a single thermometer measuring attitudes towards Indigenous Australians (r = 0.529) (Pedersen, 2012).

There was an even stronger relationship between a 16-item Attitudes towards Muslim Australians Scale and a thermometer measuring attitudes towards Muslim Australians (r = 0.763), and between an 18-item Attitudes towards Asylum Seekers Scale and a thermometer measuring attitudes towards asylum seekers (also r = 0.763). In another unpublished study, a strong relationship was found between prejudice against Middle-Eastern Australians as measured by the General Evaluation Scale (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997) and a single thermometer measuring attitudes towards Middle-Eastern Australians (r = 0.816) (Pedersen, 2010). However, there are limitations of the thermometers:

- a single item measure is not as strong as a multi-item scale; and
- there may not be great variation between participants' answers to thermometer items for different groups because there is less time to think before responding. This is especially the case if the list of attributes being considered is long.

There are also a number of advantages, including that they are:

- less likely to offend respondents than many multi-item scales;
- a parsimonious means of addressing a number of attributes;
- readily tailored to the particular forms of prejudice to be measured in a given context; and
- successfully used in other Australian telephone survey research (e.g. Markus, 2017).

Based on the above, the In-group Preference Scale was supplemented with five attitudes thermometer items as outlined in Table 8. All six In-group Preference items were included in the validation study to gauge their reliability (their validity having already been considered via the item selection approach described above) and user acceptability. The aim was to select the best four performing items for the survey proper.

Despite strong theoretical and practical grounds for including a measure of social class prejudice, a decision was taken not to proceed with this. This was because of the difficulty in identifying a small number of conceptually relevant measures from the wider range of possible attributes associated with social class (e.g. employment status, education, income, place of residence, housing status etc.).

Physical and mental disabilities are included in the thermometer items. It is noted that although there are many other forms of disability (e.g. sensory, cognitive), separate items have not been included for these because these are not readily simplified and are likely to require some explanation to some sample members, a problem in a telephone survey. Whether members of the general community differentiate between disability types beyond the two types included in the measure is also unclear.

Items pertaining to same-sex attracted-ness have been included as they are readily understood across the community. There are multiple forms of gender identity and orientation that are the basis of prejudice (e.g. intersex, transgender). However, these other forms may be difficult to describe simply in a telephone survey and may not be readily recognised by some sections of the

community. There was insufficient room to include all the forms. A distinction has been made between male and female same-sex attracted-ness on the basis of evidence showing variation in attitudes towards these two groups (MacInnis & Hodson, 2015).

4.6.4 Item reduction testing and validation

The approach to item reduction was similar to the other measures (reported above), with the exception that only one round of testing was undertaken at the validation stage as the measurement properties were considered satisfactory for the purpose for which the measure was to be used in the survey. Details of the validation and reduction are provided in later sections of this report.

The attitudes thermometer items were framed in the validation in the form of a question in which respondents were asked to rank their feelings about the groups concerned on a scale from 1-5. In the pilot tests, this proved complex and time consuming to administer, as many respondents objected to the requirement to rank in this way and were reluctant do so. This was a particular problem since the pilot test was already well over the 20-minute limit. The item wording used in the final survey instrument was adapted from the approach in the Scanlon Foundation Social Cohesion Survey (Markus, 2017), a telephone survey in which it had been successfully used (with data collection for the Scanlon survey having been undertaken by the SRC). This item wording uses a ranking approach, but respondents are asked to identify whether their feelings are positive, negative or neutral, rather than to give a numerical rank.

4.6.5 Outcome

The final measures of ethnocentrism were selected primarily on item wording as there were few distinctions between them on Rasch and factor analysis. The ethnocentrism and positivity items separated into two factors in the validation.

Table 8: PAC items

Item label	Item text	Theoretical domain
	Ethnocentrism items	
Prej1c	I would probably be quite content living in a cultural or ethnic group that is very different to mine.	Ethnocentrism
Prej1d	If I could be born again, it would be fine for me to be born into a different cultural or ethnic group to my own.	Ethnocentrism
Prej1b	In most cases, I like people from my culture more than I like others.	Ethnocentrism
Prej1a	In general, I prefer doing things with people from my own culture than with people from different cultures.	Ethnocentrism

Item label	Item text	Theoretical domain
	Thermometer items	
Prej 2	Is your personal attitude positive, negative or neutral towards…/ And what about… (PROBE: Very or somewhat positive/negative?)	
Prej2c	People with mental disabilities	Positivity
Prej2a	Aboriginal and Torres Strait Islander Australians	Positivity
Prej2b	People with physical disabilities	Positivity
Prej2e	Men who are sexually attracted to men	Positivity
Prej2d	Women who are sexually attracted to women	Positivity

4.7 Gender composition of social network

The value of addressing the gender composition of respondents' social networks was identified in the May 2016 review, reflecting evidence in the literature that one's peers influence attitudes and behaviour towards violence against women, especially the attitudes and behaviours of men in male-dominated peer networks (DeKeseredy, 1990; Murnen, 2015). Such a measure had been considered in 2013, and although the question piloted well, there was ultimately insufficient space to include it. It was anticipated that the inclusion of this measure in the 2017 instrument would:

- increase the capacity to gauge attitudes in the fourth theme in the gender equality component (concerned with male peer relations) because it would enable the responses of men in different peer contexts to be compared;
- provide a more nuanced understanding of the relationship between gender and attitudes towards violence against women; and
- strengthen the capacity of the NCAS to address a community level factor on attitudes towards violence against women (peer context), consistent with the ecological framework on which the survey instrument is based.

The item is framed as follows:

- Thinking now of close friends – not your partner or family members but people you feel close to – would you say that this group is made up…
    1. Totally of women
    2. Mostly of women
    3. Mostly of men, or
    4. Totally of men
    5. A roughly equal proportion of men and women?

4.8 Aboriginal people and Torres Strait Islander specific items

4.8.1 Rationale for development

Although it is difficult to establish the true extent of violence against women in Aboriginal and Torres Strait Islander communities (Olsen & Lovett, 2016), research drawing from diverse data sources suggests that when compared to non-Indigenous women, Aboriginal and Torres Strait Islander women experience:

- a higher rate of violence (Al-Yaman, Van Doeland, & Wallis, 2006; Cripps, Bennett, Gurrin, & Studdert, 2009; Human Rights and Equal Opportunity Commission, 2006; Lievore, 2003; McGlade, 2006; Olsen & Lovett, 2016; Taylor & Putt, 2007);
- higher rates of hospitalisation as a result of family violence (AIHW 2018);
- more severe violence (Al-Yaman et al., 2006; Berry, Harrison, & Ryan, 2009); and
- greater barriers to securing safety (Nixon & Cripps, 2013; Prentice, Blair, & O'Mullan, 2017), support services (McCalman, et al., 2014) and to disclosing violence (Spangaro et al., 2016).

As is the case with violence against women in general, little is known about the backgrounds of those perpetrating violence against Aboriginal and Torres Strait Islander women and girls. However, this violence involves both intra-communal violence and violence perpetrated by persons who do not identify as Aboriginal people or Torres Strait Islanders.

Reducing violence against Aboriginal and Torres Strait Islander women and girls is identified as a high priority in both the *National Plan* and the *Change the Story* framework. In order to develop tools that tap attitudes in ways that are appropriate, relevant and tailored to those from, and those working with, Aboriginal and Torres Strait Islander communities, the NCAS team collaborated closely with an Expert Subgroup of Aboriginal women. The Expert Subgroup is national in scope and includes women with academic backgrounds and from key organisations working with Aboriginal and Torres Strait Islander communities (see Appendix 5). In collaboration with this Expert Subgroup, a set of questions was developed and subsequently tested. These questions were asked only of those who self-identified as Aboriginal and/or Torres Strait Islander respondents. As it is impossible to predict in the development phase whether questions will test well (via cognitive testing and piloting) and how long they will take to administer, a larger number of questions was developed for piloting than it was likely to be possible to include in the final survey instrument . The Expert Subgroup was informed of this from the outset.

4.8.2 Conceptual framework

Partner violence, sexual assault, stalking and sexual harassment within Aboriginal and Torres Strait Islander communities are commonly seen as part of a broader picture of family violence, defined as "a wide range of physical, emotional, sexual, social, spiritual, cultural, psychological and economic abuses that occur within families, intimate relationships, extended families, kinship networks and communities" (Indigenous Family Violence Taskforce, 2003, p. 123). This reflects the significance of extended family and kinship relationships in Aboriginal and Torres Strait Islander communities, resulting in both a broader understanding of "family" and a view that the consequences of violence affect all those involved (Day et al., 2012). The broader definition also reflects the interrelationships between violence occurring within Aboriginal and Torres Strait Islander communities and that which has been perpetrated against them (Atkinson, 1994).

This broad definition of family violence informed the development and framing of the questions to be asked of Aboriginal and Torres Strait Islander respondents. In particular, this way of understanding family violence in Aboriginal and Torres Strait Islander communities informed the decision to focus on violence against Aboriginal and Torres Strait Islander women and girls perpetrated by any other person regardless of that person's gender, race or relationship to the victim. This is in contrast to most of the questions in the survey instrument , which, consistent with the survey scope, focus on men's violence towards women (and hence, where relevant, more or less explicitly refer to the perpetrator as male and the victim as female). The Expert Subgroup indicated that focusing on male-perpetrated partner violence in particular would not accord with the dynamics and understandings of violence in Aboriginal and Torres Strait Islander communities. It was also important to the group that steps were taken in reporting to highlight that much violence against Aboriginal and Torres Strait Islander women and girls is perpetrated by persons who do not identify as Aboriginal or as Torres Strait Islander.

As a starting point for the collaborative development of these items, four broad topics were determined:

1. Knowledge of causes of violence against Aboriginal and Torres Strait Islander women and girls.
2. Barriers to help seeking for Aboriginal and Torres Strait Islander women and girls experiencing violence.
3. Practices of help seeking: where do Aboriginal and Torres Strait Islander women and girls go for help?
4. Appropriateness of various responses to violence (e.g. law enforcement, counselling, healing).

These topics were selected based on key areas, identified by the group, in which data for Aboriginal and Torres Strait Islander Australians is needed.

4.8.3 Item selection, development and testing

The process by which the topics and wording of the Aboriginal and Torres Strait Islander tailored items were determined occurred as follows:

- Once the broad topics were finalised, the NCAS team drafted possible question options and wordings. These were refined via telephone and email communications with the Expert Subgroup.
- Once a number of question options were settled upon, an in-person meeting was held at which the group modified the framing of some of the questions, reworded some elements of the items and determined the priority order of the questions, as well as the priority order of the response options. The prioritising of these elements was important, given the likelihood that there would not be space for all of them in the survey instrument .
- It was agreed at this meeting that the NCAS team would finalise the questions on the basis of cognitive testing and piloting with people from Aboriginal and Torres Strait Islander backgrounds.

Five face-to-face cognitive interviews were conducted with Aboriginal people and Torres Strait Islanders (see section 5.4). In these interviews feedback was sought from respondents on all the questions developed through the process outlined above. Interviewees were asked about their personal reactions to the questions (including terminology, wording and meaning). Due to the potentially sensitive nature of these questions, respondents were also specifically asked about how they would feel about these questions being asked over the telephone (see section 5 for more detail). During the pilot test, an additional ten individuals identifying as Aboriginal people and/or Torres Strait Islanders were recruited to ensure a sufficient number of Aboriginal people and Torres Strait Islanders were involved in pilot testing the survey as a whole and the Aboriginal and Torres Strait Islander specific module (see section 7). Proportionately more cognitive and pilot interviews were completed with Aboriginal people and/or Torres Strait Islanders than was the case for the main community sample, given the potential sensitivity of these items. Feedback from this testing contributed to the shape of the final questions.

On the basis of advice from those involved in the cognitive interviews and the pilot testing, an introduction to the questions was scripted to inform respondents that these questions would only be asked of Aboriginal people and Torres Strait Islanders. This was to avoid Aboriginal and Torres Strait Islander interviewees feeling stigmatised if they mistakenly thought these questions were being asked of the whole sample.

Following the outcomes of testing, the final number of questions in the survey instrument was determined based on the priority order given by the Expert Subgroup and the survey's 20-minute time limit. Of the questions proposed by the group, a total of 12 have been included in the 2017 NCAS, representing approximately one-third of the questions developed by the process described here.

4.8.4 Final questions

Table 9: Aboriginal and Torres Strait Islander respondent items

Table 9 shows the final questions asked of Aboriginal and Torres Strait Island respondents

Item label	Item text
I1a	I am now going to ask you some questions about violence against Aboriginal and Torres Strait Islander women and girls. From here onwards, the term Indigenous will be used and includes both Aboriginal and Torres Strait Islanders. These next few items are only asked of those who identify as Indigenous.
I1a	I am going to read out a list of factors that may lead to violence against Indigenous women and girls. For each one could you please tell me if you think it leads to this violence?
I1a-a	Having an alcohol problem?
I1a-b	A lack of employment opportunities in a community?
I1a-b	Drug problems in a community?
I1a-d	Lack of supportive services in a community?
I1a-e	Do you think men losing their role in families would lead to violence against Indigenous women and girls?
I1a-f	What about having been removed from one's family?
I1a-g	Do you think that if Indigenous people see violence as part of culture, this would lead to violence?
I1a-h	Lastly, do you think that people seeing lots of violence in the community leads to violence against Indigenous women and girls?
I2a	Do you agree or disagree that when Indigenous women and girls experiencing violence report to police, it can bring them trouble?
I2aa	[If agree, then follow up with I2a] Because of this, do you think it's better if they don't report to the police?
I2b	And do you agree or disagree that when Indigenous women and girls experiencing violence report to police, it can bring trouble to their family?
I2bb	[If agree, then follow up with I2b] Because of this, do you think it's better if they don't report to the police?

4.9 Items not in a scale

The knowledge component of the NCAS includes items that make up the UVAWS, as well as other items of policy importance (non-scale items). The CASVAWS component also includes a small number of non-scale items. These are items that:

- were not included in the CASVAWS because they were considered outside its scope (e.g. they concern sexual harassment in the workplace); or

- were excluded from the CASVAWS in the course of the scale validation but retained in the survey instrument because they concerned an issue of policy importance.

It was necessary to remove some additional non-scale items after piloting to achieve the desired 20-minute average survey length. Non-scale items retained in the final survey instrument are shown in Appendix 3. Appendix 2 shows non-scale items from the 2013 instrument that were deleted in the course of piloting. Non-scale items introduced in the course of the redevelopment but ultimately not retained are in Appendix 9.

5 Cognitive testing

5.1 Purpose

The main purposes of the cognitive testing were to:

- assess the extent to which the draft questions for the NCAS were understood in the way that they were intended to be and were clear and effective in obtaining a response;
- minimise the use of unnecessary jargon;
- identify whether and where there were issues related to cognitive understanding of the wording itself, and the concepts inherent in each question;
- identify where there were inconsistencies or ambiguities in understanding, to determine whether these were more apparent among some groups than others (e.g. where English is not the first language, differences among age groups, and socio-economic status);
- assess whether any question areas were subject to factors such as order effects and/or social desirability bias;
- broadly assess any sensitivities in subject matter/wording and perceptions of survey instrument content, and assess whether respondents felt that issues that were important to them had been adequately covered; and
- offer suggestions/alternatives regarding rewording and rephrasing of questions.

5.2 Methodology

Cognitive interviewing is a tool that developers of survey questionnaires (or any other data collection instrument) can use to study the way targeted audiences understand, mentally process and respond to the materials presented, with a special emphasis on potential breakdowns in this process. That is, cognitive interviewing tests target questions that may pose difficulties that generally originate in the cognitive processing of those questions (Willis, 2005). The aim of this procedure is the design of survey instrument s that yield valid, reliable, sensitive, unbiased and complete results (Collins, 2015).

Cognitive interviewing is conducted with an acceptance of the commonly supported “question and answer model”. Put briefly, this model assumes that to answer a question, a person must comprehend the question, retrieve the necessary information from long-term memory, make a judgement about the information necessary to answer the question, and respond to the question. This process is not simple and linear but is thought to involve numerous iterations and interactions between the phases (Collins, 2015).

The most general model of these processes is attributable to Tourangeau, Rips, & Rasinski (2009) and is outlined below:

Comprehension of the question:

a) Question intent: what does the respondent believe the question to be asking?

b) Meaning of terms: what do specific words and phrases in the question mean to the respondent?

Retrieval from memory:

a) Recall of information: what type of information does the respondent need to recall to answer the question?

b) Recall strategy: what types of strategies (e.g. recall events individually, or estimate) are used to retrieve information?

Judgement/decision processes:

a) Motivation: does the respondent devote sufficient mental effort to answer the question accurately and thoughtfully?

b) Sensitivity/social desirability: does the respondent want to tell the truth? Does he/she say something that makes him/her look "better"?

Response processes:

a) Mapping the response: can the respondent match his/her internally generated answer to the response categories given by the survey question?

A guiding principle for the conduct of the interviews, and for the interpretation of responses to the cognitive testing process, has been the consideration of "measurement error" (within a Total Survey Error framework) – that is, to identify areas of questioning that are not clear to respondents who then may potentially give a misleading, inaccurate or biased response. Measurement error will ultimately lead to bias in the data. The cognitive testing process recorded here was designed to ensure that measurement errors were minimised in the redevelopment of the NCAS.

5.2.1 Recruitment approach

In the interests of time, all fieldwork was conducted with metropolitan Melbourne sample members. Recruitment of participants for these interviews was conducted via five methods:

- **SRC's internal qualitative recruitment database:** the majority of recruitment was conducted through the SRC's internal qualitative recruitment database, made up of people who had filled in an online form on the SRC's website expressing interest in taking part in future research. Respondent demographics were monitored to ensure

that the recruitment specifications were met, in particular that Aboriginal and Torres Strait Islander participants were included.

- **External recruitment agency:** where the SRC was unable to fulfil the demographics from its internal database, it engaged the services of a specialist recruitment agency. The external recruitment agency is a registered member of the Australian Market and Social Research Society (AMSRS) and works to appropriate industry standards. The SRC worked with the agency to ensure that project and ethical requirements were met.
- **AMES Australia:** to assist with recruitment of recent arrivals from non-English speaking backgrounds (NESB), ANROWS approached AMES Australia to promote the research opportunity to its eligible clients. Contact details of those who agreed to be contacted for the research were supplied to the SRC via ANROWS.
- **Engagement of members of the NCAS Expert Subgroup on CALD communities:** to ensure sufficient numbers of individuals from diverse backgrounds participated in the cognitive testing, ANROWS engaged members of the NCAS Expert Subgroup on CALD communities to assist in the recruitment of NESB respondents via relevant professional connections and channels.
- **Victoria University:** a key contact at Victoria University assisted in the recruitment of young people from CALD backgrounds by promoting the study among students at Victoria University.

Apart from the external recruitment agency respondents, the SRC contacted participants via telephone to establish if they were prepared to participate in the research. The purpose of the research was explained to respondents, who were also advised about the sensitive nature of the discussion. A convenient time and day was arranged with the respondent and a confirmation email – containing a participant information sheet (Appendix 10) and location details of the interview – was sent. A reminder Short Message Service (SMS) was sent to participants the day before their interview.

Prior to beginning the interview, respondents were provided with a participant information sheet and a consent form (Appendix 11). It was also explained to respondents that the discussion would incorporate sensitive issues related to violence against women, sexual assault and gender inequality. Respondents were provided with a counselling services referral list (Appendix 12) in case the interview caused some form of distress. All respondents signed the consent form before proceeding with the cognitive interview.

5.2.2 The approach for testing the NCAS instrument

Given the large number of questions in the NCAS, it was not possible to include all of them in cognitive testing. Many were existing items (and hence had been tested in previous surveys) or were selected from existing instruments in the literature (see section 4) and had been subject to appropriate testing in the development of those instruments. Accordingly, selected items (or groups of items) were identified by the IG for cognitive testing based on the following criteria:

- if items were new to the survey instrument and contained language or overall concepts that may not be readily understood in an Australian context, or among particular groups (e.g. people whose first language was not English);
- if measurement issues had been identified in consultation with DSS (as funder) and other key stakeholders;
- if there was uncertainty among the research team about an item or item wording; and
- if issues had been identified with an item in the course of the review of the 2013 survey instrument , including via debriefing with the 2013 team of telephone interviewers.

In consultation with the IG, questions and issues required for testing were identified. The SRC developed an instrument to be used by the moderator based on the questions to be tested. Probing questions were developed and added to the instrument. Throughout the fieldwork period, the moderator's instrument was refined, and new questions and probes were added where further testing was felt to be required.

For this exercise, survey items were tested with respondents using a concurrent probing technique. That is, respondents were asked a question or a set of questions, followed by a series of probes to explore the cognitive aspects of the questions (i.e. comprehension, retrieval, etc.). Respondents were also encouraged to "think aloud" when providing feedback on the survey questions and formulating their answers, so that the moderator could understand their thought processes.

Potential issues tested for each question included respondents' comprehension of intended meaning, the ability to retrieve an accurate answer and the extent to which they felt that they could provide an accurate answer. NESB respondents were interviewed to gauge how well they understood the terminology and phrases throughout the questionnaire.

Examples of probe questions asked of respondents include:

- What are your first impressions of these questions? What do you interpret these questions to mean?
- Was there anything in the above questions that didn't make sense to you? Anything that caused you some confusion? Why?
- What were you thinking of when we mentioned "young men"?
- What is the difference between the terms "sexual assault" and "rape"?
- Were there any questions you struggled to provide an answer to? Which ones? Why was that?

All interviewing was undertaken in English and involved testing the questionnaire by reading each question aloud to respondents in a face-to-face setting. In each case, the interviewer was accompanied by a research assistant who observed the respondent and took notes, recording their verbal and non-verbal responses to the survey questions, as they were read out.

5.3 Cognitive testing rounds

Cognitive testing for the survey instrument as a whole occurred in two rounds. The first-round of cognitive testing, conducted via 14 face-to face interviews, identified a small number of items for further refinement and testing in Round 2. This second round of cognitive testing was conducted with a small number of participants from Round 1 over the telephone.

The face-to face interviews were held at the SRC's William Street offices in central Melbourne. Respondents were paid $75 as an incentive for their participation in the face-to-face interview and $50 for the over-the-phone interview. Table 10 outlines the characteristics of the interviewees in both rounds.

Table 10: Cognitive test respondents

ROUND ONE				
Respondent characteristics	**Male (n = 7)**		**Female (n = 7)**	
	Youth (18-24)	**25+ years old**	**Youth (18-24)**	**25+ years old**
Recently arrived migrant[a]	1	1	1	1
Established migrant[b]	-	1	-	1
General population	1	2	1	2
Aboriginal or Torres Strait Islander person	-	1	-	1
ROUND TWO				
Respondent characteristics	**Male (n = 3)**		**Female (n = 2)**	
	Youth (18-24)	**25+ years old**	**Youth (18-24)**	**25+ years old**
Recently arrived migrant[a]	-	1	-	-
Established migrant[b]	-	-	-	-
General population	1	1	1	1
Aboriginal or Torres Strait Islander person	-	-	-	-

Notes: a, from an NESB who arrived in Australia within the past two years; b, from an NESB who arrived in Australia between 2010-14.

The number of cognitive interviews was larger than is typical for a survey instrument of this nature. This was to ensure that the testing included individuals from each of the population groups of particular interest to the NCAS (Aboriginal people and Torres Strait Islanders, NESB and young respondents).

At the completion of testing, the findings were considered by the IG and applied to the items concerned.

5.4 Cognitive testing – Aboriginal and Torres Strait Islander items

To address the newly developed section asked only of Aboriginal or Torres Strait Islander respondents in the 2017 NCAS, cognitive testing was sought with respondents who identified as being a member of this group (see section 4.8). The SRC engaged a recruitment company with connections to an Aboriginal health agency. Members of staff, or family and friends of staff, were recruited to take part in the research. This was a sample of convenience to allow sufficient time to incorporate the comments and feedback. Five Aboriginal or Torres Strait Islander people were recruited to test these items (three identified as female and two as male). The age of the respondents was not collected as part of the cognitive interview. The primary purpose of these interviews was to:

- assess the extent to which the draft questions for respondents of Aboriginal and/or Torres Strait Islander background are understood in the way that they are intended to be and are clear and effective in obtaining a response;
- identify whether and where there are issues related to cognitive understanding of the wording itself, and the concepts inherent in each question;
- broadly assess any sensitivities in subject matter/wording and perceptions of survey instrument content, and assess whether respondents feel that issues that are important to them have been adequately covered; and
- offer suggestions/alternatives in regards to rewording and rephrasing of questions.

5.5 Cognitive test outcomes

Some of the items subject to cognitive testing were subsequently dropped from the survey instrument (see Appendix 9). The outcomes of cognitive testing for items retained in the survey instrument are recorded in Appendix 13 for the survey instrument as a whole and Appendix 14 for the items for Aboriginal people and Torres Strait Islanders.

6 Scale validation

6.1 Methodology

In section 4 the process for selecting items for validation for each of the measures was reported. In this section the psychometric analysis of the four measures is described. These are as follows:

- Community Attitudes Supportive of Violence Against Women Scale (CASVAWS) – 54 items;
- Gender Equality Attitudes Scale (GEAS) – 36 items;
- General Violence Construct (GVC) – 16 items; and
- Prejudice Attitudes Construct (PAC) – 11 items.

The two scales were validated and the items in them reduced through two rounds of testing – the first with 599 general community respondents in March 2017 and the second with 278 respondents in April 2017. Items for the constructs were selected via one round of testing. This testing was conducted via a survey completed by participants online. The profile of the general community respondents is summarised in Table 11.

In addition to the general community samples, online surveys were conducted with booster samples to ensure an adequate sample for testing and to validate survey items among particular subgroups (comprising Aboriginal and Torres Strait Islander Australians, youth (those aged 16-24 years) and people from CALD backgrounds, including persons recently settled in Australia). Most booster samples were recruited via the online panel, with some assistance from AMES Australia and Victoria University for recent arrivals from NESBs. Contact details of those who agreed to be contacted for the research were supplied to the SRC via ANROWS.

The assumptions tested in this work were:

- that a set of rating scale items related to attitudes towards gender equality, general violence, prejudice and violence against women were to be used to construct scales that would enable time-series comparisons and comparisons between subgroups of interest; and
- that these items align with their current assigned constructs.

Factor analysis was used to explore the scale and subscale membership of all items. The Rasch[5] measurement model was used to assess if the items in the NCAS support the derivation of the

[5] Summarised in Linacre (2014) as follows: "Rasch analysis is a method for obtaining objective, fundamental, additive measures (qualified by standard errors and quality-control fit statistics) from stochastic observations of ordered category responses." Georg Rasch, a Danish mathematician, formulated this approach in 1953 to analyse responses to a series of reading tests (Rasch, 1992).

described scales. This model is designed to convert ordered response data into interval-scale measures and to provide a range of diagnostic outputs for evaluating the results.

Table 11: Profile of general community respondents surveyed in validation

	Round 1 validation		Round 2 validation	
	N	%	n	%
Age group				
16-24 years	87	14.5	35	12.6
25–34 years	103	17.2	45	16.2
35-44 years	115	19.2	56	20.1
45-54 years	110	18.4	52	18.7
55-64 years	91	15.2	46	16.5
65-74 years	69	11.5	30	10.8
75+ years	21	3.5	12	4.3
Gender				
Male	271	45.2	135	48.6
Female	327	54.6	143	51.4
Other	1	0.2	-	-
Educational attainment				
University (bachelor or post-graduate degree)	229	38.2	89	32.0
Have not completed a university degree	363	60.6	189	68.0
Australian / overseas born				
Australian born	362	60.4	216	77.7
NESB	197	32.9	33	11.9
English-speaking background (overseas born)	30	5.0	28	10.1
Indigenous				
Yes	20	3.3	7	2.5
No	571	95.3	270	97.1
Total	599	100	278	100

In particular, the model was used to assess the following aspects of the instrument, which are further detailed in section 6.2:

- how well the items seemed to work together to measure a common trait;
- whether the rating scale categories were used by respondents in a consistent manner;
- whether there was a distinctive hierarchy of items and persons along the measured variable; and
- how well matched the items were to the sample of respondents.

Rating scales used for each item are listed in Table 12 with their category definitions.

Table 12: Rating scale categories

Rating scale	Categories
Agreement (A)	1. Strongly agree 2. Somewhat agree 3. Neither agree nor disagree 4. Somewhat disagree 5. Strongly disagree
Harm (H)	1. A great deal of harm 2. Quite a lot of harm 3. Some harm 4. Not very much harm 5. No harm at all
Positive (P)	1. Very positive 2. Somewhat positive 3. Neutral 4. Somewhat negative 5. Very negative

6.2 Analytical approach

6.2.1 Rasch analysis

The Rasch model is a tool for constructing measures from rating scale responses and for evaluating how well questionnaire items contribute to an underlying trait and how consistently respondents answer the items. The model is less well known than factor analysis, so this section includes details on the aim of the model and its outputs.

The model assumes that an underlying dimension exists for which persons can experience something to a small or a large degree. On this assumption of a quantitative trait, a set of items is developed and administered so as to estimate each person's position on the trait. Here, the "Support for violence against women" underlying trait is used to explain and illustrate the model.

The model uses the observed patterns of responses to estimate the probability that a person with a given level of the trait will provide a particular response to an item. This probability is directly related to the difference between:

- the person's position on the trait – a person more supportive of violence against women is more likely to endorse (agree with) an item, whereas a person less supportive of violence against women is more likely to disendorse (disagree with) it; and
- the item's position on the trait – some items are endorsed by relatively more respondents, whereas some items are endorsed by relatively fewer respondents.

A person's position on the trait can be most accurately pinpointed[6] when there is a mix of items – some that they are more likely to endorse and some that they are less likely to endorse. In other words, for effective measurement there should be:

- some items that are "easier" to endorse;
- some items that are "harder" to endorse; and
- a predictable progression in between.

The Rasch model provides a number of statistics summarising how well items and persons meet this progression – items or persons that deviate significantly from our expectation are evidence of items that measure different traits, or of persons that answer questions in unexpected ways. Both of these are undesirable and degrade the quality of derived measures.

It is important to keep in mind that the Rasch model simultaneously estimates both person and item positions on the trait ("person measures" and "item measures") but care needs to be taken when interpreting the measures.

For persons:

- a higher measure means they are more supportive of violence against women and thus more likely to *endorse* an item; and
- a lower measure means they are less supportive of violence against women and more likely to *disendorse* an item.

For items:

- a higher measure means that persons more supportive of violence against women will be most likely to *endorse* them; and
- a lower measure means that persons less supportive of violence against women will be most likely to *disendorse* them.

Ideally, for useful measurement of persons, 20-30 items should be retained in a construct (Linacre, 1994). Below this number, the precision of estimates begins to decline so that the position of persons on the trait can only be approximated with respondents on the extremes of the scale. As discussed earlier, it was not possible to include scales of this size for all four constructs of interest (violence against women, gender equality, violence in general and prejudice). It was agreed by the IG that the aim would be to achieve a CASVAWS of at least 24 items, and a GEAS of at least 20 items (since these were the core constructs being measured in the survey). A smaller number of items was identified for the PAC and the GVC as these were to be used as comparator variables.

More information on the Rasch model can be found in Appendix 15. For a readable introduction to the Rasch model and its application in the social sciences refer to Bond and Fox (2007).

[6] The term "triangulate" may be a useful analogy here – the method relies on measurement from several directions to determine the position of an unknown point.

The remainder of this section describes the diagnostic outputs that were used in the assessment of item and measure quality.

Fit to the Rasch model

The Rasch model calculates several fit statistics for both items and scales. Several that are of particular use for assessing individual items are summarised in Table 13. Those that apply to each set of items as a whole are summarised in Table 14.

Table 13: Selected Rasch model outputs for item assessment

Statistic	Meaning	Ideal range
Infit mean square	This is the mean of the squared residuals[a], giving relatively more weight to the performances of persons closer to the item value. This statistic is more sensitive to unexpected patterns of observation by persons on items that are roughly targeted on them (i.e. items that sit in the middle of the scale).	0.6-1.4 for rating scale items with an expected value of 1. Low values indicate items whose responses can be easily predicted from other items. High values indicate unpredictable responses.
Outfit mean square	This is the mean of the squared residuals, across all items with all persons contributing equally. This statistic is more sensitive to unexpected observations by persons on items that are relatively very easy or very hard for them (i.e. items that are towards either end of the scale continuum).	
Point-measure correlation	This is the correlation between the Rasch measures and the responses for an item.	Low values indicate poor fit and negative values suggest miscoding (where a scale is reversed relative to other items).
Item discrimination	This relates to how well an item discriminates between high and low scoring persons.	The expected value is 1. High values indicate better discrimination than expected by the model and low values indicate an item that discriminates less than expected.

Note: a, The residual values represent the differences between the Rasch model's theoretical expectation of item performance and the performance actually encountered for the item. Following usual statistical convention, residuals are squared to make the difference between actual and predicted values positive.

Table 14: Selected Rasch model outputs for scale assessment

Statistic	Meaning	Ideal range
Person separation index	This indicates how well the set of items is able to distinguish between the persons measured	Values below 2 imply that the instrument may not be sensitive enough to distinguish between high and low scoring persons.
Item separation index	This indicates how well the sample of persons enables the item locations to be determined	Values below 3 imply that the person sample is not large enough to confirm the hierarchy of item measures.

Rating scale categories

In analysing rating scale data, it is important to assess how well the categories are contributing to the creation of interpretable measures. In the same way that there must be a predictable hierarchy among the items, the locations of item categories on the underlying trait must also progress in a hierarchical manner. Plotting the probability of selecting a category against a person's position on the trait ought to show a clear pattern – persons with low levels of support for violence should be more likely to select a low rating, whereas persons with high levels of support for violence should be more likely to select a high rating. Where an item is not related to support for violence or where too few respondents select a category, the probabilities will not follow the expected pattern and some remedial action is required. To pinpoint person measures as accurately as possible and to distinguish between persons with different levels of support for violence, each item and each rating scale category needs to be carefully designed to target persons at different positions on the underlying trait. If an item or rating scale category is used inconsistently or is almost universally endorsed (or disendorsed), it has limited value in measurement.

Item and person targeting

To estimate respondents' locations on the underlying scales as accurately as possible and to enable differences between respondents to be detected, measurement instruments need to be designed so as to cover the full range of the underlying trait likely to be observed in practice. Whenever the range of measurement and the range of the trait differ markedly, the precision of measurement is reduced. Since the Rasch model calculates person and item estimates on the same scale, a side-by-side display of persons and items shows how well matched the instrument is to the intended respondents.

Unidimensionality

A requirement of the Rasch model is that measures must be unidimensional, so that constructing measures should proceed by one clearly theorised trait at a time. Indicators of

misfit are typically used to reveal the extent to which item or person performance suggests more than one underling latent trait is at work (Bond & Fox, 2007).

6.2.2 Factor analysis

Factor analysis examines relationships between variables to identify latent variables. It is a widely used technique and no further details are provided about it here. To explore the current scales, factor loadings for a variety of solutions were produced as outlined further below.

6.3 Scale validation outcomes

6.3.1 Round 1

Rasch analysis

This section summarises the results of applying the Rasch measurement model to rating scale responses collected during Round 1 of the validation. The presentation follows that described above at section 6.2 regarding analytical approach.

Item fit statistics

Item fit statistics for each construct are presented in Appendix 16. Items that were answered in an unpredictable way by respondents are shown in the appendix in bold, red text. There are a number of additional items with high values on just the outfit index and these items were also considered for exclusion. Remaining items were prioritised for removal if they had poorer fit and worse discrimination statistics than items at similar positions on the construct. The validity and policy relevance of the items was also a consideration.

Individual items in all four measures are a good fit to the Rasch model, showing that they measure the relevant underlying concept.

Scale fit statistics

To complement the individual item results presented in the appendices and referred to above, Table 15 summarises fit statistics as they apply to the scales as a whole. The statistics presented are:

- person separation, which indicates how well a set of items is able to distinguish between the persons measured; and
- item separation, which indicates how well a sample of persons is able to separate the items on an instrument.

The separation indices are outputs from the Rasch model and should be no less than two for persons and no less than three for items (Linacre, 2014).

Table 15: Person and item separation indices for each construct, Round 1

Construct	Person separation	Item separation
CASVAWS	3.47	5.85
GEAS	3.53	6.96
GVC	1.88	11.32
PAC	1.76	5.71

The person separation indices for the GV and PA Constructs do not meet the suggested minimum of two. This was expected given the small number of items in these measures. It means that the measures may not be sufficiently sensitive to discriminate between persons. However, this was considered acceptable given that they will be used as comparators rather than as measures of core constructs of interest. The item separation indices all well exceed the minimum of three, indicating that the number of respondents is large enough to confirm the hierarchy of item measures.

Factor analysis

Explanatory factor analysis was conducted to determine, within each of the two scales (CASVAWS and GEAS), if items aligned with their subscale assignment. Since the PAC comprised two groups of items, this analysis was also conducted for this construct. Since the variables used for analysis are ordinal, factor analysis was performed based on the polychoric correlation matrix. Results are presented in Appendix 17 and the dominant loading for each item is shown in bold text**.** This designation was made purely on statistical grounds. There may be other valid reasons why the construct membership of items might differ from their empirical values.

Results in the appendix are presented as follows:

- 5-factor solutions for CASVAW and general *v*iolence corresponding to the five subscales to which items are assigned in each of these constructs; and
- a 2-factor solution for prejudice.

The dominant loadings broadly confirmed the assignment of subscales for the constructs. It is apparent that items that appeared together in the questionnaire often load together. Where items from a subscale do not load onto the same factor, their subscale membership may need to be reviewed. This is not essential for deriving measures, however, as the Rasch model does not use subscale membership.

Note that negative loadings for a factor indicate items whose sense is reversed with respect to other items.

To test different item loadings under different factors, 5-, 6- and 4-factor models for gender equality were run. These are detailed in Appendix 17. After a review of these models, a 4-factor model was agreed. The factors/domains were also assigned different names, to more accurately reflect the content of the items within each one. Items were deleted from the scale in

conjunction with the factor loadings and Rasch analysis (detailed above). The revised gender equality model is presented in Appendix 16. This is the model that was tested in Round 2.

The factor analysis for the CASVAWS (see Appendix 17) appeared to show that most items addressing attitudes towards women remaining in violent relationships fell into the same factor. Items addressing this theme had been identified for review or removal at the end of validation Round 1 (DV6z and DV6cc). A further two items from the 2013 NCAS instrument using this line of questioning had been identified as mis-fitting in the earlier statistical review of the 2013 survey instrument (section 4.2.1), and hence had not been included in validation Round 1:

- DV6c – It's hard to understand why women stay in violent relationships (Trivialise); and
- DV6l – Most women could leave a violent relationship if they really wanted (Trivialise).

All four items were reintroduced in validation Round 2 to test the possibility that they may form a factor.

6.3.2 Round 2

Rasch analysis

This section summarises the results of applying the Rasch measurement model to rating scale responses collected for Round 2 of the validation for the GEAS and CASVAWS. The presentation generally follows that of the Round 2 results, with less pertinent results omitted.

Item fit statistics

Item fit statistics and their purposes are described above (section 6.2.1). Item fit statistics for the CASVAW and GEA Scales are in Appendix 18. As before, items that were answered in an unpredictable way by respondents are shown in red. There were two items that misfit on only the outfit index but that were also identified for exclusion if this was required.

Scale fit statistics

Person and item separation indices for Round 2 are shown in Table 16. As with Round 1, these indices met the guidelines so that, overall, persons and items were measured with adequate precision.

Table 16: Person and item separation indices for each construct, Round 2

Construct	Person separation	Item separation
CASVAWS	3.48	7.32
GEAS	3.36	7.45

A comparison of person separation indices for the 2013 survey and the various trials in 2016 and 2017 is shown in Table 17. It is clear that the development of new items for these scales has greatly improved the precision of person estimates.

Table 17: Comparison of person separation indices for each construct, for different measurement occasions

	Gender equality			Attitudes supportive of violence against women		
	# respondents	# items	Person separation	# respondents	# items	Person separation
NCAS (2013)	17,517	8	1.10		38	1.97
NCAS trial (2016)[a]	-	-	-	119	18	1.92
NCAS Round 1 (2017)	289	36	3.53	588	54	3.47
NCAS Round 2 (2017)	278	24	3.36	278	40	3.48

Note: a, this was an 18-item scale developed using items from the 2013 instrument only. The current work was undertaken to strengthen this scale by supplementing it with items from the literature.

Factor analysis

The factor analysis was repeated for responses to the Round 2 survey and the loadings are shown in Appendix 19. For the GEAS the analyses used:

- a 2-factor model to test the distinction between public and private spheres;
- a 4-factor solution to re-test the model that emerged in Round 1;
- a 5-factor solution to re-test the original allocation in Round 1; and
- a 7-factor solution corresponding to its seven subscales.

For CASVAW the following were tested:

- a 3-factor solution based on the results from Round 1;
- a 5-factor solution to re-test the original allocation used in Round 1; and
- a 6-factor solution.

As for Round 1, there was some statistical support for grouping items into their assigned subscales, with some solutions working better than others (namely a 4-factor solution for the GEAS and a 3-factor solution for CASVAWS). Alignment to factors was stronger for the GEAS than for the CASVAWS.

As indicated earlier in this report (section 1.4), the validation survey is designed to ensure that the survey is conducted with the full sample of more than 17,500 respondents with the best possible combination of items. However, as there is potential for scale subdomains to shift once

the survey is conducted with the full sample, final allocation to factors was determined as part of the scale confirmation using the whole data set (see section 12).

6.4 Scale validation summary

Items removed following Rounds 1 and 2 of the scale validation are recorded in Appendix 9. The final items used for fieldwork have been presented in Table 2, Table 4, Table 5, Table 7, Table 8 and Table 9 in section 4.

7 Pilot testing

7.1 Methodology

7.1.1 Key project parameters

In total, three pilot tests were conducted as indicated in Table 18. As the interview length was longer than expected, slightly fewer interviews were achieved in Pilot test 1. A summary of the key pilot test statistics is presented in Table 18.

Table 18: Key pilot test statistics

Key pilot statistics	Pilot test 1	A&TSI pilot test	Pilot test 2
Target interviews	70	10	70
Interviews achieved	58	10	79
Average interview duration (minutes)	29 mins	32 mins	25 mins
Fieldwork start date	18 May 2017	30 May 2017	6 June 2017
Fieldwork finish date	21 May 2017	1 June 2017	8 June 2017

7.1.2 Sample design

Pilot tests 1 and 2

The sampling frame for the 2017 iteration of the NCAS is a dual frame Random Digit Dialling (RDD) technique incorporating both mobile and landline telephone numbers. The blend of mobile to landline numbers is 60:40 to ensure that the sample is representative of the Australian population. All Australians aged 16 years or over are eligible to take part.

Pilot testing with Aboriginal people and/or Torres Strait Islanders

Prior to the main field launch, a separate pilot test was conducted with only Aboriginal and/or Torres Strait Islander respondents to test the survey in full. This was conducted to understand the additional burden being placed on these respondents. It was carried out separately as there would be an insufficient number of Aboriginal and/or Torres Strait Islander respondents captured in the small RDD pilot tests that were conducted. Respondents were recruited via an external recruiting company, which was fully briefed by the SRC and worked closely with the

team to ensure that requirements were met. The external recruitment agency is a registered member of the AMSRS and worked to appropriate industry standards. Respondents taking part in this pilot test were incentivised ($50).

7.1.3 Sample generation

The commercial sample provider, SamplePages, provided both the landline and mobile telephone samples:

- Landline numbers were generated using a list-assisted methodology. 'Lists' of 100 potential telephone numbers based on the first eight numbers of an Australian landline telephone number (namely, the area code, the exchange and the first two of the last four numbers). The sample frame was generated from these lists, where only lists with at least one listed residential telephone number were included. Listed residential numbers were sourced from a range of historical and current lists. In addition, SamplePages selected disproportionally more numbers from 100-blocks with more listed numbers. This method was implemented to overcome inefficiencies resulting from the rapidly decreasing number of active landlines in Australia. The list-assisted methodology is consistent with international best practice and SamplePages' implementation of the approach has been tested by the SRC to establish that there is no adverse impact on the total survey error. Generated numbers are assigned the postcode (and other geographies) of the list number. Numbers that do not exist in the lists are assigned the values of the nearest list number. This is then used for a priori allocation of numbers to geographic strata.
- The process for generating mobile RDD numbers is also based on the 100-block "Register of Numbers" maintained by the Australian Communications and Media Authority. However, due to the high degree of saturation in the mobile number range, the mobile sample is selected as a purely random sample across all blocks to provide an efficient and unbiased sample of mobile phone users.

7.1.4 Sample exclusions

Exclusions to the survey included:

- Residents of institutional quarters (prisons, nursing homes, etc.) as the sampling frame is based on a household. Ensuring a random selection method within the household of all qualifying sample members cannot be achieved in an institutional setting.
- Selected respondents who:
    - are incapable of undertaking the interview due to a physical health condition;
    - do not have the cognitive capacity (e.g. if they have obvious signs of dementia);
    - are under the effect of drugs or alcohol (interviewer judgement call); or

    - are not able to undertake the interview in English and do not speak a language otherwise covered in the survey.
- Households where no adults 16 years plus are usually resident.

7.1.5 Respondent selection procedure for RDD sample

For the landline sample the qualifying respondent was the person in the household aged 16 years and over who had the next birthday (the "next birthday" method). In the case of the mobile sample, the qualifying respondent was the telephone answerer, if aged 16 years and over.

Parental consent was obtained for those aged 16 or 17 years who were interviewed over the telephone, with the exception of those without a legal guardian (see section 1.7).

7.1.6 Interviewer–respondent gender matching

As with previous iterations of the NCAS, it was agreed by the IG that given the subject matter of the survey and the need to overcome any potential gender-related difficulties/sensitivities in administering the survey, female interviewers would interview female respondents and male interviewers would interview male respondents.

This process was managed by the SRC's Computer Assisted Telephone Interviewing (CATI) software as part of the appointment setting process. If an interview was not possible upon initial contact (e.g. a female interviewer selecting a male sample member for interview), this record was flagged appropriately (via the use of call outcome codes) and "re-served" to an interviewer of the appropriate gender. Where a respondent did not identify with a binary gender, the interviewer would ask the respondent if they would prefer to be interviewed by a male or female interviewer.

7.1.7 Pre-approach contact

Primary approach letter

A primary approach letter was mailed to each landline sample member for whom a full address match could be found. The landline telephone numbers generated through RDD were matched against the current address information provided by the Sensis MacroMatch service. The approach letter was on ministerial letterhead and addressed to "The Householder" (see Appendix 20 for the 2017 letter). The main body of the letter was in English, with translated summaries on the reverse side in Arabic, Persian, Turkish, Mandarin, Cantonese, Vietnamese, Hindi, Punjabi, Korean and Tamil. These languages were chosen in consultation with the NCAS Expert Subgroup on CALD communities, giving consideration to levels of proficiency in English among language groups in the age cohorts in the NCAS scope (16 years and over), as well as

recent growth in the language or community group (Department of Immigration and Border Protection, 2014).

The approach letter introduced the survey, encouraged participation and provided sample members with telephone numbers and website details to assist with the resolution of any queries they might have. Letter recipients were encouraged to call the SRC hotline for more information about the study. A total of 164 and 165 letters were sent out for Pilot tests 1 and 2 respectively.

In addition to sending primary approach letters to address-matched records in advance of commencing calling, letters were also made available after calling had commenced in the following circumstances:

- to sample members of address-matched records who did not recall receiving an advance letter and wanted another letter to be sent before progressing any further; and
- to those sample members residing at an unmatched address who requested further information about the survey before deciding whether to cooperate with the request for interview.

SMS

Mobile telephone numbers randomly generated for the purpose of this study were sent a pre-approach text message at least 24 hours before being dialled, informing the receivers that they would be contacted for the research and offering them a way to opt out. Sending a pre-field SMS can increase response rates and improve efficiencies in field (Pennay, Borg, & Lavrakas, 2016). The content of the message was, “Social Research Centre has selected you for an important survey, part of the Government’s effort to reduce violence. We will call soon. To opt out call 1800 023 040.”

7.1.8 Call procedures

For the pilot testing, initial contact attempts were made between 4:30pm and 8:30pm on weekdays, and 11.00am and 5.00pm on Saturdays and Sundays. Appointments were made for any time within the hours of operation of the call centre. Due to the short fieldwork period of the pilot test, no records reached a maximum number of call attempts for unanswered telephone calls.

7.1.9 Call alerts and escalation process

The SRC regularly conducts research of a sensitive nature across a wide spectrum of the community. In ensuring that both respondents and interviewers are supported in the conduct of research, a call alert and escalation process has been established. For this study interviewers

were encouraged to fill out a call alert in an instance of respondent distress, respondent complaint or other respondent feedback. When a call alert form was filled out, the supervisor on shift would receive an email alert and would be contacted by the interviewer who populated the electronic form. The supervisor would then review the content and proceed to progress any action required and debrief with the interviewer as required. The supervisor would also be a point of call to manage any escalations at the time of call if requested by the respondent. Members of the SRC's Employee Assistance Program also attended the call centre at certain times throughout the fieldwork period. All members of the project team were invited to consult with the Employee Assistance Program on either an individual or group basis.

The call alerts were reviewed daily by the project manager. This allowed insight into the experience of the fieldwork team, as well as enabling a response to any respondent requests for further information or escalation that could not be resolved at the time of call.

In cases where the respondent was distressed, interviewers were encouraged to "step-out" of the survey and ask the respondent if they would like to pause the interview or would like the telephone numbers of helpline services. Often, this sign of empathic neutrality allowed the respondent time to compose themselves to continue with the survey without the emotional response escalating or continuing. At the end of the call all respondents were asked if they would like the contact details of other counselling and information services broadly related to the topic of domestic violence (see Appendix 12).

Of those calls escalated for further action or consideration, a total of 142 callers were offered support numbers for a range of reasons including distress. Interviewers categorised 44 callers as 'distressed'. This underscores the importance of the protocols used in the NCAS for responding to distress. However, it is noted that this number is a very small fraction of the total number of people completing an interview and an even smaller proportion of those contacted.

7.1.10 1800 number operation

The SRC operates a 1800 inbound telephone number to handle respondent queries, schedule appointments, manage complaints and action survey refusals. The telephone is staffed by the Inbound Call Solutions (ICS) team, which is trained to resolve each call with the aim of meeting the needs of the respondent calling in. In the minority of cases where the ICS team is not able to satisfy a query or complaint, this is then passed on to the research team to respond.

No calls related to the NCAS were received to the 1800 number during either pilot test.

7.2 Interviewer briefing and quality control

7.2.1 Interviewer briefing

All interviewers and supervisors selected to work on the NCAS attended a briefing session delivered by the SRC project manager and project coordinator, which focused on all aspects of survey administration, including:

- survey context and background;
- survey procedures and sample management protocols;
- respondent selection procedures;
- strategies to gain and maintain cooperation;
- detailed examination of the survey instrument; and
- comprehensive practice interviewing.

ANROWS team members also attended the briefing session and provided contextual information for the interviewers. This had the benefit of helping to improve interviewer engagement and confidence in administering the survey.

7.2.2 Interviewer debriefing

A debriefing session was conducted after the first night of field testing to pick up on any immediate issues that might need to be amended for the duration of the pilot test. This occurred at both Pilot test 1 and Pilot test 2. A second debrief took place post-field (Monday 22 May 2017, Pilot test 1; Thursday 8 June 2017, Pilot test 2) so that interviewers were able to provide feedback across a variety of calls and contacts. ANROWS participated in the debriefing and comments and feedback regarding the survey were recorded by the SRC in the form of an annotated data items list for consideration by the IG.

7.2.3 Fieldwork quality control procedures

The SRC is accredited under the ISO 20252 Australian Market and Social Research Standard. All aspects of this consultancy were undertaken in accordance with the AMSRS code of practice, ISO 20252 standard[7], the Australian Privacy Principles and the Privacy (Market and Social Research) Code, 2014. All senior staff are full members of the AMSRS and the SRC is also a member of the Association of Market and Social Research Organisations. All sensitive information, such as data, was transferred using our secure file exchange.

[7] The new International ISO standard for market, social and opinion research (AS ISO 20252) was published worldwide in May 2006. See Australian Market and Social Research Society, n.d.

The in-field quality monitoring techniques applied to this project included:

- listening-in validations conducted in accordance with existing ISO 20252 procedures;
- field team debriefing after the first shift and after the pilot fieldwork period; and
- periodic monitoring (listening in) by the SRC supervisory staff, SRC research team, ANROWS and other members of the IG.

7.3 Pilot test results

7.3.1 Summary of key findings and outcomes

Overall, the survey performed well, with little feedback on specific items from the interviewing team. The interviewing team reported that most respondents were engaged in the survey and were happy to participate. The survey length, however, was an area for concern. As shown in Table 19, the overall average interview length for Pilot test 1 was 29:36 minutes. The shortest interview length was 19 minutes and the longest was 48 minutes.

Of interest is the length of the Indigenous-only module, which, as shown in Table 19, was just under 5 minutes. For Pilot test 2, the overall average interview length was 24:59 minutes. The shortest interview length was 16 minutes and the longest was 42 minutes.

Table 19: Interview length by section

Survey section	Pilot test 1 Minutes:seconds (mean)	A&TSI pilot test	Pilot test 2	Module in questionnaire
Section - 0	1:38	1:22[a]	2:05	Introduction and screening
Section - 1	0:54	0:54	0:49	Personal demographics
Section - 2	1:38	1:38	1:40	General violence/ violence against women knowledge
Section - 3	1:37	1:25	1:27	Domestic violence up to Gv1 – DV10
Section - 4	6:11	5:30	4:26	Domestic violence – DV4-DV6iv
Section - 5	1:26	1:28	1:08	DV12 / DV13
Section - 6	-	4:49	-	Indigenous
Section - 7	1:43	1:37	1:12	Bystander behaviour
Section - 8	5:05	4:27	4:36	Sexual violence and harassment
Section - 9	3:54	3:30	3:56	Gender equality
Section – 10a	1:32	1:24	1:13	Prejudice measure
Section – 10b	1:41	1:42	1:40	Demographics
Section - 11	0:29	0:46	0:20	Telephone status
Section – 12	0:49	0:48	-	Recontact
Section – 13	0:53	0:55	0:27	Close
Total (mean)	29:36	32:17	24:59	

Note: a, this is less time than for the general community, as respondents were pre-recruited and their gender was known prior to calling, eliminating the need to gender match within the survey.

A key outcome from the pilot testing was a decision to split the sample to accommodate the number of items while still maintaining research integrity and analytic power and meeting the objectives of the survey. That is, scale scores would be able to be calculated for the scales, despite some items being split sampled. This includes scale scores for the subsamples (young people, Aboriginal people and Torres Strait Islanders, people from non-main English-speaking countries and young people). This was done using the Rasch measurement model (described in section 6.2.1) to estimate a score for each respondent on each scale. The mathematical formulation of the model accommodates missing data without imputation.

Different variants of sample splitting were trialled in the pilot testing phase with a focus on reducing the average survey length. The final solution effectively involved four variations of the survey. To avoid the interviews with individual respondents becoming too fragmented, each group was asked discrete sections of the survey. The approach to sample splitting, tested in the second pilot and finalised for fieldwork, is as follows:

- All CASVAWS and demographic items were asked of everybody.
- At the commencement of fieldwork, all GEAS items were asked of everybody. However, as the average interview length remained above acceptable limits well into the data collection period, a decision was taken to remove one GEAS item, ask ten items of all, and split the remaining nine items.
- Each respondent was asked two items within the UVAWS, GVC and PAC (the items selected were guided by Rasch analysis). The remaining GVC and PAC items were randomly allocated to 50 percent of the sample (Groups A/C and Groups B/D were combined).
- The bystander items and items that were included to obtain population estimates, but not included in the scales (CASVAWS and GEAS) or scale covariates (PAC and GVC) were asked of one-quarter of the total NCAS pool (approximately 4375 respondents) as follows:
    - Group A – Knowledge, outside of UVAWS;
    - Group B – Bystander;
    - Group C – Causes; and
    - Group D – CASVAW, outside of scale.

7.3.2 Questionnaire changes following Pilot test 1

In addition to the changes made to the way items are split sampled, specific changes were made following pilot testing and these are summarised in Appendix 21. Items removed following testing are identified in Appendix 9.

Wording changes made to individual items following pilot testing are noted in Appendix 2.

7.3.3 Overview of 2017 questionnaire content

The questionnaire is made up of the following modules:

- introduction;
- personal demographics;
- GVC;
- violence against women (knowledge);
- domestic violence (CASVAWS and knowledge);
- an Indigenous-specific module only asked of respondents who identified as Aboriginal and/or Torres Strait Islander;
- bystander behaviour;
- sexual violence and harassment (CASVAWS and knowledge);
- gender equality;
- prejudice measure;

- demographic items;
- a measure of the gender composition of a respondent's social network; and
- telephone status.

A list of items in the 2017 survey instrument is appended at Appendix 3, and the full survey instrument is at Appendix 4.

The final approach to split sampling is detailed below. As can be seen, just over half (71) of the items in the survey instrument were asked of all respondents. Twenty percent (26 items) were asked of half the sample with the remaining items (35) asked of a quarter of the sample. To avoid the interviews with individual respondents becoming too fragmented, each group was asked discrete sections of the survey.

Table 20: Final approach to split sampling

	Number of items asked of: Full sample (n= aprox 17,500)	Number of items asked of: Half sample (n= aprox 8,250)	Number of items asked of: Quarter sample (n=aprox 4,125)
UVAW Scale	3	3	
Knowledge (not in scale)			22
CASVAW Scale	26	4 (scenario items)	0
CASVAW (not in scale)	2		9
GEA Scale	10	9	
Bystander items			4
Prejudice Attitudes Construct	2	7	
General Violence Construct	3	3	
Demographics (incl. gender composition of social network item)	25		
Totals	71	26	35

8 Fieldwork execution

In addition to the information provided in section 7, this section sets out additional detail in relation to fieldwork execution that is relevant to the main fieldwork component of the 2017 NCAS. Key aspects of the fieldwork execution, such as sample design, sample generation, sample exclusions, respondent selection, gender matching, interviewing training, and briefing and quality control, are detailed in section 7 and remain the same for the main fieldwork execution, hence only differences between the pilot testing and main fieldwork are described below.

8.1 Key project parameters

After the extensive piloting period, the main survey commenced data collection on 4 July 2017. Table 21 provides an overview of the key project statistics.

Table 21: Survey overview key statistics

Key statistics	2017
Interviews completed (n)	17,542
Mobile interviews (n)	10,500
Landline interviews (n)	7542
Cooperation rate (%) (AAPOR 3)	48.8
Start date	4-Jul-17
Finish date	19-Nov-17
Average interview length (mins)	22.43
Average interview length (landline)	22.27
Average interview length (mobile)	22.54

8.2 Sample design and survey procedures

8.2.1 Sample design

As it is not possible to sample mobile telephones with location information, location only becomes available upon contact with the telephone answerer and tends to match closely to the distribution of the general population. The landline sample boosts representation in locations where the population (mobile distribution) is lower to make up for the decreased chance of

calling a mobile respondent in that location. As seen in Table 22, this was the case (expectedly so) for less-populated states and territories where the majority of interviews were achieved on a landline, unlike larger states, which had a majority of mobile-completed interviews. A disproportional state-level sample design was employed for the NCAS to allow for sufficient state or territory analysis.

The use of the landline sample to increase total interviews achieved within each state also helps to balance the drift towards metropolitan (capital) respondents over the regional population. This meant that there were 15 markets to monitor throughout fieldwork (see Table 22).

The SRC was able to draw on a small state-screened RDD mobile sample pool (Northern Territory and Tasmania) to attempt to increase the proportion of mobile-completed interviews in those locations.

Table 22: Survey geographic distribution of final achieved sample by sample frame

Geographic strata	Sample frame		
	Landline	Mobile	Total interviews
	(n)	(n)	(n)
Sydney	704	1937	2641
Rest of New South Wales	339	1043	1382
Melbourne	348	2245	2593
Rest of Victoria	128	688	816
Brisbane	374	1016	1390
Rest of Queensland	537	1014	1551
Adelaide	710	651	1361
Rest of South Australia	189	182	371
Perth	713	856	1569
Rest of Western Australia	248	191	439
Hobart	391	138	529
Rest of Tasmania	536	163	699
Darwin	562	106	668
Rest of Northern Territory	304	40	344
Australian Capital Territory	959	230	1189
Total	7042	10,500	17,542

8.2.2 Pre-approach contact

Primary approach letter

The primary approach letter (see Appendix 20 and section 7.1.7 for further detail) was sent to each record for which an address could be established; of the 65,520 landline telephone records used, an up-to-date address listing was obtained for 26.3 percent (n = 17,244), with a primary approach letter sent to each one. This match rate is 14 percentage points lower than the previous wave (in 2013 the lettered sample made up 40.0 percent of landline sample initiated). A decreased landline letter component places higher barriers to achieving the same, if not better, response rates than the previous wave of data collection for landline sample members.

As part of the data collection procedures adopted for the survey, arrangements were put in place to send (additional) approach letters to sample members via post or email upon request. In such cases a letter was dispatched to the household and an appointment made to call back the household in five days. Twenty-two letters were sent via post.

SMS – opting out

Of the 69,795 messages sent, 469 responded by reply SMS to opt out of the survey. A further 365 sample members called the 1800 number to opt out of the survey. Refer to section 7.1.7 for more detail.

8.2.3 Call procedures

A more exhaustive set of call procedures was adopted for the main fieldwork compared with the pilot. A 10- and 8-call protocol was used for the study (ten for landline, eight for mobile), whereby up to six attempts were made to establish contact with the selected household on a landline telephone and four attempts were made to a mobile number to establish contact with a person (not including leaving a voice message). On making contact, up to four more attempts were made to achieve an interview with the selected respondent.

This call regime was adopted to improve the representativeness of the achieved sample. Previous experience suggested that the representation of groups such as males and working persons is improved by using this extended call cycle.

Initial contact attempts were made between 4:30pm and 8:30pm on weekdays and between 11:00am and 5:00pm on Saturdays and Sundays. Appointments were made for any suitable time within the hours of operation of the call centre. For respondents in a non-eastern daylight savings state, calls continued up until 10:30pm (Australian Eastern Standard Time) Monday-Thursday throughout the fieldwork period to increase the calling hours to those in different time zones to Victoria.

8.2.4 Procedures for interviewing in languages other than English

For the 2017 iteration of the NCAS, access to interviewing in a language other than English was provided across 12 languages for the main fieldwork. For this purpose, the SRC used a combination of in-house bilingual interviewers and translated versions of the survey instrument , or interpreters from the Translating and Interpreting Service, funded and operated by the Department of Immigration and Border Protection. Language groups were selected using the same considerations described earlier for the Primary Approach Letter (see 7.1.7). An additional consideration was the actual number of potential interviewees speaking particular languages identified in the course of fieldwork. As per the overarching methodology, gender matching was also provided in all languages, including when the Translating and Interpreting Service was employed. A consolidation of interviews completed in languages other than English was carried out at the end of fieldwork. In the review, the total number of interviews achieved in a language other than English was reduced. This was due to household screening being conducted and the newly selected qualifying respondent preferring to conduct the interview in English. This was true of some mobile sample members, who, having heard the full introduction, then requested to complete the interview in English.

A total of 278 interviews were achieved in a language other than English and these are summarised by language in Table 23.

Table 23: Interviews in languages other than English

	Total		Landline		Mobile	
	n	%	n	%	n	%
Mandarin	114	41.0	13	19.4	101	47.9
Arabic	46	16.5	10	14.9	36	17.1
Vietnamese	32	11.5	12	17.9	20	9.5
Greek	20	7.2	13	19.4	7	3.3
Cantonese	19	6.8	6	9.0	13	6.2
Spanish	15	5.4	7	10.4	8	3.8
Korean	8	2.9	-	-	8	3.8
Italian	7	2.5	4	6.0	3	1.4
Punjabi	5	1.8	1	1.5	4	1.9
Turkish	5	1.8	-	-	5	2.4
Filipino/Tagalog	4	1.4	1	1.5	3	1.4
Thai	3	1.1	-	-	3	1.4
Total	278	100	67	100	211	100

Sample members were identified for Languages other than English (LOTE) interviewing through the first contact had with the telephone answerer. Where the respondent was not able to provide a response to the introduction in English, the interviewer would then proceed to probe

"what language do you speak" in order to allow a bilingual interviewer to call back another time to introduce the study in that person's preferred language.

8.2.5 Leaving messages on answering machines

Answering machine and voicemail messages were left as part of the main fieldwork protocol. A pre-recorded voicemail was left on both landline and mobile telephones where possible. The pre-recorded voicemail was only left on telephones where no prior contact had been made. There was the possibility of leaving two voicemails if the next call was also unanswered. After each voicemail, the record was appointed to be contacted in five days' time, +/- two hours of the previous call.

Message 1:

> *Good morning/afternoon/evening. My name is <SAY NAME> calling on behalf of the Australian Government Department of Social Services from the Social Research Centre. We left a message recently on your (voicemail/answering machine) regarding an important study to better understand community attitudes to violence. The results will be used to try and improve public health and safety. If you would like to participate in this study, please call 1800 023 040 and we will call you back at a time that is convenient to you. Thank you.*

Message 2:

> *Good morning/afternoon/evening. My name is <SAY NAME> calling on behalf of the Australian Government Department of Social Services from the Social Research Centre. We are telephoning (people/households) across Australia to conduct an important study to better understand community attitudes to violence. The results will be used to try and improve public health and safety. If you would like to participate in this study, please call 1800 023 040 and we will call you back at a time that is convenient to you. Thank you.*

8.2.6 1800 number operation

A total of 2443 calls were made to the ICS team over the fieldwork period. Half of those calls were to schedule an appointment (51.4%), with four in ten calls (41.9%) to opt out of the study. The remaining 17 percent of those contacts covered a variety of reasons (general enquiry, survey complaint or completed interview). Table 24 describes the source for how respondents came to contact the ICS team and their reason for calling.

Table 24: Prompt and reason for contacting 1800 number

Reason for contacting 1800 number	Total	Missed call	Primary approach letter	Prior call	SMS	Voicemail left	Unknown
	n	n	n	n	n	n	n
Appointment	1256	1001	54	30	49	44	78
Refusal/opt out	1023	526	52	13	365	3	64
Out of scope	115	76	28	1	6	1	3
General enquiry/privacy concerns	34	15	7	2	6	1	3
Complaint	8	3	1	3	1	0	0
Completed with ICS	7	5	1	1	0	0	0
Total	2443	1626	143	50	427	49	148

8.2.1 Call alerts, escalations and complaints

The NCAS call escalation procedure has been described in Section 7.1.9 and Section 7.1.10. To ensure that information was collected for future improvement of the survey, interviewers were asked to log any complaint, sign of distress or feedback. A total of 267 call alerts were logged for the project. Call alerts were reported on a weekly basis and were reviewed by ANROWS project staff and the NCAS Chief Investigator responsible for monitoring compliance with the conditions of the ethics application. They were also reported to the Ethics Committee. As shown in Table 24, eight complaints were also made via the 1800 number.

The NCAS has a procedure whereby complaints that cannot be resolved to the complainant's satisfaction by the SRC are referred to ANROWS. Three complaints were referred in this way, one involving a concern about the interview process, and the other two raising concerns about the survey content. Information from call alerts and complaints is important and will be used in designing future waves of the NCAS. However, it is important to note that both complaints and call alerts represented a very small proportion of the more than 135,000 telephone contacts initiated in the course of fieldwork. The small number of complaints is particularly noteworthy given the sensitivity of the survey subject matter. Further, the great majority of call alerts and complaints were addressed at the time of the interview.

9 Call results and analysis of response

9.1 Call results

As shown in Table 25, the difference in the performance of the landline sample to the mobile sample varied greatly across several points of comparison. The landline sample had more than twice the number of unusable numbers compared to the mobile sample (22.7% landline, 9.6% mobile). Three in five mobile numbers (59.6%) were unable to be resolved before the end of fieldwork, despite 4.1 calls (average) made to each number. More than half of all landline numbers remained unresolved by the end of fieldwork (53.4%), with an average of 4.4 calls made to each number.

Both sample types had a similar percentage of sample members unable to take part in the research (such as away duration, too old/ill health/unable to participate and other) (2.9% landline, 3.5% mobile).

Reflecting the difference shown in the amount of unusable sample, the mobile sample had a higher contact rate (27.3%) than the landline sample (20.9%) ("contact rate" being where someone answered a call and either refused participation or completed the survey).

An interview was achieved on the mobile sample after an average of 27.4 calls were placed, compared to 40.6 calls on average for the landline sample. The following inputs are used for this calculation: screening required, percentage of unusable sample and sample that remains as a non-contact.

Table 25: Final call results

	Dual frame		Landline frame		Mobile frame	
	n	%	n	%	n	%
Unusable numbers						
Telstra message, number disconnected	9416	7.0	4482	6.8	4934	7.1
Fax/modem	2051	1.5	1997	3.0	54	<0.5
Incoming call restrictions	295	<0.5	47	<0.5	248	<0.5
Not a residential number	9767	7.2	8337	12.7	1430	2.0
Subtotal unusable number	*21,529*	*15.9*	*14,863*	*22.7*	*6666*	*9.6*
No contact/unresolved in survey period						
Engaged	2708	2.0	2059	3.1	649	0.9
Answering machine	35,757	26.4	13,605	20.8	22,152	31.7
No answer	35,766	26.4	17,992	27.5	17,774	25.5
Appointments	2366	1.7	1334	2.0	1032	1.5
Subtotal no contact/unresolved	*76,597*	*56.6*	*34,990*	*53.4*	*41,607*	*59.6*

	Dual frame		Landline frame		Mobile frame	
	n	%	n	%	n	%
Other						
Claims to have done survey	80	<0.5	39	<0.5	41	<0.5
Selected respondent away for duration	328	<0.5	145	<0.5	183	<0.5
LOTE – no language follow up	783	0.6	331	0.5	452	0.6
LOTE – follow up required	18	<0.5	8	<0.5	10	<0.5
Too old/ill health/unable to do survey	1757	1.3	1253	1.9	504	0.7
Denies knowledge of target respondent	46	<0.5	33	<0.5	13	<0.5
Deceased	8	<0.5	6	<0.5	2	<0.5
Over quota	3	<0.5	-	-	3	<0.5
Out of scope (no-one 16 plus in household/on mobile)	1341	1.0	106	<0.5	1235	1.8
Subtotal out of scope	*4364*	*3.2*	*1921*	*2.9*	*2443*	*3.5*
Contacts						
Interviews	17,542	13.0	7042	10.7	10,500	15.0
Midway termination	692	0.5	390	0.6	302	<0.5
Household refusal	1901	1.4	1641	2.5	260	<0.5
Respondent refusal	10,510	7.8	4357	6.6	6153	8.8
ICS refusal	978	0.7	100	<0.5	878	1.3
Remove number from list	491	<0.5	155	<0.5	336	0.5
Named respondent not known	4	<0.5	-	-	4	<0.5
Parent refusal	35	<0.5	14	<0.5	21	<0.5
Refused age	98	<0.5	47	<0.5	51	<0.5
Refused state screening question	145	<0.5	-	-	145	<0.5
SMS refusal	429	<0.5	-	-	429	0.6
Subtotal in-scope contacts	*32,825*	*24.3*	*13,746*	*21.0*	*19,079*	*27.3*
Total numbers initiated	135,315	100	65,520	100	69,795	100

Among numbers where contact was successful and the sample member was considered in scope (not screened as under 16 or unable to take part), more than half of all contacts resulted in an interview. Mobiles appeared to have a higher conversion rate (55.0%) than landlines (51.2%). The landline response rate will have been impacted by the reduced number of letters distributed to households as part of the pre-approach process (refer to section 9.5 for lettered response rates). Results are shown in Table 26.

Table 26: Final call results for in-scope contacts

	Dual frame		Landline frame		Mobile frame	
	n	%	n	%	n	%
Contacts						
Interviews	17,542	47.3	7041	44.5	10,501	49.4
Midway termination	692	1.9	390	2.5	302	1.4
Household refusal	1901	5.1	1641	10.4	260	1.2
Respondent refusal	10,495	28.3	4355	27.5	6140	28.9
Unresolved refusals as part of refusal conversion[1]	4294	11.6	2081	13.2	2213	10.4
Remove number from list	490	1.3	155	1.0	335	1.6
Named respondent not known	4	0.0	-	-	4	0.0
Parent refusal	35	0.1	14	0.1	21	0.1
Refused age	98	0.3	47	0.3	51	0.2
Refused state screening question	145	0.4	-	-	145	0.7
ICS refusal	977	2.6	100	0.6	877	4.1
SMS refusal	429	1.2	-	-	429	2.0
Total in-scope contacts	37,102	100.0	15,824	100.0	21,278	100.0

[1]*Where a record upon first contact was flagged as a refusal, but refusal conversion is subsequently commenced. In some cases these numbers will not be answered by the household so would be 'unresolved refusals'. In this case a record could possibly have two final call outcomes; first being a refusal and the other a 'non-contact (no answer)'.*

9.2 Response rate

The American Association for Public Opinion Research (AAPOR) holds the industry standard for calculating response rates and is the formula used for this study. There are four possible AAPOR response rates that can be used to measure the performance of a project. For the purposes of this report, and to facilitate comparisons with previous surveys, the response rate used is AAPOR Response Rate 3 (RR3) (AAPOR, 2016). This relies on estimating the proportion of cases of unknown eligibility that may have been eligible for the survey and including this estimate in the denominator for the calculation of the survey response rate. The formula for RR3 is:

$$RR3 = \frac{I}{(I+P)+(R+NC+O) + e(UH+UO)}$$

Where:

I =	Interviews	e =	Estimate of the proportion of unknown outcomes likely to have been in scope
P =	Partial interviews	UH =	Unknown, if household occupied
R =	Refusals	UO =	Unknown, other.
NC =	Non-contacts		
O =	Other		

The e value is the default value calculated by the AAPOR online Response Rate Calculator. This was calculated as follows:

$$e = \frac{(\text{Interviews} + \text{Partial completes}) + (\text{Eligible non-interviews})}{(\text{Interviews} + \text{Partial completes}) + (\text{Eligible non-interviews}) + (\text{Not eligible})}$$

Table 27 presents the response rates using outcome categories defined by AAPOR (AAPOR, 2016).

Table 27: Response rate summary

AAPOR 3 categories	Total %	Landline %	Mobile %
Response rate	16.9	15.9	17.7
Cooperation rate	48.8	44.4	51.9
Refusal rate	26.1	28.5	24.4

To enable comparisons with other similar surveys where only the cooperation rate (and not the response rate) has been reported, the cooperation rate has also been provided in Table 27. The formula for Cooperation Rate 3 is:

$$\text{Response Rate} = (\text{number of interviews}) \div (\text{number of interviews} + \text{refusals})$$

Both the cooperation and response rates for the NCAS 2017 are lower than those for 2013. This reflects a broader international trend towards increases in non-response in surveys (Brick & Williams, 2013; Pickett, et al., 2017; Tourangeau, 2017), in particular surveys conducted by telephone (Massey & Tourangeau, 2013). However, the NCAS rates are as high as, if not higher than, similar surveys conducted in countries comparable to Australia (Kohut, Keeter, Doherty, Dimock, & Christian, 2012; Riggle, Rostosky, & Reedy, 2005; Shih & Fan, 2008). This is confirmed in personal communication with Paul Lavrakas, the Vice President/President Elect of AAPOR, who suggests that the response rates outlined in Table 27 would be judged as "good" by US standards

where typical response rates for dual-frame media polls are between 10-15% for the landline frame and 6-10% for the mobile telephone frame.

9.3 Review of call cycle

The use of the extended call cycle aims to increase representation of sample members who are typically hard to reach. This includes young people, employed persons and people born overseas. Eight in ten completed interviews were achieved after the sixth call attempt, with three in five interviews completed after the first three call attempts. As shown in Table 28, the extended call cycle helped to reach persons:

- aged between 25-34 years;
- born overseas; and
- currently employed.

Table 28: Analysis of response by call attempt

	Total %	1-3 times %	4-6 times %	7+ times %
Age group				
16-24 years	8.9	8.8	8.9	9.5
25–34 years	11.7	10.8	12.8	14.3
35-44 years	13.7	12.7	15.3	15.0
45-54 years	16.3	15.1	17.7	19.5
55-64 years	20.1	20.3	19.9	18.7
65-74 years	19.3	21.0	16.7	15.9
75+ years	10.2	11.3	8.7	7.2
Gender				
Male	46.9	45.9	48.5	48.1
Female	52.9	53.8	51.3	51.8
Other	0.2	0.2	0.2	0.1
Educational attainment				
University (Bachelor or post-graduate degree)	39.9	39.3	41.1	40.5
Have not completed a university degree	59.1	59.7	58.0	58.4
Australian/overseas born				
Australian born	70.9	71.6	70.4	67.6
Born overseas	28.8	28.1	29.3	32.4
Employment status				
Employed	53.5	50.2	58.1	60.3

	Total %	1-3 times %	4-6 times %	7+ times %
Unemployed (incl. retired, unable to work, student)	46.4	49.6	41.7	39.5
Total (%)	**100**	**61.5**	**29.8**	**8.8**
Total (n)	17,542	10,787	5220	1535

9.4 Achieved sample profile

Table 29 outlines the achieved population alongside the 2016 Census figures for each demographic. As shown, reaching young people (aged under 35 years) proved difficult. More interviews were achieved with people aged 55 and over and those with a university degree than is found in the general population. Weighting is applied to adjust for differences in the achieved population compared to the national population (see section 11.2).

Table 29: National sample profile

	Achieved sample profile (unweighted) %	Australian population 16 years plus %
Age group		
16-24 years	8.9	14.9
25-34 years	11.7	20.4
35-44 years	13.7	15.0
45-54 years	16.3	16.3
55-64 years	20.1	14.4
65-74 years	19.3	10.8
75+ years	10.2	8.2
Gender		
Male	46.9	49.2
Female	52.9	50.8
Other	0.2	-
Educational attainment		
University (Bachelor or post-graduate degree)	39.9	21.0
Have not completed a university degree	59.1	79.0
Australian/overseas born		
Australian born	70.9	69.2
Born overseas	28.8	30.8
Total (n)	17,542	19,347,738

9.4.1 Landline and mobile sample frames

When looking into the achieved sample profile across telephone type, there are clear differences between the profile of respondents who are only contactable via a mobile telephone compared to respondents who were contactable by landline only or respondents who could be contacted by landline or mobile telephone. Of those interviewed via a landline, 12 percent stated that they did not have a mobile telephone (landline only population). Of those interviewed via a mobile telephone, 47.6 percent stated that they did not have a landline telephone (mobile only population). In looking at the overall achieved profile, the majority (66.1%) of completed interviews were achieved with respondents who had both a landline telephone in their home and their own personal mobile (dual user). As shown in Table 30, the mobile only sample was significantly different to both the dual users and landline only population, reinforcing the benefits of using a larger mobile component to reach respondents who would otherwise not be represented. Age (under 44 years), overseas born and current main activity as "employed" appear to have gained an increased representation by the mobile only population.

Table 30: Comparative sample profile – landline and mobile sample frames (unweighted data)

	Total	Dual user / landline only	Mobile only
	%	%	%
Age group			
16-24 years	8.9	6.8	13.9[a]
25–34 years	11.7	5.6	26.9[a]
35-44 years	13.7	11.0	20.2[a]
45-54 years	16.3	16.9[a]	15.1
55-64 years	20.1	22.7[a]	13.6
65-74 years	19.3	23.8[a]	8.1
75+ years	10.2	13.4[a]	2.2
Gender			
Male	46.9	44.6	52.8[a]
Female	52.9	55.2[a]	47.0
Other	0.2	0.2	0.2
Educational attainment			
University (Bachelor or post-graduate degree)	39.9	38.1	44.5[a]
Have not completed a university degree	59.1	60.8[a]	55
Australian/overseas born			
Australian born	70.9	72.8[a]	66.4
Non-main English speaking country (NMESC)	16.7	14.1	23.0[a]
Main English-speaking country (MESC)	12.2	12.9[a]	10.2
Employment status			
Employed	53.5	48.0	67.1[a]

	Total	Dual user / landline only	Mobile only
	%	%	%
A student	5.9	5.6	9.1[a]
Retired	28.3	35.6[a]	10.3
Engaged in home duties	5.6	5.6	5.9
Unemployed	2.9	2.5	3.9[a]
Unable to work	2.2	2.0	2.7[a]
Other	1.4	1.7[a]	1.0
Total (n)	17,542	12,434	4999

Notes: a, significance tested at p<0.05. Don't know/Refused excluded from telephone categories (n = 109).

9.5 Lettered response rates

Table 31 summarises the impact the primary approach letters have in increasing response rates to the survey. Despite only making up 26 percent of the landline sample, the lettered sample made up more than half of the final interviews achieved for the landline quota (57.2%). The lettered sample also showed a lower level of refusal, lower non-contact rate and lower unusable rate than the unlettered sample. To ensure the letter achieved the maximum impact for each household, letters were sent in batches so that they could be called within a week or so of receiving the letter. As mentioned in section 8.2.2, the proportion of the sample that had received a letter decreased by 14 percent when compared to the 2013 survey. The impact of this declining rate of sample from the letters means that more sample is used to meet the targets as the conversion of a landline sample record to interview is lower in the absence of a letter (65,520 in 2017 compared to 37,018 in 2013).

Table 31: Response rate for lettered sample members

	Base	Interview	Refusal	Unresolved contact	Other contacts	Non-contact	Unusable
	(n)	%	%	%	%	%	%
No letter	73.7	42.8	55.6	46.6	46.0	78.5	94.7
Letter	26.3	57.2	44.4	53.4	54.0	21.5	5.4
Total (n)	65,520	7042	8955	1205	1880	31,575	14,863

In looking into the demographic profile of landline respondents who were sent a letter compared to those respondents who were not sent a letter (Table 32), the lettered sample had a higher proportion of respondents who were:

- aged under 65 years of age;
- males;
- university educated;

- born overseas; or
- currently employed.

Of the respondents in the unlettered landline sample, more than half were aged over 65 years (54.8%), which would explain why more than half were also retired (52.5%). The unlettered sample appeared to also reach a higher proportion of people who had not obtained a university education.

Table 32: Demographic profile of letter and non-letter landline sample (unweighted)

	Base (%)	Letter (%)	No letter (%)
Age group			
16-24 years	4.8	6.0	4.0
25-34 years	3.6	5.9	2.0
35-44 years	8.5	12.4	5.6
45-54 years	14.8	18.3	12.1
55-64 years	21.8	22.2	21.5
65-74 years	27.6	22.8	31.2
75+ years	18.9	12.5	23.6
Gender			
Male	39.7	41.1	38.6
Female	60.1	58.5	61.2
Other	0.2	0.2	0.2
Education attainment			
University (Bachelor or post-graduate degree)	36.1	40.2	33.1
Have not completed a university degree	62.6	58.9	65.3
Australian/overseas born			
Australian born	74.4	70.2	77.6
Born overseas	25.4	29.6	22.3
Main activity			
Employed	40.2	48.7	33.7
A student	3.6	4.7	2.8
Retired	44.3	33.3	52.5
Engaged in home duties	5.4	5.9	5.0
Unemployed	2.2	2.8	1.7
Unable to work	2.3	2.7	2.1
Other	2.0	1.7	2.1
Total (n)	**7042**	**3014**	**4028**

9.6 Reasons for refusal

Where contact was made but an interview was refused, an attempt was made to capture the reason for this. There were few differences between mobile and landline reasons for refusals, with the most common reasons falling into three categories:

- not interested (40.4%);
- no comment/hung up (33.7%); and
- too busy (8.9%).

Table 33 summarises the reason provided for refusals.

Table 33: Reasons for refusal

	Total dual frame %	Landline frame %	Mobile frame %
Not interested	40.4	40.1	40.6
No comment/just hung up	33.7	36.1	31.6
Too busy	8.9	6.6	11.0
Never do surveys	2.3	2.8	1.8
15-20 minutes is too long	2.0	1.7	2.2
Don't trust surveys/government	2.0	2.1	1.9
Don't believe surveys are confidential/privacy concerns	1.4	1.4	1.3
Don't like subject matter	1.0	1.0	1.0
Get too many calls for surveys/telemarketing	0.9	0.9	0.9
Too personal/intrusive	0.9	0.9	0.9
Silent number	0.5	0.8	0.2
Dislike being called on my mobile	0.4	0.1	0.7
Letter put me off	0.1	0.1	0.1
Other (specified)	5.5	5.3	5.7
Total (n)	**18,209**	**8681**	**9528**

10 On-line "booster" sample 16-17 year olds

There has been an increase in the number of people in Australia who only have a mobile telephone. Reflecting this, 60 percent of interviews in the NCAS were conducted via a mobile telephone. Given the increase in mobile telephone usage among Australians of all ages, young people with mobile devices had a lower probability of being randomly selected in 2017 than was the case in previous NCAS waves. As a result, a lower than anticipated number of interviews were achieved with persons aged 16 or 17 years. A further factor contributing to this was the requirement for parental consent to be obtained for respondents in this age group.

To ensure that there were sufficient interviews with young people (16-24 years) for analysis, it was agreed by the IG that an additional "boost" of data collection would be carried out to supplement this sample. These additional interviews needed to be cost effective and time efficient in order to fit within the broader budget and timeline of the NCAS project. To meet this criterion, it was agreed that an additional 200 interviews would be achieved with 16 and 17 year olds via an online survey, using the same data items as per the main data collection conducted via CATI. Parental permission was sought prior to participants taking part.

Ethics approval was granted to proceed with this new methodology.

Data collected in the online survey will not be included in the main survey results but, will be used in the analysis for the youth report (forthcoming), subject to statistical calibration to account for mode and sampling effects.

10.1 Methodology

The Online Research Unit, an Australian-based online panel provider, was subcontracted by the SRC to invite its panel members to take part. The panel members were required to answer a screening question: Are you the parent or guardian of a 16 or 17 year old? If they indicated they were, they were presented with the same information as offered in the CATI survey so that they could provide informed consent for their dependent to take part. As the recruitment required a screening question of eligibility, there were limitations on conditions that could be applied to ensure that the achieved sample reflected the Australian population. To optimise the distribution, however, panel members were invited to take part based on their location (state and metropolitan versus regional). There were no controls based on the demographic information of the 16 or 17-year-old participants (refer to Table 34 for details).

The SRC hosted and programmed the online survey.

Table 34: Demographic profile of online participants

Demographic (unweighted)[a]	n	%
Gender		
Male	107	53.5
Female	92	46.0
Other	1	<1
Location		
Metro	164	82.0
Regional	36	18.0
Indigenous		
Yes	3	1.5
No	195	97.5
Country of birth		
Australia	166	83.0
Other	28	14.0
Language spoken at home		
English	164	82.0
Other	36	18.0

Note: a, Items may not add to 100% as Don't know and Refused categories are not shown.

10.1.1 Data outputs and analysis

As the "youth booster sample" was completed through an online survey, design weights could not be calculated. Instead, to enable the CATI youth records to be combined with the online youth records, their final weights were calculated using nearest neighbour imputation.

This method used the survey responses and characteristics of persons in the online group to find the most similar persons in the CATI group. The weights of the online group were then imputed as the average weight of the most similar persons in the CATI group.

As a last step, the weights for the combined youth sample (consisting of the final weights of CATI youth respondents and the imputed weights of online youth respondents) were then adjusted so that they matched external benchmarks for age, gender and part of state.

11 Data outputs

11.1 Coding

Responses to "other specify" questions were reviewed before the end of fieldwork to determine if code frame development or code frame extensions were required. The verbatim responses available in the survey related only to demographic information. These items were country of birth (respondent, maternal and paternal parents), education status, household composition and current main activity.

All country of birth responses (pre-coded and free-text) were coded to the Australian Bureau of Statistics (ABS) Standard Australian Classification of Countries code frame. This compares with the 2013 NCAS in which country of birth was coded at the time of data collection to regions.

Code frame extensions were applied for two items (household composition and current main activity) to reduce the amount of uncategorised responses in residual other. These categories can be combined with the "Other" category if required when analysing the data.

11.2 Weighting

11.2.1 Approach to weighting

The approach to calculating weights for the 2017 NCAS entailed the following steps:

1. Compute an initial weight as the inverse of the probability of selection, accounting for the overlapping landline/mobile RDD frames.
2. Calibrate (or post-stratify) the weights so that they satisfy population benchmarks for several demographic characteristics.
3. Trim the weights so that no respondents have an undue influence on estimates made from the data set.
4. All weighting and analysis was conducted using the statistical program "R" (R Core Team, 2017).

The samples of all three surveys (2009, 2013 and 2017) were weighted using this common technique. This makes sure that they are as comparable as possible and that any patterns found are not due to changes in the structure of the population between surveys.

Initial weights

The design weight for dual-frame surveys is the inverse of each respondent's chance of selection, calculated according to the following formula:

$$p_{selection} = \frac{S_{LL} \times LL}{U_{LL} \times AD_{LL}} + \frac{S_{MP} \times MP}{U_{MP}}.$$

In this formula, S_{LL} is the number of survey respondents contacted by landline, U_{LL} is the population of the universe of landline numbers, LL is the number of landlines in the respondent's household, AD_{LL} is the number of in-scope adults in the respondent's household, S_{MP} is the number of survey respondents contacted by mobile, U_{MP} is the population of the universe of mobile numbers, and MP is an indicator of whether or not the respondent owns a mobile telephone (0 = No, 1 = Yes).

Post-stratification weights

To ensure that estimates made from the data set are representative of Australians aged 16 years or older, the initial weights were adjusted so that they matched external benchmarks (ABS Census, 2016) of several demographic parameters:

- location;
- age;
- gender;
- country of birth; and
- highest education attainment.

These variables are routinely used for weighting by the SRC and its research shows that these variables tend to influence survey estimates and aspects of these variables are typically overrepresented in survey research (for example, females, older persons and those with higher educational attainment) and therefore need to be taken into account in the weighting strategy.

The method used to adjust the weights was raking (also known as "rim weighting" or "iterative proportional fitting"), which, through a process of iteration, ensures that weights simultaneously satisfy a combination of marginal and joint population distributions.[8]

Refer to Lumley (2004, 2017) for more details on the implementation of raking in R (R Core Team, 2017) and to Valliant, Dever, & Kreuter (2013) for a more general treatment of weighting and estimation for sample surveys.

[8] A marginal distribution involves a single variable, such as age category, so that the weights add up to the total population in each category. A joint distribution involves two or more variables, such as age and sex, so that the weights add up to the total population in each cross-classified cell.

Item level non-response among weighting variables

As is common in survey research, not all respondents were willing to or able to answer all questions, leading to missing values for some items. Since the raking implementation in R requires complete data for the weighting variables, it was necessary to impute the missing values. The method was the nearest neighbour imputation (implemented in R by Kowarik & Templ, 2016), which takes the modal response of the five most similar respondents on a range of respondent characteristics and survey responses.

There was a very low prevalence of missing values to weighting variables (less than 0.5 percent of respondents). Taking this into account, as well as the use of several different benchmarking variables and the trimming of extreme weights, the imputation process is expected to have a negligible impact on estimates made from the data set.

The design effect, or the variance introduced by the weights, was assessed to ensure that the most appropriate weighting strategy was used. This included investigating the impact of using each benchmark variable, as well as the effective base.

Weight trimming

The disproportionate jurisdictional quotas applied to the NCAS produced unequal sampling weights. Since large variations in weights may lead to large variances in survey estimates, trimming of extreme weights was undertaken to improve the precision of the estimates.[9] The application of weight trimming methods aims to reduce the variance at the same time as limiting increases in the bias. Various procedures exist, ranging from trimming the tails of the weights distribution according to some criteria (Battaglia, Hoaglin, & Frankel, 2009) to model-based trimming estimators in a Bayesian framework (Elliott, 2008).

The most common approach to weight trimming is the former, though, in which the weighting procedure includes detecting and trimming extreme weights then redistributing the trimmed portions to ensure that the weights still sum to the required totals (Chowdhury, Khare, & Wolter, 2007). An extreme weight is identified as one that is outside an interval defined with respect to the median and inter-quartile range (IQR) of the weights:

$$wt_t = \begin{cases} median(wt) - f \times IQR(wt), wt < median(wt) - f \times IQR(wt) \\ median(wt) + f \times IQR(wt), wt > median(wt) + f \times IQR(wt) \\ wt, otherwise \end{cases}$$

For this survey, the IQR factor (*f*) was taken to be 6. The impact of trimming was assessed by comparing the weighting efficiency (wt_{eff}) of untrimmed and trimmed weights, where

$$wt_{eff} = 100 \frac{\frac{1}{n}(\sum_{i=1}^{n} wt_i)^2}{\sum_{i=1}^{n} {wt_i}^2}$$

[9] At the expense of introducing a level of bias to estimates, brought about since the weights may no longer precisely reflect the population.

In this case, trimming improved the efficiency only marginally (from 56 percent to 58 percent) but significantly reduced the extent of a handful of very large weights.

Weighting of the Aboriginal and Torres Strait Islander sample

Given the level of interest in providing as accurate an understanding as possible of community attitudes to violence against women among Aboriginal people and Torres Strait Islanders for the survey estimates produced for Aboriginal and Torres Strait Islander respondents, a separate weight was calculated to align the Aboriginal and Torres Strait Islander sample with independent population benchmarks (ABS Census, 2016).

To create this weight, all Aboriginal and Torres Strait Islander records retained their existing initial weight (as described above) and a rim-weighting procedure was used to match the Aboriginal and Torres Strait Islander sample with the chosen Census parameters (age, gender and part of state). All non-Indigenous records kept the same weight as previously calculated and, as such, were not affected by this process.

11.3 Confidence intervals

In the reports of findings for the 2017 NCAS, knowledge and attitudes among certain subgroups of interest are explored. Table 35 presents margins of error associated with a survey estimate of 50 percent for the total 2017 NCAS sample and various subgroups. This table should be used to assist with the interpretation of results. For example, if a result from the 2017 NCAS was 50 percent for the total sample, we can use the table to identify that the associated margin of error is +/- 0.75 percent. That is, if the survey was replicated many times with different samples, 95 percent of the time the true value for the Australian population will lie between 49.25 percent and 50.75 percent. Similarly, a result of 50 percent for Aboriginal and Torres Strait Islander people has an associated error range of +/- 5.3, so 95 percent of the time the true value for Aboriginal and Torres Strait Islander people is between 44.7 percent and 55.3 percent.

Table 35: Confidence intervals (CI) for key subgroups

		2017 sample sizes					
				95% CI	estimate	CI lower bound	CI upper bound
		N	%	%	%	%	%
Total sample		**17,542**	**100**	**0.75**	**50**	**49.25**	**50.75**
Disability		3,340	19.0	1.7	50	48.3	51.7
	Base: respondents aged <65 years						
	Disability: aged <65 years	1901	10.8	2.25	50	47.75	52.25
	No disability: aged <65 years	10,592	60.4	0.95	50	49.05	50.95
	Base: respondents aged 65+ years						
	Disability: aged 65+ years	1,439	8.2	2.6	50	47.4	52.6
	No disability: aged 65+ years	3,691	21.0	1.6	50	48.4	51.6
Aboriginal and Torres Strait Islander		342	1.9	5.3	50	44.7	55.3
Youth		2,228	12.7	2.1	50	47.9	52.1
	16-17 years	177	1.0	7.4	50	42.6	57.4
	18-24 years	2,051	11.7	2.15	50	47.85	52.15
Birthplace	*Australia*	12,605	71.9	0.85	50	49.15	50.85
	MESC	2,141	12.2	2.1	50	47.9	52.1
	NMESC	2,946	16.8	1.8	50	48.2	51.8
Migration status	*First generation*	5,040	28.7	1.4	50	48.6	51.4
	Second generation	3,311	18.9	1.7	50	48.3	51.7
	Second generation – both parents MESC born	1,644	9.4	2.4	50	47.6	52.4
	Second generation – one or both parents born in NMESC	1,667	9.5	2.4	50	47.6	52.4
	Third plus generation – born in Australia and both parents born in Australia	9,133	52.1	1.05	50	48.95	51.05
Year of arrival	*Base: First generation Australians from MESC*						
	0-5 years	139	0.8	8.35	50	41.65	58.35
	6-10 years	161	0.9	7.75	50	42.25	57.75
	10+ years	1,819	10.4	2.3	50	47.7	52.3
	Base: First generation Australians from NMESC						
	0-5 years	649	3.7	3.85	50	46.15	53.85
	6-10 years	430	2.5	4.75	50	45.25	54.75
	10+ years	1,828	10.4	2.3	50	47.7	52.3
Language proficien-cy	*Base: First generation Australians speak LOTE at home*						
	Speaks English well	2,551	14.5	1.95	50	48.05	51.95
	Does not speak English well	233	1.3	6.45	50	43.55	56.45

12 Scale confirmation, constructs and derived variables

12.1 Scale and construct confirmation

Upon completion of fieldwork, analysis was conducted for each of the constructs discussed in section 3 of this report. In addition, a "confirmatory analysis" of the Understanding Violence against Women (UVAW) construct, developed in 2013, was undertaken, using the full data set. This analysis assessed the extent to which the findings of the scale validation analysis (which used a smaller data set) were achievable with the full data set.

Similar to the development of the constructs, confirmation involved both Rasch and factor analyses. The process for confirming each scale was as follows:

- Rasch analysis was conducted to confirm item to construct fit. Rasch analysis produces a number of output measures for each item, and where an item was determined as not fitting across two or more measures, the item was not included in the final construct structure.
- Following this, factor analysis with an oblimin rotation was conducted for those constructs with theoretical subdomains (CASVAWS and GEAS) to determine if the subdomains were statistically valid.

It is important to note that some items for PAC, GVC, ITAC and GEAS were split sampled to ensure a 20-minute survey length. A small number of split sampled items were also included in the final CASVAW Scale. Rasch analysis determines a person's score based on the number of items answered. For example, PAC comprised nine items. There were three items asked of all respondents and six items that were split sampled. This resulted in each survey respondent answering six of the nine items, and therefore the Rasch score for each person is based on six items and not all nine items.

These approaches are more fully detailed in section 5.2.

12.1.1 Outcomes of Rasch analysis

The purposes and outcomes of Rasch analysis has been described in section 6 of this report and in greater detail in Appendix 15. Rasch analysis was used as the key form of analysis to validate the scales on the basis of the survey data.

Item fit statistics

Item fit statistics for each data item listed in section 3 for the various constructs are presented in Appendix 8. Across the constructs there were several items that did not demonstrate a good fit within the construct. These items were removed from the final respective construct and are identified in Appendix 8 in red. Table 36 summarises the number of items removed from each of the constructs.

Table 36: Number of items removed from each construct, construct confirmation

Construct	Items removed from construct	Items remaining in construct
UVAWS	0	6
CASVAWS	3	32
GEAS	1	19
PAC	0	9
GVC	1	5

Construct fit statistics

To complement the individual item results presented in the appendices and referred to above, Table 37 summarises fit statistics as they apply to the constructs as a whole. The statistics presented are:

- person separation, which indicates how well a set of items is able to distinguish between the persons measured; and
- item separation, which indicates how well a sample of persons is able to separate the items on an instrument.

The separation indices are outputs from the Rasch model and should be no less than 2 for persons and no less than 3 for items (Linacre, 2014).

Further, Cronbach alphas were calculated for each construct to provide a further measure of construct reliability and a measure of internal consistency, with a measure of $\alpha = .70$ being regarded as the minimum required.

Table 37: Statistical properties for each composite measure

Construct	Number of items	Person separation	Item separation	Cronbach alpha
UVAWS	6	0.82	19.72	0.78
CASVAWS	32	2.01	38.66	0.92
GEAS	19	1.83	58.64	0.86
PAC	9	1.27	44.5	0.71
GVC	5	0.67	16.53	0.51

The GEAS and CASVAWS constructs are close to the suggested minimum criteria of 2 for the person separation index. However, this threshold was not met for the other constructs, suggesting that measures derived from them may not be sensitive enough to distinguish between persons. This is not unexpected, given these constructs comprise fewer than ten items.

The item separation indices all well exceed the minimum of 3 for all constructs, indicating that the number of respondents is large enough to confirm the hierarchy of item measures.

The final measure, Cronbach alpha, indicates that the CASVAWS, GEAS, PAC and UVAWS all have at least acceptable to excellent reliability. The Cronbach alpha for the GVC is poor.

Overall, the PAC and GVC were considered acceptable as constructs as they are designed to be used as explanatory factors rather than being measures of core constructs of interest. Statistics for the individual items in each of these constructs do fit the Rasch model, suggesting that the items measure the underlying constructs they were designed to measure.

12.2 Factor analysis

The factor analyses revealed that a 5-factor solution for the GEAS and a 4-factor solution for the CASVAWS were the most statistically sound models. Results are presented in Appendix 7. Allocation of items to factors (and therefore subdomains) was made purely on statistical grounds. As noted, although both were broadly aligned with the theoretical frameworks used for item selection, some conceptual adjustment was indicated in the findings of the factor analyses, and this was particularly the case for the CASVAW Scale. On the basis of this, some adjustments were made to frameworks and the labelling of the factors and subdomains. The rationale for this is discussed in greater detail in section 3 of this report. The subdomains for CASVAWS were determined as:

- excusing the perpetrator and holding women responsible;
- minimising violence against women;
- mistrusting women's reports of violence; and
- disregarding the need to gain consent.

The subdomains for GEAS were determined as:

- promoting rigid gender roles, stereotypes and expressions;
- undermining women's independence and decision-making in public life;
- undermine women's independence and decision-making in private life;
- condoning male peer relations involving aggression and disrespect towards women; and
- denying gender inequality is a problem.

12.2.1 Subdomain construction

Three additional subscales were constructed to investigate issues of theoretical interest and policy and practice concern as follows:

- within GEAS – a "public and private life" subscale to investigate the pattern emerging in the subdomains of men's control in public and private life (see above) with a larger number of items; that is, to investigate the hypothesis that levels of support for gender equality vary between matters concerned with equality in public life as opposed to equality in private life;
- within CASVAWS – sexual violence and intimate partner violence to investigate whether there is variation in levels of attitudinal support for partner violence (excluding sexual coercion) as opposed to sexual violence; and
- within CASVAWS – consent-related items to investigate patterns of variation on these items, especially among young people.

The items pertaining to the theoretical subdomains, along with the statistically derived subdomains, were used to create subdomain measures using Rasch analysis. A summary of items underlying each subdomain is presented in Appendix 22. As indicated above, the conceptual basis for the GEAS and CASVAWS factor structure is discussed in section 3.

As was determined as part of the construct confirmation, all items demonstrate a good fit within each construct, showing that they measure the concept of interest. For completeness, the item fit statistics are presented in Appendix 22 for each of the subdomains.

Similar to the construct confirmatory analyses, Table 38 summarises scale fit statistics as they apply to the subdomains as a whole, as well as Cronbach alphas. As can be seen, the person separation statistics are less than the minimum value of 2, suggesting that the subdomains may not be sensitive enough to distinguish between persons. This is not unexpected, given the number of items belonging to each subdomain. The item separation statistics suggest that the number of respondents is large enough to confirm the hierarchy of item measures, and the Cronbach alphas indicate almost all are reliable measures, the exception being the "male peer relations" subdomain in the GEA Scale. The "disregarding the need to gain consent" subdomain is just under the minimal threshold of $\alpha = .69$.

Table 38 also shows the properties of five additional measures formed on theoretical grounds. The first of these comprised all items concerned with intimate partner violence (excluding those focussing on sexual coercion) and the second all items concerned with sexual assault. The purpose of these two measures was to compare whether there were differences in levels of attitudinal support for intimate partner violence as opposed to sexual assault. The third measure comprised all questions concerning consent to sexual relations and was formed for use in analysing the youth sample.

The fourth and fifth measures were made up of all items concerned with gender equality in public life and private life respectively. The purpose of these measures was to compare levels of attitudinal support for gender equality in public as opposed to private life overall (not just in *decision-making* as is the case in the statistically derived themes in the GEAS).

Table 38: Statistical properties for each subdomain

Subdomain	Construct	Number of items	Person separation	Item separation	Cronbach alpha
Statistically derived					
Minimising violence against women	CASVAWS	11	0.94	20.53	0.83
Excusing the perpetrator/holding women responsible (for the abuse or managing its consequences)	CASVAWS	11	0.92	30.78	0.84
Mistrusting women's claims	CASVAWS	4	0.53	23.04	0.75
Disregarding consent	CASVAWS	6	0.57	20.87	0.69
Denying gender inequality is a problem	GEAS	5	0.85	38.43	0.72
Rigid gender roles, stereotypes and expressions	GEAS	5	0.00	17.01	0.65
Male peer relations emphasising aggression and disrespect	GEAS	3	0.00	62.52	0.43
Men's control – private life	GEAS	2	0.40	25.76	0.74
Men's control – public life	GEAS	4	0.00	21.23	0.75
Theoretically derived					
Intimate partner violence (excluding sexual coercion)	CASVAWS	17	1.35	43.77	0.87
Sexual assault	CASVAWS	14	1.22	31.69	0.83
Consent	CASVAWS	13	1.16	12.42	0.76
Public life	GEAS	5	0.41	18.14	0.72
Private life	GEAS	11	1.48	61.24	0.80

12.3 Derived variables

A series of derived variables was created to assist the analysis. Appendix 23 summarises how each of the anticipated derived variables for the 2017 NCAS was calculated. A summary of the derived variables is presented in Table 39.

Table 39: Summary of the 2017 NCAS derived variables

Derived variable name	Description	Source variable (s)
Age	Age was collected as a single year in the survey and was classified into 16-17 year olds, 18-24 year olds and thereafter ten-year age groups to 74 years and 75 years and over for analysis purposes only.	Intro6, Intro7
Age generation	Age was classified into three generations as follows: · Generation 1: 16-24 years · Generation 2: 25-64 years · Generation 3: 65+ years As there is no consensus in the literature regarding generation classifications, age-based generation has been informed, broadly speaking, by life cycle. That is, young persons, a possible parental cohort and older persons.	Age
Strata	Fifteen geographic regions across Australia based on the ABS postcode to Greater Capital City Statistical Area (GCCSA) concordance. This variable is used for weighting purposes.	Pcfinal
Country of birth	Birthplace – categorised as Australian born, born in a MESC, born in a NMESC.	Dem3a
Occupation	Occupation was collected as an open-ended response and was coded to Australian and New Zealand Standard Classification of Occupation (ANZSCO) Level 4, as defined by the ABS. ANZSCO Level 1 was used for some bivariate analysis.	Dem11
Aboriginal and Torres Strait Islander status	A respondent was identified as being of Aboriginal and Torres Strait Islander status if they self-identified as either Aboriginal and/or Torres Strait Islander.	Dem2
Migration	First, second or third generation – if overseas born, migration status was counted as first generation and divided into those born in a MESC and those in a NMESC. If Australian born and either parent born overseas in a NMESC, migration status was counted as second generation NMESC. If Australian born and both parents were born in a MESC, this was counted as second generation MESC. If Australian born and both parents Australian born, this was counted as third-plus generation.	Dem3a Dem4a Dem4b
dem4length	Numbers of years lived in Australia. In the survey this data was collected as year of arrival, therefore the number of years between reported year of arrival and 2017 was determined.	Dem4
Dem4time	Numbers of years lived in Australia, grouped as 0-5, 6-10 and More than 10 years	Dem4length

Derived variable name	Description	Source variable (s)
Education	Highest level of education completed, classified as university or higher, trade, certificate or diploma, and secondary or below	Dem8
Disage	Self-reported disability status by age, less than 65 years and 65 or more years. A person was classified as having a disability if they self-identify as having a disability, health condition or injury that has lasted, or is likely to last, six months or more, which restricts their everyday activities.	Dem17, age
Langprof	Based on self-report. Only asked of those who speak a language other than English at home.	Dem5
ARIA	Based on the postcode provided by respondents. Respondents were classified as living in a major city, inner regional, outer regional, remote or very remote area using categories in the Australian Statistical Geography Standard (ASGS) Volume 5 – Remoteness Areas, July 2011 (cat. no. 1270.0.55.005)	pcfinal
Telstatus	Telephone status of sample member categorises as landline only, dual-user or mobile-only. This variable was used for weighting purposes only.	Samptyp, ts1 and ts3
SEIFA	SEIFA score: The Index of Relative Socio-economic Advantage and Disadvantage is one of the indices provided as part of the ABS Socioeconomic Index for Areas (SEIFA) range of products. This index summarises information about the economic and social conditions of people and households within an area, including both relative advantage and disadvantage measures. Quintiles have been used, with a low score indicating most disadvantaged and a high score most advantaged. This index takes into account area-based factors such as occupational status, educational attainment, home ownership, employment status, jobless households, disability status, lone parents etc.	PCfinal
Occ_gend	Occupation coded into male-dominated, female-dominated and gender-balanced occupations using data sourced from the ABS Census – % of gender in occupations. Categories will reflect:	Occupation
	1. Highly male-dominated occupations (75% or more of persons in the occupation are males).	
	2. Male-dominated occupations (60-74% of persons in the occupation are males).	
	3. Gender-balanced occupations (50-59% of persons in the occupation are males/females)	
	4. Female-dominated occupations (60-74% or more of person in the occupation are females).	
	5. Highly female-dominated occupations (75% or more of persons in the occupation are females).	
Occ_Intervene	Occupations listed at ANZSCO Level 4 have been reviewed to identify occupations that:	occupation

Derived variable name	Description	Source variable (s)
	a) directly provide support to/work with people affected by violence against women (as victim/survivors, perpetrators or child witnesses); and/or	
	b) are likely to encounter people affected by violence against women in the course of their work and who may be in a position to intervene/support in some way.	
	These have been placed into sectors (including legal, education, health, emergency, counselling and support, sport and recreation (often seen as a setting for primary prevention), and faith.	
Intention to Act Construct (ITAC)	A measure comprising respondents' answers to questions in response to two scenarios: a male friend telling a sexist joke and a male friend insulting or verbally abusing a woman he is in a relationship with. Questions are based on theoretical determinants of ITAC identified in the literature. The Rasch model was used to derive measures for each person answering one or more ITAC item. Although not explicitly designed as a scale, the items worked very well together, exhibiting good fit to the Rasch model and showing a clear hierarchy among statements.	bs1a, bs1b, bs3a, bs3b

12.4 Gender

Respondents were asked what gender they identify with and responses were recorded as either male, female, other or chose not to answer. Two approaches to testing of statistical significance were used in NCAS 2017: in the first results for each category were compared with each other category (e.g. people in clerical and administrative jobs were compared separately with each other occupational categories). In the second, a given category was compared against 'all others". In the example just given this would involve comparing clerical and administrative workers against the aggregate of all other occupational categories.

There was insufficient data to treat persons nominating other (n = 31) or who chose not to respond to the question on gender (n -= 7) as separate gender categories.

In the first approach to significance testing just described the 'other' category was not included in the analysis. In the second approach to significance testing, the comparisons involved:

- comparing males to persons nominating as female and other; and
- comparing females to males and other

In both approaches results from the small number of people who chose not to answer the question about gender (n=7) were excluded.

13 Analysis methodologies and reporting conventions

13.1 Significance testing

To decide whether differences are true differences (i.e. whether they represent genuine changes or differences rather than just random variation), testing of the statistical significance of these differences has been conducted. This was done using the effective base (i.e. the underlying sample size after adjusting for the impact of the weights) for each statistic using the column proportions with overlap adjustment t-test available within the IBM:SPSS Data Collection Survey Reporter (Version 7) software.

Two different approaches to significance testing have been used. For the item level, bivariate data estimates have been tested against all others in the variable concerned. For example, those aged 18-24 years have been significance tested against all others at the 99% confidence level ($p \leq .01$). This approach was taken as the most efficient approach to identifying key patterns at the item level (with isolated differences at the individual item level generally having limited practical importance).

The second approach involved testing each variable against each other relevant variable. This approach has been used for analyses at the scale level because differences have greater meaning since they are based on multiple items aggregated using psychometric testing. It has also been used for more complex analyses at the item level, in particular where the differences between more than one group in a variable are of theoretical importance (e.g. the generation in Australia variable) or the influence of variables (e.g. social network composition) are being compared between more than one variable (e.g. gender).

As the NCAS sample size is large, it is possible for a result to be statistically significant without necessarily having any practical importance. For example, there may be a 2 percentage point difference between women and men agreeing to a particular survey statement. On its own, this result would not warrant targeting change efforts to men as opposed to women. Two steps have been taken to address this issue:

- in reporting at the bivariate level, unless there were compelling reasons to the contrary, a focus was maintained on associations that occurred in a patterned way; and
- Cohen's effect size (Cohen, 1988) was calculated on all significant differences.

Cohen's effect sizes are typically reported at three levels – 0.2, 0.5 and 0.8 – for the purpose of showing the relative strength of various associations (Walker, n.d.). However, in this project they were used as a means of filtering out significant but trivial results (noting that other statistical approaches are used in analysis to gauge the strength and ordering of associations). An effect

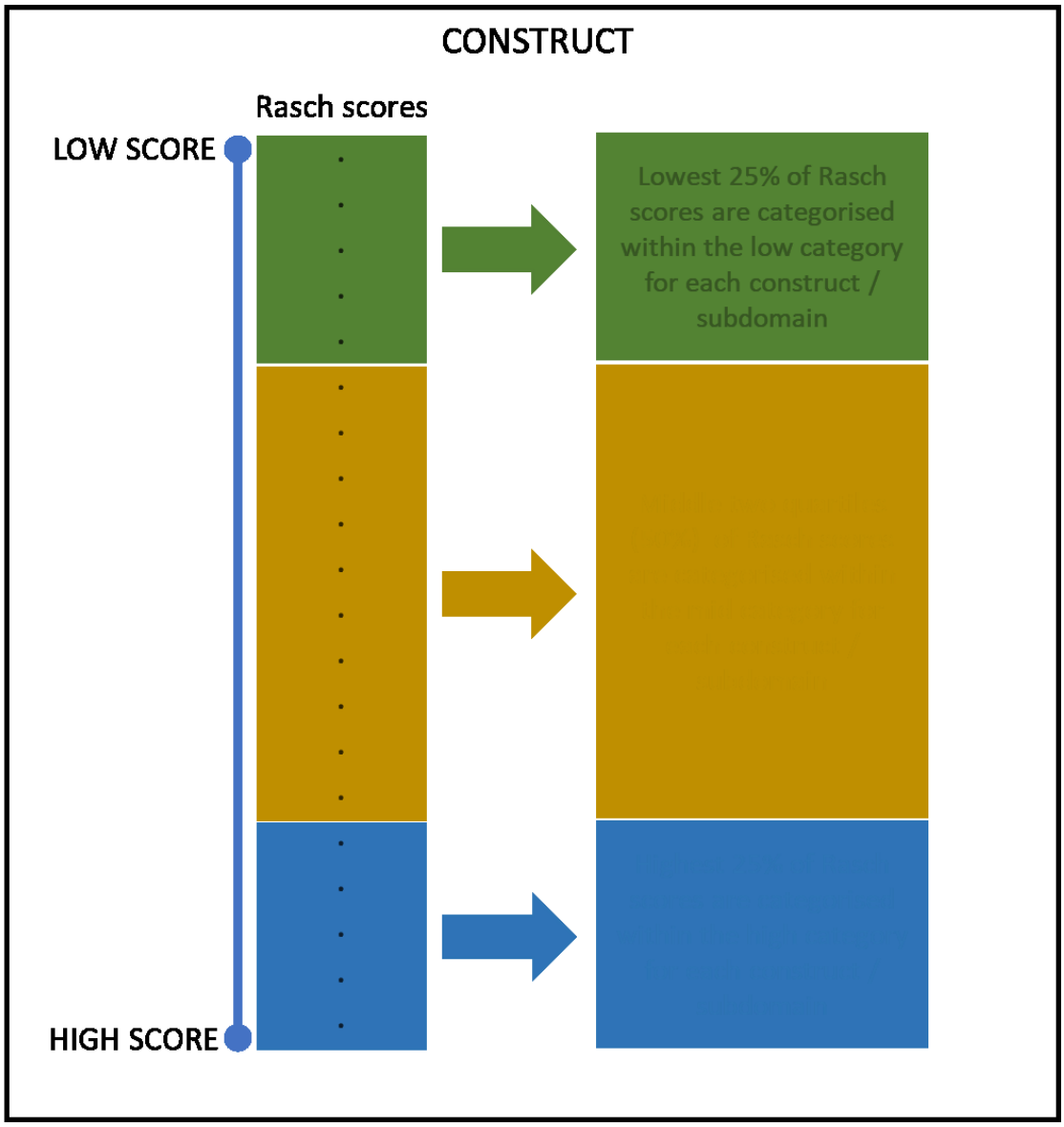
size of 0.2 (small) was set as the minimum threshold for the 2017 NCAS. Only statistically significant results meeting this threshold are reported.

13.2 Scale score allocation and presentation of findings

Scale and subdomain level analyses were conducted in two ways. The first involved using the Rasch scores generated for each respondent as part of the analyses and classifying them into high, medium and low levels of knowledge (in the case of UVAW), and endorsement (in the case of GEAS and CASVAW). The construct scores were split into weighted quartiles, whereby a low score equates to a low level of knowledge or low endorsement of a construct. The second and third quartiles were combined and labelled as a medium level of knowledge or endorsement of a construct, and the fourth quartile was labelled as high. The same approach was also used for the ITAC measure. This method allows for comparisons to be made between demographic groups by facilitating comparisons between them on the basis of the proportions within each category (see Figure 5). It is the clearest way to show differences between groups, particularly in publications for a non-technical readership. This approach is limited for comparing scales and subscales, however, given that the categories are determined in the same way for each measure.

It is important to note that that the categories are researcher assigned and are relative rather than absolute measures. That is, they can be used to compare two groups based on the distribution of respondents between the three categories, and as a basis for claiming that one group is more or less likely to have a high, medium or low (as the case may be) level of knowledge (or other relevant attribute) than another. However, they cannot be used to claim that a group has a high, medium or low level of knowledge (or attitudinal support) in the absolute sense. While it would have been optimal to use an absolute measure, understanding of knowledge and attitudes is not sufficiently well developed to identify thresholds at which negative attitudes or poor knowledge become problematic at the individual or group level (see, for further discussion, Edwards et al., 2011).

Figure 7: Categorisation of Rasch score



The second approach involved calculating a mean score using the Rasch scores for each construct and subdomain as a basis.

Rasch scores are estimated using a probability model whose natural scale is logits (or log-odds). Since logits have a theoretical range of -∞ to +∞, they were converted to a 0-100 scale to facilitate interpretation. This involved determining the lowest and highest possible Rasch scores for each construct and subdomain and applying the following formula:

$$0-100 \text{ value} = \frac{(\text{person measure} - \text{measure for minimum possible score}) * 100}{(\text{measure for maximum possible score} - \text{measure for minimum possible score})}$$

This measure enables comparisons between scales and subscales and between them over time.

13.3 Change over time at the scale and item levels

To track change over time, data estimates have been compared to previous iterations of the NCAS (2013, 2009 and 1995). Estimates have been tested for significance at the 99 percent level. A decision was taken not to apply an effect size threshold to change over time data. This recognises attitudes change slowly such that small changes may have greater meaning than is the case when comparing differences between groups. This is affirmed in successive iterations of the NCAS where changes at the item level between survey years, if occurring, are generally in the order of 2-3 percentage points.

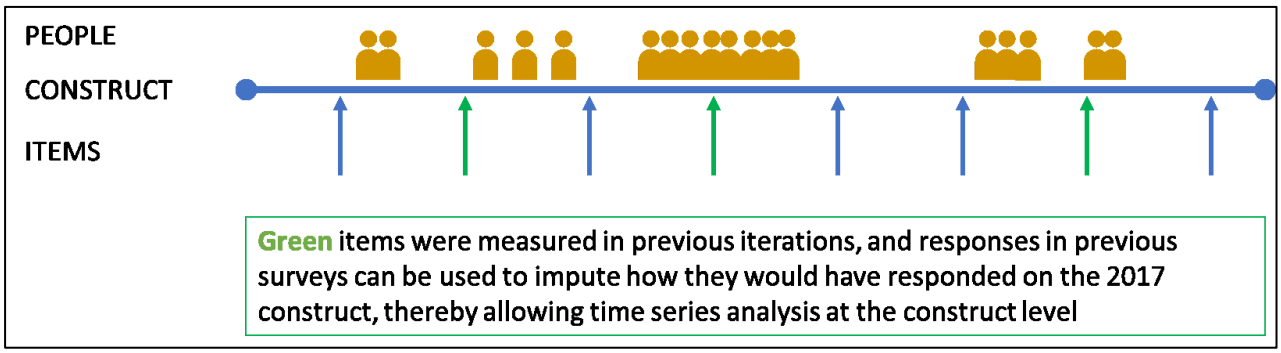
Data item change over time

Excluding demographics, a total of 36 data items in 2017 were asked in previous iterations of the NCAS. These are detailed in Appendix 3.

Construct change over time

Some data items from the CASVAW, GEAS and UVAW constructs were retained to allow for change over time analysis at the construct level. This is done by using the item parameters generated from the Rasch analysis of 2017 items to create "anchors" for historic data, from which person parameters can be estimated. In other words, the data items asked in both the current and previous surveys are used as a "link" between historic and current data. Figure 7 explains this process pictorially. The blue line represents the construct as measured across a continuum. The continuum is measured at various points by the data items (relating to the item separation previously discussed in section 5) that sit below it. Finally, the respondents are positioned along the continuum based on their responses to the data items (relating to the person separation, which is also discussed in section 5).

Figure 8: Diagrammatic representation of how Rasch analysis facilitates measurement of change over time at the construct level



13.4 Multivariate model methodology

Multiple linear regression modelling was used to measure the relationship between selected characteristics and dependent variables of interest, namely the CASVAWS, GEAS, UVAWS and ITAC scores.[10] Initially, inputs to these models were limited to selected demographic variables and were then expanded to include other attitudinal constructs and subdomains to measure the explanatory power of the combined variables and the relative strength of their association with each of the constructs.

The results of this modelling must be interpreted differently from the univariate and bivariate results. Whereas the univariate and bivariate results are overall averages for each separate demographic variable, ignoring all others, the multiple regression approach gives results that illustrate the nett effect for a variable, after accounting for other variables.

There was a two-stage process for generating the models. First, a "full" model was estimated, incorporating all potential explanatory variables (see demographic, contextual and attitudinal factors in Figure 1). Second, a reduced model was derived using stepwise regression[11] (based on Akaike's information criterion) (Venerables & Ripley, 2002) to arrive at the simplest model that still explains approximately the same amount of variance as the full model.[12] The relative contribution (Gromping, 2006) of each predictor to the variance explained by the regression model was also calculated. Table 40 provides a summary of each model and the associated adjusted R^2 values that indicate the overall variance explained by the model. The data were assessed for multicollinearity (using the variation inflation factor) (Fox & Weisberg, 2011) to ensure that the required assumptions were met.

For simplicity, reporting in the NCAS main report focuses on the adjusted R^2 values and the relative variance explained, as this information is of the most practical importance.

[10] Note that since the scale scores have slightly different ranges, they were all normalised to have a mean of zero and a standard deviation of 1. This means that regression coefficients are always in terms of the number of standard deviations for the construct scores.

[11] Stepwise regression is a simple, automatic model-selection procedure that iteratively adds or subtracts variables from a model and uses a metric of fit to determine which variables to retain. As stated in the text, the metric in our case was Akaike's information criterion (AIC), which is a modern alternative to the traditional F-tests. See Harrell (2015) for more details. Note that as an automated, data-driven process aimed at reducing the number of model variables, the final set of variables can vary from subgroup to subgroup. There may be theoretical reasons to retain some or all variables from the full model, but for simplicity of presentation and interpretation here, the stepwise models have generally been preferred.

[12] AIC is a commonly used metric in comparing the results of regression models. The magnitude of AIC varies with the sample size and the number of parameters, so that no threshold for a "good" model can be specified. Among two related models (such as the full and stepwise versions described here), though, the one with the lower AIC value may be judged as yielding improved predictions.

Table 40: Variance explained by multiple linear regression modelling on construct variables

Construct	Predictors	n	Adjusted R^2	AIC[1]
UVAW	Demographics	17322	8.47	47660
CASVAW	Demographics	17332	18.86	45608
CASVAW	Demographics, UVAW, GVC, PAC, GEAS	17306	53.46	35895
CASVAW	GEAS subdomains	17100	47.10	37659
GEAS	Demographics	17331	19.51	45470
GEAS	Demographics, GVC, PAC	17315	34.08	41970
ITA	Demographics, UVAW, CASVAW, GEAS	4394	14.5	11796
ITA	GEAS subdomains	4347	14.0	11674

[1] *Akaike's information criterion*

14 Strengths and limitations

The NCAS has a number of strengths. However, as is the case with all research, a number of factors need to be considered in interpreting the results. In this section the strengths and limitations of the redevelopment and of the approach to data collection and analysis are outlined.

14.1 Sample size and composition

A particular strength of the NCAS is its large sample size. It enables population inferences to be drawn and, together with the dual frame approach to sample accrual, meant that it was possible to derive randomly selected samples of two groups of particular interest – people identifying as Aboriginal and Torres Strait Islanders and people from non-English speaking backgrounds. This obviated the need to use special sample accrual approaches for these groups, which can be very expensive or are formed using non-probability methods. Non-probability methods have implications for assessing change over time, as they are not easily replicated due to the non-random nature of the sample design.

A third group of interest is people aged 16-24 years. However, insufficient respondents aged 16-17 years were accrued through the processes used to form the main sample. Accordingly, a decision was taken to "boost" data for 16-17 year olds through a survey completed online (n = 200). As the young people were approached through families registered with an existing social research panel, selection was not random, although parameters were set to achieve young people from across jurisdictions and both metropolitan and regional areas. Prior research shows that the same people may respond differently in a telephone interview than if they are responding to a survey online (Lavrakas, 2008).

Given the differences in survey mode and sample accrual, data collected for 16-17 year olds through the "booster" were used only in the analysis for the special youth report (forthcoming) and were not included in the analysis for the main sample. To contain the possible impact of mode and sample selection differences in the analysis of the data for the youth report, the online booster sample was calibrated statistically with the telephone sample. However, the possibility that differences in mode and sample formation influenced the findings cannot be eliminated.

A number of approaches are used in the NCAS to maximise the response rate and ensure that all Australians have an equal chance of being selected to participate. These include a six-call call-back procedure to randomly generated landline numbers (four to mobiles); a six-call call-back procedure after establishing contact with the respondent or their household (four for mobile respondents); advance information about the survey by letter (to landline numbers that can be matched with an address) and text (mobile phone respondents); detailed procedures to introduce the survey and secure informed participation; training of interviewers to optimise

sensitivity; gender matching of interviewer to interviewee (recognising the sensitivity of the subject matter); and interviewing in languages other than English via professional interpreters or bilingual interviewers.

These efforts resulted in a response rate of 16.9 percent. Although low in absolute terms, there has been a noted decline in survey response rates globally (Pickett, Cullen, Bushway, Chiricos, & Alpert, 2018; Tourangeau, 2017) and this rate is as high, if not higher than, other similar surveys in countries comparable to Australia (Kohut et al., 2012; Riggle et al., 2005; Shih & Fan, 2008). There are different approaches to calculating and reporting response metrics in the literature. In this research the AAPOR 3 method is used. Although a number of inputs are used in this calculation, broadly speaking the rate is a measure of completed interviews as a proportion of the total number of randomly generated telephone numbers to which a call is made. That is, the denominator includes telephone numbers for which call attempts were made but for which there was no answer. Since the aim of the NCAS is to accrue a sample to support population inferences, this is the optimal measure of response. An additional AAPOR 3 metric is the cooperation rate, which can be described in broad terms as a measure of completed interviews as a proportion of all landline or mobile phones answered. The cooperation rate for the NCAS was 48.8 percent, again comparable to or better than other similar surveys (Kohut et al., 2012; Riggle et al., 2005; Shih & Fan, 2008). Low levels of cooperation in social research conducted via telephone are a common problem across the world (Brick & Williams, 2013; Massey & Tourangeau, 2013). Although a weighting regime was applied to reduce the impact of unequal chances of selection among groups, non-coverage and non-response, as in all survey research the possibility of a response bias cannot be eliminated.

To maximise the analytical potential of the survey, a decision was made to extend the split sampling approach used in the 2013 survey by asking some questions of only one-half or one-quarter of the sample. This allows a larger number of questions to be asked in total. Asking questions of only one-half ($n \approx 8771$) or one-quarter of respondents ($n \approx 4385$) was sufficient for benchmarking at the whole sample level. However, a limitation is that for some questions the base sizes among smaller groups (e.g. people identifying as Aboriginal and/or Torres Strait Islander origin) were too small to support population inferences. This is made clear in reporting by noting the need for caution when interpreting results with less than 100 cases. Findings falling below 40 cases are not reported. The split sampling approach represented a balance between increasing the analytical potential and comprehensiveness of the survey as a whole and meeting the objectives of benchmarking and understanding attitudes among particular groups.

14.2 Measurement properties and precision

The redevelopment of the NCAS instrument documented in this report involved a number of steps to optimise its conceptual coherence and measurement properties. Item selection was based on theoretical frameworks grounded in the literature, and most of the new items were adapted from existing surveys (and hence had been previously tested). Cognitive testing was

undertaken and items for the composite measures were finalised using a process of item reduction and, in the case of the CASVAW and GEA Scales, validation. The survey was pilot tested twice in advance of the fieldwork. These processes are aligned with best practice identified in the literature (Collins, 2015; Willis, 2005, Hinkin et al., 1997; Hardesty & Bearden, 2004; Diamantopoulos et al., 2012; Morgado et al., 2017).

Survey questions

There is wide recognition in the literature that attitudes are inherently difficult to measure, and this is particularly the case for attitudes pertaining to sensitive issues, such as violence against women. One reason for this is that many attitudes are implicitly held and therefore difficult to access using the survey method (McMahon & Farmer, 2011). The other is the impact of social desirability bias; that is, the tendency for people to give responses in surveys that they believe are socially acceptable rather than their actual opinion (Brenner, 2017; McMahon & Banyard, 2012; Näher & Krumpal, 2012; Tourangeau & Yan, 2007).

As indicated in the reports of the 2017 NCAS findings[13], many measures of attitudes supporting violence against women and gender inequality are endorsed by a minority of the Australian population (albeit for many questions a sizeable minority). This has also been found in other surveys of attitudes towards violence against women and has been interpreted by some scholars as reflecting an actual low level of cultural support for violence against women or rejection of gender equality (see, for example, Reece, 2014). However, others have argued that survey results are likely to *underestimate* the degree to which negative attitudes are held due both to the difficulty in measuring implicitly held attitudes and the impacts of social desirability bias (discussed above) (Edwards et al., 2011). As discussed in section 3.2, consideration was given to including a measure of social desirability and, on balance, was rejected on methodological grounds. A number of measures were taken to select items to gauge more covert forms of attitudinal support for violence against women or rejection of gender equality (e.g. more nuanced questions, the use of scenarios). However, since measurement issues remain unresolved in the wider literature on which the project drew for survey items, it is not possible to exclude the possibility that overall measurement was imprecise.

Composite measures

A strength of the NCAS is its use of composite measures to gauge overall constructs of interest and relationships between them and other factors being measured in the survey. Although scales have been used to measure overall support for violence against women in smaller studies (Powell & Webster, 2016), the NCAS is the first known to use them in a population-based survey concerned with violence against women. This approach was further strengthened in 2017 with the redevelopment of measures to gauge attitudes towards violence against women (the CASVAW Scale) and gender equality (the GEA Scale). Both have been constructed using an

[13] See *Australians' attitudes to violence against women and gender equality: Findings from the 2017 NCAS* released November 2018 and related reports at www.ncas.anrows.org.au

accepted statistical methodology to optimise their measurement properties. Both contain more contemporary items than was the case in the 2013 survey and are more clearly conceptually aligned with relevant research and theory. Importantly, the GEAS incorporates a wider range of constructs understood to be associated with attitudinal support for violence against women.

The measurement properties of both scales well exceeded thresholds given in the literature in the validation study (see Table 16). When confirming the scales with the full data set, individual items in them fit the Rash model, indicating that they measured the concept concerned. As overall measures, both came close to the person separation thresholds required in Rasch analysis, the CASVAW being slightly over and the GEAS slightly under. The Cronbach alphas (a further measure of construct reliability and of internal consistency) were $\alpha = 0.92$ for the CASVAW Scale and $\alpha = 0.86$ for the GEA Scale, both within acceptable limits. The relatively poorer performance of the scales with the full data set, compared with the validation study, is not unexpected given the larger size and greater heterogeneity of the larger, population-based sample. The third key scale, the UVAW Scale, was developed in 2013. While the Cronbach alpha for the UVAW ($\alpha = 0.78$) is acceptable, it does not meet the required person separation threshold on Rasch analysis, meaning that it may not distinguish between respondents as effectively as is desirable.

Two further limitations of the CASVAW and GEA Scales need to be considered. First, the redevelopment depended on the extant literature as a source of items to gauge support for violence against women and gender inequality. However, theory, concepts and research tools in this area have developed in a piecemeal fashion (Eigenberg & Policastro, 2016). Measurement tools are not particularly well developed in some of the areas of interest, are outdated or do not encompass all concepts of emergent concern (Powell & Webster, 2016). Second, as discussed further below, some items from the 2013 survey instrument had to be retained in both scales to enable measurement of change over time at the scale level. The measurement properties of the scales may have been stronger had it been possible to select items on conceptual and psychometric criteria alone.

In 2013 items were allocated to themes on theoretical grounds. For the 2017 survey, factor analysis was undertaken to establish if the theoretical structure could be confirmed and, if not, what alternative constructs were likely to underpin attitudinal support for violence against women and gender inequality. A factor structure was identified for both the CASVAW and GEA Scales. For the GEAS the theoretical structure was broadly confirmed, with one modification (see section 4.3), while analysis of the CASVAWS indicated a new structure, which included most of the themes in the theoretical structure but was not limited to them (see section 4.2).

There are two strengths in this analysis. First, it demonstrates the latent constructs underlying attitudinal support for gender inequality and violence in the Australian community, and is thus an important finding of the redevelopment itself. Second, and relatedly, the identification of statistically validated factors allows them to be used in analysis to assess the significance of particular types of attitudes within the broader constructs of the CASVAWS and GEAS. However,

as indicated above, since the validation was dependent on concepts and items in the extant literature, it is not possible to know if the factors emerging in the confirmation are comprehensive of all concepts underlying attitudinal support for violence against women and gender inequality in the Australian community.

The items for the factors all had good fit to their respective scales as a whole and met the item separation thresholds required in Rasch analysis. Most met the required thresholds for reliability as measured by the Cronbach alpha. However, none met the required person separation threshold, a likely consequence of the small number of items in each factor.

In 2017, two new measures were introduced into the survey as covariates – the PAC and the GVC. It was not possible to measure these constructs using a fully validated scale (as was the case for the CASVAWS and GEAS), as this would have required a larger number of items than there would be time for in the survey. Rather, these are constructs derived from items in existing scales from the literature. However, to optimise their measurement and conceptual properties, the questions were selected using a similar process as the CASVAW and GEA Scales. Items for both constructs showed an overall fit to the respective constructs being measured. Both met the Rasch analysis item separation thresholds. The alpha for the prejudice measure just met the threshold for reliability ($\alpha = 0.71$). However, not unexpectedly, the person separation threshold was not met for these measures due to the small number of items possible in the survey. Although these scales could estimate person locations on the latent construct less well than others, none of the items mis-fitted and so the scales were seen as more than acceptable as covariates. Nevertheless, the possibility that different results would have been achieved had these measures been more precise cannot be excluded.

The split sampling approach (described above) necessitated estimating scores statistically for the PAC, GVC and GEAS for each respondent from the questions they were asked (see Section 7.3.3 for a description of the approach). Each measure included some questions that were asked of all respondents, with the remainder being asked of a quarter of the sample (in the case of GVC and PAC) and half of the sample (in the case of the GEAS). This is likely to have had minimal impact on findings using the GEA Scale given the estimation method used by the Rasch model and that each respondent was asked half the questions. However, its impact needs to be taken into account in considering analyses using the PAC and GVC. In the case of the GVC, one of the two questions asked of all respondents was excluded from the measure in the confirmation stage as being a poor statistical fit, leaving only one question asked of all members of the sample and four split sampled items from which to estimate a score (i.e. three items for each survey member).

In the confirmation a decision was taken to include a small number of items in the CASVAWS that were identified as being outside the scale in the course of the validation (and hence had been asked of only one-quarter of the sample). Although measurement would have been more precise had these been full-sampled items, the decision to include them is likely to have had an

overall positive benefit on measurement precision, since this generally increases the greater the number of items.

Another strength of the NCAS is that data has been collected over four waves, the first undertaken in 1995. This enables attitudes and knowledge to be monitored over time to see if there are changes. In the 2017 survey, this monitoring was undertaken at the individual item level as well as at the scale level. The advantage of gauging change over time at the scale level is that findings are based on a robust measure comprising multiple questions (as discussed above).

Ideally, there would be consistency in items in the scale between surveys being compared. However, a balance had to be struck between retaining items and item wording (required to make comparisons between waves) and introducing new items to address different or emerging issues. In the 2017 survey, these competing objectives were addressed by retaining as many historical items as possible in the scales and using these to estimate a score for each survey wave. This was done using a rigorous statistical method (see Section 13.3). However, the possibility that there may be variation between such estimates and the findings had it been possible to use scales comprised exclusively of questions common to all survey waves cannot be excluded.

14.3 Influences on attitudes

An objective of the NCAS is to strengthen understanding of factors influencing attitudes. This is explored in the NCAS using multivariate analysis. While such analysis can help to isolate factors that are more likely than others in the survey to be associated with attitudes or knowledge, it does not show definitively that there is a causal relationship between variables. The relationship may be in the reverse direction, bi-directional or due to a common third factor not measured in the survey. Longitudinal research would be required to draw more definitive conclusions about the influence of variables on attitudes and knowledge.

The GVC was included to explore the relationship between attitudinal support for violence in general and attitudes towards gender inequality and violence against women. Three hypotheses have been advanced for such a relationship (see section 4.5.1). One of these is that both violence in general and violence against women are driven by attitudes that support violence as part of masculinity. However, there were no items that measured this concept as:

- in developing the CASVAWS, items concerned with violence as part of masculinity were excluded as these were being considered in the GEAS; and
- in the validation of the GEAS, many of the items measuring violence and aggression as part of masculinity were identified as having poor measurement properties relative to other items and were excluded.

This meant that there were no items in either scale gauging attitudes towards violence and aggression as part of masculinity, in turn limiting the capacity of the NCAS to explore this particular relationship.

14.4 Attitudes and knowledge among particular groups

A large population survey has some strengths for exploring attitudes among groups of particular interest. Respondents are randomly selected and since all respondents are asked the same questions, groups of interest can be compared with other relevant groups, or the sample as a whole, to inform targeting of efforts to prevent violence against women and explore influences. For example, the attitudes of young and older people can be compared to explore whether attitudes are influenced by developmental or environmental factors (see, for example, Harris, Honey, Webster, Diemer, & Politoff, 2015).

However, the population survey method has some limitations for meeting the objectives of benchmarking and understanding attitudes among sub-populations (the focus of three forthcoming reports). First, since questions need to be relevant to a broad cross-section of the population, there may be limited capacity to explore issues of specific concern to them (e.g. knowledge of the rights of women holding temporary visas). Second, the three sub-populations (young people, Aboriginal and Torres Strait Islanders, and young people) are not homogenous; rather, there is diversity within each of them. Some of this diversity was explored in the analysis using data collected in the survey (e.g. by exploring gender differences among young people). However, this was not possible for all variables of interest owing to sample size constraints. For example, in the NMESC sample, analysis could not be undertaken by country of birth, since the base size for almost all birth place groups is too small. In the case of the Aboriginal and Torres Strait Islander sample, people in remote areas were underrepresented. Further, while there is evidence of marked diversity between Aboriginal and Torres Strait Islander communities, including between communities situated geographically close to one another (McCausland & Vivian, 2009), the variables included in the survey are not precise enough to capture these differences to support a more nuanced analysis. As a consequence, the findings for the sub-populations of special interest may mask patterns among particular groups. Likewise, results for the sub-populations cannot be said to apply to any particular group within the subsample.

A second important factor to consider in the analysis of the subgroup findings is the impact of differences in class, ethnic or racial cultures, language and life experiences between research participants and the research enterprise. Research on methods shows that there are many points across the survey life-cycle at which these differences may influence results (Survey Research Centre, 2011). This is particularly the case in understanding and responding to survey questions. Respondents in the three sub-populations may not have understood the questions in the way intended. Further, they are less likely than other sample members to engage in socially desirable responding (see above) (Survey Research Centre, 2011). This is because giving socially desirable responses depends on an understanding of aspects of the research context and process that are not necessarily made explicit to research participants. These are less likely to be apparent to respondents in the NCAS sub-populations because there is less overlap between their own cultural context and experience and that of the research enterprise, and hence less

opportunity to develop the awareness required to trigger social desirability bias (Survey Research Centre, 2011).

The impact of the differences described above are at least partly contained in the NCAS through the use of scales, enabling findings to be drawn on the basis of a pattern of responses, rather than individual items. A number of other approaches were also adopted to address these issues, including:

- engaging experts working with the three groups (and also, in some cases, with other members) to contribute at key survey stages (e.g. survey instrument redevelopment, interpretation of findings, review of research tools and reports);
- reviewing item language and survey instrument scripts to minimise differences in understanding and the use of idiosyncratic and colloquial language;
- undertaking cognitive testing of the questions with participants from each of the three groups;
- proactively recruiting participants in each of the three groups to the online validation survey;
- making telephone interviewing available in the most commonly spoken community languages using translated versions of the questions; and
- contextualising the findings for the sub-populations with respect to other research, with the aim of exploring the extent to which the findings reflect patterns previously documented.

However, the possibility cannot be excluded that differences between the groups and the main sample are, in part, an artefact of cultural and linguistic differences and differences in life experience, rather than actual differences in attitudes.

In NCAS 2013 consistent differences were found between people on the basis of their degree of proficiency in English. This may be a real difference, or it may be because people who do not speak English well, or at all, misunderstood the questions. To investigate this, in 2017 a Differential Item Functioning (DIF) analysis was undertaken. This was for the purposes of the report of findings for the NMESC sample (forthcoming).

Where it occurs, DIF indicates that one group of respondents scored higher than another group of respondents on an item (after adjusting for the overall scores of the respondents). In general, we do not expect an item to be unexpectedly easy (or difficult) for any particular group to endorse. DIF investigates the items on an instrument, one at a time, for signs of interaction with respondent characteristics. The process calculates the item difficulty separately for each characteristic and identifies if one group of respondents scored higher than another group on an item, after adjusting for the overall scores of the respondents. The analysis cannot identify the reason for the discrepancies but does flag items for closer scrutiny by item developers to ensure that including an item on a questionnaire does not distort the measures of any particular group. In this case, patterns of responses were explored for each item to establish if, relative to other respondents, people who reported that they did not speak English well or at all answered in a

systematically different manner than would be predicted based on their overall pattern of responses.

Table 41: DIF analysis – respondents who do not speak English well or not at all

Survey instrument component	Item label	Item text	Based on their overall pattern of responses, persons in this subgroup were unexpectedly more like to…
Knowledge of violence against women	None		
Gender equality	att4nn	MANY women exaggerate how unequally women are treated in Australia.	Agree
	att4oo	MANY women mistakenly interpret innocent remarks or acts as being sexist.	Agree
	att4dd	I think there's no harm in men making sexist jokes about women when they are among their male friends.	Agree
Community attitudes supportive of violence against women	dv6n	Women going through custody battles OFTEN make up or exaggerate claims of domestic violence in order to improve their case.	Disagree
	dv6o	It's a woman's duty to stay in a violent relationship in order to keep the family together.	Agree
	sv3y	It is COMMON for sexual assault accusations to be used, as a way of getting back at men	Disagree
	sv3l	A lot of times, women who say they were raped had led the man on and then had regrets.	Disagree
	sv3dd	Since some women are so sexual in public, it's not surprising that some men think they can touch women without permission.	Disagree
Bystander action	bs1a	If a male friend told a sexist joke about women	Not act
General violence	None		
Prejudice	prej1a	In general, I prefer doing things with people from my own culture than with people from different cultures.	Agree
	prej1c	I would probably be quite content living in a cultural or ethnic group that is very different to mine.	Disagree
	prej2d	Women who are sexually attracted to women.	Feel negative
	prej2e	Men who are sexually attracted to men.	Feel negative

This showed that people who did not understand English well or at all responded in unexpected ways to some questions (see Table 41). However, the number of affected questions was small and unlikely to have had an impact on the overall findings. For some of the questions, the DIF analysis finding could be explained theoretically (suggesting a lower likelihood that respondents misunderstood the question). For example, respondents with poor language proficiency were more likely than expected to agree that "It's a woman's duty to stay in a violent relationship in order to keep the family together". Their strong agreement to this particular question relative to other questions and to other respondents is not unexpected. Although there is diversity within this group, many will have originated from a collectivist culture in which a high value is placed on family unity (Yoshioka & Choi, 2005).

For the reasons above, it is also likely that misunderstanding would have had a minimal impact on analyses involving comparisons between people depending on their language proficiency, although the risk is greater given that this involves comparing two smaller groups. Accordingly, reference to the findings of the DIF analysis will be made in the report of the NMESC sample (forthcoming) as a factor to consider in interpreting findings.

15 Conclusion

The National Community Attitudes towards Violence against Women Survey, as far as is known, the longest running survey of its type internationally. As a consequence, it provides a unique opportunity to monitor change in knowledge of, and attitudes towards, violence against women. The large probability sample on which it is based enables inferences to be drawn both at the population level and for smaller subgroups in the community. There are also some limitations associated with its population-wide scope when it comes to understanding attitudes in smaller groups. However, steps consistent with best practice were taken to minimise the consequence of these, both in the instrument redevelopment and the survey roll-out.

The survey instrument redevelopment documented herein has markedly increased its analytical power and capacity to contribute to knowledge. A particular strength is the redeveloped measure to gauge attitudes to gender equality, enabling measurement of this concept overall, as well as attitudes to particular dimensions of inequality linked to violence against women in prior research. Likewise, the measure of attitudinal support for violence against women has been redeveloped to enable different aspects of this concept to be measured.

The survey instrument also includes new covariates, facilitating improved understanding of factors associated with attitudes toward violence against women and gender inequality among Australians. Both the new measures and the covariates were developed using best practice approaches documented in the relevant literature.

Together, it is anticipated that these developments will strengthen the role of the survey in monitoring Australia's nationally coordinated approach to preventing violence against women and their children.

Abbreviations and acronyms

A&TSI	Aboriginal people and Torres Strait Islanders. Where the relevant group is either Aboriginal people or Torres Strait Islanders, the appropriate reference is specified.
AAPOR	American Association for Public Opinion Research
ABS	Australian Bureau of Statistics
AIC	Akaike's information criterion
AMSRS	Australian Market and Social Research Society
ANROWS	Australia's National Research Organisation for Women's Safety
ANZSCO	Australian and New Zealand Standard Classification of Occupation
CALD	Culturally and Linguistically Diverse
CASVAWS	Community Attitudes Supportive of Violence Against Women Scale
CATI	Computer Assisted Telephone Interviewing
Change the Story	*Change the Story: A Shared Framework for the Primary Prevention of Violence Against Women and their Children in Australia* (Our Watch, ANROWS, & VicHealth, 2015)
DIF	Differential Item Functioning
DSS	Department of Social Services
EFA	Exploratory factor analysis
GEAS	Gender Equality Attitudes Scale
GVC	General Violence Construct
ICS	Inbound Call Solutions (a team of the SRC)
IG	Implementation Group (the research team for the NCAS)
IQR	Inter-quartile range
ITAC	Intention to Act Construct
LOTE	Languages other than English
National Plan	*The National Plan to Reduce Violence against Women and their Children, 2010-2022*
MESC	Main English-speaking country
NCAS	National Community Attitudes towards Violence against Women Survey
NESB	Non-English speaking background
NMESC	Non-main English-speaking country
PAC	Prejudice Attitudes Construct
PSS	*Personal Safety Survey*
RDD	Random Digit Dialling
RR3	Response Rate 3
SEIFA	Socioeconomic Index for Areas
SMS	Short Message Service
SRC	Social Research Centre
SV	sexual violence
US	United States
UVAWS	Understanding Violence Against Women Scale
VicHealth	Victorian Health Promotion Foundation
VSA	Violence Supportive Attitudes (superseded by CASVAWS)

Glossary and terminology

The following terms are used in this report and are arranged in alphabetical order except where grouping conceptually related terms aids understanding:

Aboriginal people and Torres Strait Islanders – this report refers to Aboriginal people and Torres Strait Islanders or to Aboriginal and Torres Strait Islander people (respondents, women or the relevant term) throughout. However, for brevity, the acronym "A&TSI" is used in tables and charts. For brevity, the term **Indigenous** is used in the wording of items developed specifically for Aboriginal and Torres Strait Islander respondents in the survey. The use of this term in the survey was explained to respondents through an introduction (see section 3.8.4). **Indigenous** is also sometimes used when referring to a global context (e.g. "the international rights of Indigenous peoples") or where the literature referenced has used the term.

Determinant – an attribute or exposure that increases the probability of the occurrence of a disease or other specified outcome – in this report, violence against women or attitudes that are supportive of violence against women. The term **risk factor** is sometimes used interchangeably with this term in the literature.

Disability – refers in this report to persons who self-identify as having a disability, health condition or injury that has lasted, or is likely to last, six months or more which restricts their everyday activities.

Gender – refers to the economic, social and cultural attributes and opportunities associated with being male or female at a particular point in time.

Gender-based violence – is a term commonly used in the international arena to describe violence involving men and women, in which the female is usually the victim; it is derived from the unequal power relationships between men and women. Violence is directed significantly against a woman because she is a woman, or affects women disproportionately (WHO, 2010).

Interpersonal violence – violence occurring between individuals either known or unknown to one another. It is distinguished from collective violence, such as violence occurring in the course of war and self-directed violence such as suicide and other forms of self-harm (WHO, 2002).

Intimate partner violence/partner violence – any behaviour by a man or a woman within an intimate relationship that causes physical, sexual or psychological harm to those in the relationship. This is the most common form of violence against women (WHO, 2010).

Non English speaking background – a term used in this report to refer to people born in a country in which English is not the main language spoken as well as to people born in Australia with one or more parents born in a country in which English is not the main language spoken.

Sex – refers to the biological characteristics that typically define humans as male or female (the exception being persons who are inter-sex). The gender identity of transgender or bi-gender

persons may be different to the sex assigned to them at birth. It is noted that the word "sex" is also used as a verb in this report (e.g. "to have sex with").

Social norms – consist of rules of conduct and models of behaviour expected by a society or social group. They are rooted in the customs, traditions and value systems that gradually develop in a society or social group.

Socio-economic status – an umbrella term used in this report to refer to education, occupational status, employment, and level or degree of disadvantage or advantage at the area level.

Univariate analysis – is the analysis of a single variable or data item. For example, the distribution of the sample by age group. **Bivariate analysis** is the comparison between more than two variables or data items simultaneously, usually to look for a relationship between the two. For example, in this report, the proportion of women cross-tabulated by the Gender Equity Attitudes Scale. **Multivariate analysis** is the comparison between more than two variables, or data items, simultaneously; for example, the proportion of women's attitudes to violence against women and men in each group, and whether they agree or disagree with a particular question. **Multiple linear regression analysis** allows assessment of the influence of two or more variables on a dependent variable, after other influences have been accounted for, and also allows the extent of the influence of one variable to be assessed relative to the influence of others.

Violence against women – "…any act of gender-based violence that results in or is likely to result in physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty whether occurring in public or private life" (United Nations, 1993, Article 1). Aboriginal and Torres Strait Islander communities understand violence against women perpetrated by people known to them as part of the broader issue of **family violence**, defined as "a wide range of physical, emotional, sexual, social, spiritual, cultural, psychological and economic abuses that occur within families, intimate relationships, extended families, kinship networks and communities" (Victorian Indigenous Family Violence Task Force, 2003, p.123). This reflects the significance of extended family and kinship relationships in Aboriginal and Torres Strait Islander communities, resulting in both a broader conceptualisation of the notion of family and a view that the consequences of violence affect all those involved. The broader definition also reflects the interrelationships between violence occurring within Aboriginal and Torres Strait Islander communities and that perpetrated against them (Atkinson, 1994).

The Australian Bureau of Statistics is responsible for implementing the *Personal Safety Survey* (PSS), which measures the experience of violence. The definition of **violence** used in the PSS is any incident involving the occurrence, attempt or threat of either sexual or physical assault experienced by a person since the age of 15 (ABS, 2017). It includes sexual violence and/or physical violence, but does not include emotional abuse. The following definitions are used in

the PSS for each type of violence and for emotional abuse (for further detail see the glossary at ABS, 2017):

- **Physical violence –** the use of physical force with the intent to harm or frighten a person.
- **Physical threat –** any verbal and/or physical intent or suggestion of intent to inflict physical harm, which was made face-to-face and which the person believed was able to be and likely to be carried out.
- **Stalking** – involves various behaviours, such as loitering and following, which the person believed were being undertaken with the intent to cause them fear or distress. To be classified as stalking more than one type of behaviour had to occur, or the same type of behaviour had to occur on more than one occasion.
- **Sexual assault –** an act of a sexual nature carried out against a person's will through the use of physical force, intimidation or coercion, and includes any attempts to do this. This includes rape, attempted rape, aggravated sexual assault (assault with a weapon), indecent assault, penetration by objects, forced sexual activity that did not end in penetration and attempts to force a person into sexual activity.
- **Sexual threat –** involves the threat of acts of a sexual nature, which were made face-to-face where the person believes it is able to and likely to be carried out.
- **Sexual harassment –** occurs when a person has experienced or has been subjected to behaviours that made them feel uncomfortable and that were offensive due to their sexual nature. They can include, but are not limited to, indecent text, email or post, indecent exposure, inappropriate comments and unwanted touching.
- **Emotional abuse –** behaviours that are repeated with the intent to prevent or control a person's behaviour and are intended to cause emotional harm or fear.

Violence supportive attitudes – for the purposes of this report these are defined as attitudes that:

- excuse the perpetrator and hold women responsible;
- minimise violence against women;
- mistrust women's reports of violence; and
- disregard the need to gain consent.

Individuals who hold such attitudes are not necessarily 'violent-prone' or would openly condone violence against women. However, when such attitudes are expressed by influential individuals or held by a substantial number of people, this can have the effect of creating a culture in which violence is at best not clearly condemned and at worst condoned or encouraged.

Reference list

Akers, R. L. (1973). *Deviant behavior: A social learning approach*. Belmont, C.A. Wadsworth.

Ahn, B. (2002). *The perceptions of and attitudes toward partner abuse among first generation Korean-Americans: Their relationships to the incidence of partner abuse.* (Doctoral dissertation). Louisiana State University and Agricultural and Mechanical College, AZ.

Ahrens, C.E. (2006). Being silenced: the impact of negative social reactions on the disclosure of rape. *American Journal of Community Psychology,* 38(263), 263-274 https://doi.org/10.1007/s10464-006-9069-9

Ajzen, I. (2011). Theory of planned behaviour. In P. van Lange, A. Kruglanski, & T. Higgins (Eds.), *Handbook of theories of social psychology: Volume one* (pp. 438-459). doi: 10.4135/9781446249215.n25.

Ajzen, I. (2015). The theory of planned behaviour is alive and well, and not ready to retire: A commentary on Sniehotta, Presseau, and Araujo-Soares. *Health Psychology Review, 9*(2), 131-137. doi:10.1080/17437199.2014.883474

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. A. Albarracin, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173-222). New York: Psychology Group, Taylor and Francis.

Alcoff, L. M. (2009). Discourses of sexual violence in a global framework. *Philosophical Topics, 37*(2), 123-139.

Alexander-Scott, M., Bell, E., & Holden, J. (2016). *Department for International Development (DFID) guidance note: Shifting social norms to tackle violence against women and girls (VAWG).* London: VAWG Help Desk.

Alfredsson, H., Ask, K., & von Borgstede, C. (2015). Beliefs about intimate partner violence: A survey of the Swedish general public. *Scandinavian Journal of Psychology, 57*, 57-64. doi:10.1111/sjop.12254.

Al-Yaman, F., Van Doeland, M., & Wallis, M. (2006). *Family violence among Aboriginal and Torres Strait Islander peoples.* Canberra: Australian Institute of Health and Welfare.

American Association for Public Opinion Research (AAPOR). (2016). Response-Rate-Calculator-4-0-Clean-18-May-2016. Retrieved from https://www.aapor.org/Education-Resources/For-Researchers/Poll-Survey-FAQ/Response-Rates-An-Overview.aspx

Anderson, K. B., & Anderson, C. A. (1997, May). *The predictive specificity of hostility toward women for male-on-female vs. male-on-male aggression*. Presented at the Annual Convention of the Midwestern Psychological Association, Chicago.

Anderson, C. A., Benjamin, A. J., Wood, P. K., & Bonacci, A. M. (2006). Development and testing of the Velicer Attitudes Toward Violence Scale: evidence for a four-factor model. *Aggressive Behavior, 32*(2), 122-136. doi:10.1002/ab.20112

Ashmore, R. D., Del Boca, F. K., & Bilder, S. M. (1995). Construction and validation of the Gender Attitude Inventory, a structured inventory to assess multiple dimensions of gender attitudes. *Sex Roles*, *32*(11-12), 753-785.

Atkinson, J. (1994). Recreating the circle with WE AL-LI. A program for healing, sharing and regeneration. *Aboriginal and Islander Health Worker Journal*, *18*(6), 8-13.

Australian Bureau of Statistics. (2017). *Personal safety, Australia, 2016* (Cat. No. 4906.0). Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/mf/4906.0

Australian Bureau of Statistics. (2016). *Information paper: Census of population and housing: Products and services, 2016* (Cat. no. 2011.0.55.001). Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2011.0.55.001~2016~Main%20Features~TableBuilder~6

Australian Human Rights Commission. (2010). Gender equality blueprint 2010. Retrieved 20 August 2018 from https://www.humanrights.gov.au/our-work/sex-discrimination/publications/gender-equality-blueprint-2010

Australian Institute of Health and Welfare. (2018). Family, domestic and sexual violence in Australia 2018. Retrieved from https://www.aihw.gov.au/reports/domestic-violence/family-domestic-sexual-violence-in-australia-2018/contents/table-of-contents

Australian Law Reform Commission, & New South Wales Law Reform Commission. (2010). Family violence: A national legal response. *ALRC Report, 114*.

Australian Market and Social Research Society. (n.d.). ISO Standard for market social and opinion research. Retrieved from https://www.amsrs.com.au/professional-standards/iso-standards-20252-26362

Avalos, J. L. (2017). Policing rape complainants: When reporting rape becomes a crime. *Journal of Gender, Race & Justice, 20*(3), 459-508.

Baber, K. M., & Tucker, C. J. (2006). The social roles questionnaire: A new approach to measuring attitudes toward gender. *Sex Roles*, *54*(7-8), 459-467.

Bandura, A. (1977). *Social learning theory*. New York: General Learning Press.

Barak, G. (2003). Secrets of violence and nonviolence. In G. Barak, *Violence and nonviolence: Pathways to understanding* (pp. 3-18). Thousand Oaks, CA: Sage Books.

Barger, S. D. (2002). The Marlowe-Crowne affair: Short forms, psychometric structure, and social desirability. *Journal of Personality Assessment, 79*(2), 286-305.

Barkacs, L. L., & Barkacs, C. B. (2010). Do you think I'm sexty? Minors and sexting: Teenage fad or child pornography? *Journal of Legal, Ethical and Regulatory Issues*, *13*(2), 23.

Baugher, A. R., & Gazmararian, J. A. (2015). Masculine gender role stress and violence: A literature review and future directions. *Aggression & Violent Behavior*, *24*, 107-112.

Battaglia, M., Hoaglin, D., & Frankel, M. (2009). Practical considerations in raking survey data. *Survey Practice*, *June*. Retrieved from Survey Practice website http://surveypractice.wordpress.com/2009/06/29/raking-survey-data//

Bay-Cheng, L. Y., & Eliseo-Arras, R. K. (2008). The making of unwanted sex: Gendered and neoliberal norms in college women's unwanted sexual experiences. *Journal of Sex Research*, 45(4), 386–397. https://doi.org/10.1080/00224490802398381

Beere, C. A., King, D. W., Beere, D. B., & King, L. A. (1984). The Sex-Role Egalitarianism Scale: A measure of attitudes toward equality between the sexes. *Sex Roles*, *10*(7-8), 563-576.

Berburg, J. G., & Thorlindsson, T. (2005). Violent values, conduct norms and youth aggression: A multilevel study in Iceland. *The Sociological Quarterly, 46*, 457−478.

Berkowitz, A. (1992). College men as perpetrators of acquaintance rape and sexual assault: A review of recent research. *Journal of American College Health*, *40*(4), 175-181.

Berkowitz, A. D. (2004). The social norms approach: Theory, research and annotated bibliography. Retrieved 20 July 2018 from www.alanberkowitz.com/articles/social_norms.pdf

Berry, J. G., Harrison, J. E., & Ryan, P. (2009). Hospital admissions of Indigenous and non-Indigenous Australians due to interpersonal violence, July 1999 to June 2004. *Australian New Zealand Journal of Public Health*, 33(3), 215-222. doi:10.1111/j.1753-6405.2009.00378.x

Bilz, K., & Nadler, J. (2014). Law, moral attitudes and behavioural change. In E. Zamir & D. Teichman (Eds.), *The Oxford handbook of behavioural economics and the law,* (pp. 241-260). Oxford: Oxford Handbooks.

Bizumic, B., & Duckitt, J. (2012). What is and is not ethnocentrism? A conceptual analysis and political implications. *Political Psychology, 33*(6), 887-909.

Bizumic, B., Duckitt, J., Popadic, D., Dru, V., & Krauss, S. (2009). A cross-cultural investigation into a reconceptualization of ethnocentrism. *European Journal of Social Psychology, 39*(6), 871-899.

Blevins, R. M. (2001). *Attitudes toward violence and reasons for living in adolescents with high, moderate, and low self-esteem.* (Master of Arts in Psychology). East Tennessee State University, TN. Retrieved from http://dc.etsu.edu/etd

Bohner, G., Siebler, F. & Schmelcher, J. (2006). Social norms and the likelihood of raping: Perceived rape myth acceptance of others affects men's rape proclivity. *Personality and Social Psychology Bulletin*, *32*(3), 286-297.

Bolin, R., Jackson, M., & Crist, A. (1998). Gender inequality, vulnerability, and disaster: Issues in theory and research. In E. Enarson & B. H. Morrow (Eds.), *The gendered terrain of disaster: Through women's eyes.* Westport, CT: Praeger Publishers.

Bond, T. G., & Fox, C. M. (2007). *Applying the Rasch model: Fundamental measurement in the human sciences* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

Boxall H, Payne J & Rosevear L. 2015. Prior offending among family violence perpetrators: A Tasmanian sample*. Trends & issues in crime and criminal justice* No. 493. Canberra: Australian Institute of Criminology. https://aic.gov.au/publications/tandi/tandi493

Brand, P. A., & Anastasio, P. A. (2006). Violence-related attitudes and beliefs: Scale construction and psychometrics. *Journal of Interpersonal Violence, 21*(7), 856-868.

Brandt, M. J. (2011). Sexism and gender inequality across 57 societies. *Psychological Science, 22*(11), 1413-1418. doi:10.1177/0956797611420445

Brenner, P. S. (2017). Toward a social psychology of survey methodology: An application of the approach and directions for the future. *Sociology Compass, 11*(7). doi:10.1111/soc4.12491

Brick, J. M., & Williams, D. (2013). Explaining rising nonresponse rates in cross-sectional surveys. *The ANNALS of the American Academy of Political and Social Science, 645*(1), 36-59.

Briere, J. (1987). Predicting self-reported likelihood of battering: Attitudes and childhood experiences. *Journal of Research in Personality, 21*, 61-69.

Brown, A. L., & Messman-Moore, T. L. (2010). Personal and perceived peer attitudes supporting sexual aggression as predictors of male college students' willingness to intervene against sexual aggression. *Journal of Interpersonal Violence*, *25*(3), 503-517.

Browning, C. R. (2002). The span of collective efficacy: Extending social disorganization theory to partner violence. *Journal of Marriage and Family, 64*(4), 833-850.

Brownmiller, S. (1975). *Against our will: Men, women and rape*. New York: Simon and Schuster.

Bruner, J. (2002). Measuring rape supportive attitudes, behaviors, and perceived peer norms among college men: Validation of a social norms survey. *Abstracts International, Section B: The Sciences and Engineering, 63*(7-B), 3466.

Burgess, G. H. (2007). Assessment of rape-supportive attitudes and beliefs in college men: Development, reliability, and validity of the Rape Attitudes and Beliefs Scale. *Journal of Interpersonal Violence, 22*(8), 973-993.

Burman, M. (2010). The ability of criminal law to produce gender equality – Judicial discourses in the Swedish criminal legal system. *Violence Against Women, 16*(2), 173–188.

Burman, M. (2014). Blaming violent men – A challenge to the Swedish criminal law on provocation. *Women's Studies International Forum, 46*, 88-95.

Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology, 38*(2), 217-230.

Caprara, G., Cinanni, V., & Mazzotti, E. (1989). Measuring attitudes toward violence. *Personality and Individual differences, 10*(4), 479-481.

Cares, A. C., Moynihan, M. M., & Banyard, V. L. (2014). Taking stock of bystander programmes. In N. Henry & A. Powell (Eds.), *Preventing sexual violence: Interdisciplinary approaches to overcoming a rape culture* (pp. 170-188). London: Palgrave Macmillan.

Carll, Elizabeth K. (2003). News portrayal of violence and women: Implications for public policy. *The American Behavioral Scientist, 46*(12). 1601-1610.

Carlson, B. E., & Worden, A. P. (2005). Attitudes and beliefs about domestic violence: Results of a public opinion survey: I. Definitions of domestic violence, criminal domestic violence, and prevalence. *Journal of Interpersonal Violence, 20*(10), 1197–1218.

Centre for Advancing Journalism. (2017). *Violence against women qualitative phase report*. Melbourne: University of Melbourne.

Chaiken, S., & Trope, Y. (Eds.). (1999). *Dual-process theories in social psychology*. New York: Guildford Press.

Chaiklin, H. (2011). Attitudes, behavior, and social practice. *Journal of Sociology & Social Welfare, 38*(1), 31-54. Retrieved 30 July 2018 from https://scholarworks.wmich.edu/jssw/vol38/iss1/3

Check, J. V. P. (1988). Hostility towards women: Some theoretical considerations. In G. W. Russell (Ed.), *Violence in intimate relationships* (pp. 43-65). New York: PMA.

Check, J. V. P., Perlman, D., & Malamuth, N. M. (1985). Loneliness and aggressive behaviour. *Journal of Social and Personal Relationships*, *2*(3), 243-252.

Chowdhury, S., Khare, M., & Wolter, K. (2007). Weight trimming in the National Immunization Survey. Retrieved from American Statistical Association http://ww2.amstat.org/sections/srms/proceedings/y2007/Files/JSM2007-000077.pdff

Clarke, D. (2003). *Pro-social and anti-social behaviour*. London: Routledge.

Cockburn, C. (2010). Gender relations as causal in militarization and war: A feminist standpoint. *International Feminist Journal of Politics, 12*(2), 139–157.

Coghlan, S., & Millsteed, M., (2017) *Identifying the differences between generalist and specialist family violence perpetrators : Risk factors and perpetrator characteristics* retrieved 20 November, 2018 from http://apo.org.au/system/files/74507/apo-nid74507-10441.pdf

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Cohen, A. K., & Short, Jr., J. F. (1971). Crime and juvenile delinquency. In R. K. Merton & R. A. Nisbet (Eds.), *Contemporary social problems* (3rd ed.) (pp. 88-146). New York: Harcourt, Brace, Jovanovich.

Collins, D. (2015). *Cognitive interviewing practice.* London: Sage Publications Ltd.

Conroy, N. E., Krishnakumar, A., & Leone, J. M. (2015). Re-examining issues of conceptualization and willing consent: The hidden role of coercion in experiences of sexual acquiescence*. Journal of Interpersonal Violence*, 30, 1828–1846. https://doi .org/10.1177/0886260514549050

Coroners and Justice Act 2009 (UK). Retrieved from https://www.legislation.gov.uk/ukpga/2009/25/contents

Council of Australian Governments. (2011). *The National Plan to Reduce Violence against Women and their Children: Including the first three-year action plan.* Canberra: Department of Families, Housing, Community Services and Indigenous Affairs.

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, *43,* 1241-1299.

Crimes Act 1900 (NSW). Retrieved from http://www5.austlii.edu.au/au/legis/nsw/consol_act/ca190082/s23.html

Cripps, K., Bennett, C., Gurrin, L., & Studdert, D. (2009). Victims of violence among Indigenous mothers living with dependent children. *Medical Journal of Australia*, *191*(9), 481-485.

Currie, E. (1985). *Confronting crime: an American challenge*. New York, Pantheon Books.

Dahlberg, L. L., Toal, S. B., Swahn, M., & Behrens, C. B. (2005). Measuring violence-related attitudes, behaviors, and influences among youths: A compendium of assessment tools. Retrieved from Centers for Disease Control and Prevention website https://www.cdc.gov/violenceprevention/

Dasgupta, S., Siriner, I., & Partha, S. D. (Eds.). (2010). *Women's encounter with disaster.* London: Frontpage Publications.

Davidson, M. M., & Canivez, G. L. (2012). Attitudes Toward Violence Scale: Psychometric properties with a high school sample. *Journal of Interpersonal Violence, 27*(18), 3660-3682. doi:10.1177/0886260512447578

Davis, K. (2008). Intersectionality as buzzword: A sociology of science perspective on what makes a feminist theory successful. *Feminist Theory, 9*(1), 67-85. doi:10.1177/1464700108086364

Day, A., Jones, R., Nakata, M., & McDermott, D. (2012). Indigenous family violence: An attempt to understand the problems and inform appropriate and effective responses to criminal justice system intervention. *Psychiatry, Psychology and Law*, *19*(1), 104-117. doi:10.1080/13218719.2010.543754

de Vargas, D., Luis, M. A. V., Soares, J., & Soares, M. H. (2015). Reliability and validity of the Management of Aggression and Violence Attitude Scale (MAVAS-BR) for use in Brazil. *Archives of Clinical Psychiatry,* (5-6), 161-164. doi:10.1590/0101-60830000000068

Debowska, A., Boduszek, D., Dhingra, K., & DeLisi, M. (2015). The effect of male incarceration on rape myth acceptance: Application of propensity score matching technique. *Deviant Behavior*, *37(6),* 634-643.

DeKeseredy, Walter. (1990). Male peer support and woman abuse: The current state of knowledge. *Sociological Focus, 23*(2), 129-139.

DeKeseredy, Walter. (2011). *Violence against women: Myths, facts, and controversies*. Toronto, Ontario, Canada: University of Toronto Press.

DeKeseredy, Walter, & Schwartz, M. D. (2013). *Male peer support and violence against women: The history and verification of a theory*. Boston, MA: Northeastern University Press.

Department of Immigration and Border Protection. (2014). The people of Australia: Statistics from the 2011 census. Retrieved from https://www.homeaffairs.gov.au/ReportsandPublications/Documents/research/people-australia-2013-statistics.pdf

Dhamoon, R. K. (2011). Considerations on mainstreaming intersectionality. *Political Research Quarterly, 64*(1), 230-243. doi:10.1177/1065912910379227

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science, 40(3)*, 434–449. doi:10.1007/s11747-011-0300-3

Diemer, K., Ross, S., Humphreys, C., & Healey, L. (2017). A "double edged sword": Discretion and compulsion in policing domestic violence. *Police Practice and Research, 18*(4), 339-351.

Dobash, R. E., & Dobash, R. (1979). *Violence against wives: A case against the patriarchy*. New York: Free Press.

Dovidio, J. F., Piliavin, J. A., Schroeder, D. A., & Penner, L. (2006). *The social psychology of prosocial behavior*. New Jersey: Lawrence Erlbaum.

Donnermeyer, J. F., & DeKeseredy, W. (2013). *Rural Criminology*, London, Routledge

Draper, B. (2012). Isn't it a bit risky to dismiss suicide risk assessment? *Australian and New Zealand Journal of Psychiatry, 46*(4), 385-386.

Dunham, K., & Senn, C. Y. (2000). Minimising negative experiences. *Journal of Interpersonal Violence, 15*(3), 251-261.

Dunlap, E. E. (2010). Stalking myth acceptance: An investigation of attitudinal constructs associated with gender differences in judgments of intimate stalking. (Doctoral dissertation). University of Kentucky, Paper 41. Retrieved from University of Kentucky doctoral dissertations website https://uknowledge.uky.edu/gradschool_diss/41

Dunlap, E. E., Lynch, K. R., Jewell, J. A., Wasarhaley, N. E., & Golding, J. M. (2015). Participant gender, stalking myth acceptance, and gender role stereotyping in perceptions of intimate partner stalking: A structural equation modeling approach. *Psychology, Crime & Law, 21*(3), 234-253. doi:10.1080/1068316X.2014.951648

Dwyer, T., Easteal, P., & Hopkins, A. (2012). Did she consent? *Alternative Law Journal, 37*(4), 249-253.

Easteal, P., Bartels, L., & Bradford, S. (2012). Language, gender and "reality": Violence against women. *International Journal of Law, Crime and Justice, 40*(4), 324-337.

Easteal, P., Holland, K., & Judd, K. (2015). Enduring themes and silences in media portrayals of violence against women. *Women's Studies International Forum, 48*, 103-113. doi:http://dx.doi.org/10.1016/j.wsif.2014.10.015

Edin, K., & Nilsson, B. (2014). Men's violence: Narratives of men attending anti-violence programmes in Sweden. *Women Studies International Forum, 46*, 96–106.

Edwards, K. M., Turchik, J. A., Dardis, C. M., Reynolds, N. & Gidycz, C. A. (2011). Rape myths: History, individual and institutional-level presence, and implications for change. *Sex Roles, 65* (11-12), 761–773.

Egan, R., & Wilson, J. C. (2012). Rape victims' attitudes to rape myth acceptance. *Psychiatry, Psychology and Law*, *19*(3), 345-357.

Ehrensaft, M. K. (2008). Intimate partner violence: Persistence of myths and implications for intervention. *Children and Youth Services Review, 30*(3), 276-286. doi.org/10.1016/j.childyouth.2007.10.005

Eigenberg, H., & Policastro, C. (2016). Blaming victims in cases of interpersonal violence: Attitudes associated with assigning blame to female victims. *Women & Criminal Justice, 26*(1), 37-54. doi:10.1080/08974454.2014.997417

Elliott, M. R. (2008). Model averaging methods for weight trimming. *Journal of Official Statistics, 24*(4), 517-540.

Enarson, E., & Meyreles, L. (2004). International perspectives on gender and disaster: Differences and possibilities. *The International Journal of Sociology and Social Policy, 24*(10), 49–93.

Erlanger, H. S. (1974). The empirical status of the subculture of violence thesis. *Social Problems, 22(2)*, 280−292.

Esqueda, C. W., & Harrison, L. A. (2005). The influence of gender role stereotypes, the woman's race, and level of provocation and resistance on domestic violence culpability attributions. *Sex Roles, 53*(11–12), 821–834.

European Commission. (2010). Factors at play in the perpetration of violence against women, violence against children and sexual orientation violence: A multi-level interactive model. Retrieved 10 June 2015 from https://ec.europa.eu/info/policies/justice-and-fundamental-rights_en

Exner-Cortens, D., Gill, L., & Eckenrode, J. (2016). Measurement of adolescent dating violence: A comprehensive review (part 2, attitudes). *Aggression and Violent Behavior, 27*, 93-106. doi:10.1016/j.avb.2016.02.011

Fah, L., & Sirisena, A. (2014). Relationships between the knowledge, attitudes, and behaviour dimensions of environmental literacy: A structural equation modeling approach using smartpls. *Journal for Educational Thinkers, 5*, 119-144.

Fakunmoju, S. B., Bammeke, F. O., Oyekanmi, F. A., Temilola, S., & George, B. (2016). Psychometric properties of beliefs about relationship violence against women and gender stereotypes scale. *Journal of Psychology in Africa, 26*(3), 246-258.

Falchikov, N. (1996). Adolescent attitudes to abuse of women: Are wives and nonmarital partners viewed differently? *Journal of Interpersonal Violence, 11*(3), 391-409. doi:10.1177/088626096011003006

Fantasia, H. C. (2011). Really not even a decision any more: Late adolescent narratives of implied sexual consent. *Journal of Forensic Nursing, 7*(3), 120-129.

Farrell, A. D., Meyer, A. L., & White, K. S. (2001). Evaluation of Responding in Peaceful and Positive Ways (RIPP): A school-based prevention program for reducing violence among urban adolescents. *Journal of Clinical Child Psychology, 30*(4), 451-463.

Fazio, R. (1990). Multiple processes by which attitudes guide behavior: The MODE model as an integrative framework. *Advances in Experimental Social Psychology, 23*, 75-109. doi:10.1016/S0065-2601(08)60318-4

Feder, L., & Dugan, L. (2002). A test of the efficacy of court-mandated counseling for domestic violence offenders: The Broward experiment. Justice Quarterly, 19(2), 343– 375.

Felson, R, Liska, A. E., South, S. J., & McNulty, T. L. (1994). The subculture of violence and delinquency: Individual vs. school context effects. *Social Forces, 73(1)*, 155−173.

Ferreira, M., Lopes, A., Aparicio, G., Cabral, L., & Duarte, J. (2014). Teens and dating: study of factors that influence attitudes of violence. *Atencion Primaria*, *46*(1), 187-190.

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The Reasoned Action Approach*. New York, NY: Psychology Press.

Fleming, P. J., Gruskin, S., Rojo, F., & Dworkin, S. L. (2015a). Men's violence against women and men are inter-related: Recommendations for simultaneous intervention. *Social Science and Medicine, 146*, 249-256.

Fleming, P. J., McCleary-Sills, J., Morton, M., Levtov, R., Heilman, B., & Barker, G. (2015b). Risk factors for men's lifetime perpetration of physical violence against intimate partners: Results from the international men and gender equality survey (images) in eight countries. *PLoS One, 10*(3), 1-18. doi:10.1371/journal.pone.0118639

Flood, M., & Pease, B. (2006). *The factors influencing community attitudes in relation to violence against women: A critical review of the literature*. Melbourne: VicHealth.

Flood, M., & Pease, B. (2009). Factors influencing attitudes to violence against women. *Trauma, Violence, & Abuse*, *10*(2), 125-142.

Flood, M. (2008). *Measures for the assessment of dimensions of violence against women: A compendium*. Pretoria, South Africa: South African Medical Research Council, Sexual Violence Research Initiative.

Flynn, A., & Henry, N. (2012). Disputing consent: The role of jury directions in Victoria. *Current Issues in Criminal Justice, 24*, 167-184.

Fox, J., & Weisberg, S. (Eds.). (2011). *An R companion to applied regression* (2nd ed.). Thousand Oaks, CA: Sage.

Fozdar, F., & Pedersen, A. (2014). *Ethnocentrism.* Unpublished raw data.

Francis, L., Loxton, D., & James, C. (2017). The culture of pretence: a hidden barrier to recognising, disclosing and ending domestic violence. *Journal of Clinical Nursing, 26*(15-16), 2202–2214.

Fraser, C. (2015). From “ladies first” to “asking for it”: Benevolent sexism in the maintenance of rape culture. *Californian Law Review, 103*(1), 141-203.

Frye, V. (2007). The informal social control of intimate partner violence against women: Exploring personal attitudes and perceived neighborhood social cohesion. *Journal of Community Psychology, 35*(8), 1001-1018.

Fulu, E., Jewkes, R., Roselli, T., & Garcia-Moreno, C. (2013). Prevalence of and factors associated with male perpetration of intimate partner violence: Findings from the un multi-country cross-sectional study on men and violence in Asia and the Pacific. *The Lancet Global Health, 1*(4), e187-e207. doi:10.1016/s2214-109x(13)70074-3

Fulu, E., Warner, X., Miedema, S., Jewkes, R., Roselli, T., & Lang, J. (2013). *Why Do Some Men Use Violence Against Women and How Can We Prevent It? Quantitative Findings from the United Nations Multi-Country Study on Men and Violence in Asia and the Pacific*. Bangkok: UNDP, UNFPA, UN Women and UNV.

Funk, J. B., Elliott, R., Bechtoldt, H., Pasold, T., & Tsavoussis, A. (2003). The Attitudes Toward Violence Scale: Child version. *Journal of Interpersonal Violence, 18*(2), 186-196. doi:10.1177/0886260502238734

Funk, J. B., Elliott, R., Urman, M. L., Flores, G. T., & Mock, R. M. (1999). The Attitudes Towards Violence Scale: A measure for adolescents. *Journal of Interpersonal Violence, 14*(11), 1123-1136.

Gallagher, K. E., & Parrott, D. J. (2011). What accounts for men's hostile attitudes toward women? The influence of hegemonic male role norms and masculine gender role stress. *Violence Against Women*, *17*(5), 568-583.

García-Cueto, E., Rodríguez-Díaz, F. J., Bringas-Molleda, C., López-Cepero, J., Paíno-Quesada, S., & Rodríguez-Franco, L. (2015). Development of the Gender Role Attitudes Scale (GRAS) amongst young Spanish people. *International Journal of Clinical and Health Psychology*, *15*(1), 61-68.

Gerger, H., Kley, H., Bohner, G., & Siebler, F. (2007). The acceptance of modern myths about sexual aggression scale: Development and validation in German and English. *Aggressive Behavior, 33*(5), 422-440.

Getty, J. M., & Thompson, K. N. (1994). A procedure for scaling perception of lodging quality. *Hospitality Research Journal, 18(2)*, 75-96.

Gharaibeh, M. K., Abu-Baker, N. N., & Aji, S. (2012). Attitudes toward and justification for wife abuse among Syrian medical and nursing students. *Journal of Transcultural Nursing, 23*(3), 297-305. doi:10.1177/1043659612441022

Giles, J. R., Cureen, H. M., & Adamson, C. E. (2005). The social sanctioning of partner abuse: perpetuating the message that partner abuse is acceptable in New Zealand. *Social Policy Journal of New Zealand, 26*, 97–116.

Glick, P., & Fiske, S. T. (1996). The Ambivalent Sexism Inventory: Differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology*, *70*(3), 491-512.

Glick, P, & Fiske, S. T. (1997). Hostile and benevolent sexism measuring ambivalent sexist attitudes toward women. *Psychology of Women Quarterly*, *21*(1), 119-135.

Glick, P., & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications for gender inequality. *American Psychologist*, *56*(2), 109-11.

Glick, P., & Fiske, S. T. (2011). Ambivalent sexism revisited. *Psychology of Women Quarterly*, *35*(3), 530-535.

Gover, A. R., Richards, T. N., & Patterson, M.J. (2017) *Explaining violence against women within the context of intimate partner violence (IPV)*, in Claire M. Renzetti; Jeffrey L. Edleson; Raquel Kennedy Bergen (eds) Sourcebook on Violence Against Women (pp. 42-63). SAGE Publications. Kindle Edition.

Gover, A. R., Richards, T. N., & Tomsich, E. (2015). *Colorado's innovative response to domestic violence offender treatment: Current achievements and recommendations for the future*. Denver, CO: Buechner Institute

for Governance, Criminology and Criminal Justice Research Initiative, University of Colorado, Denver.

Gracia, E., García, F., & Lila, M. (2008). Police involvement in cases of intimate partner violence against women: The influence of perceived severity and personal responsibility. *Violence Against Women, 14*(6), 697–714.

Gromping, U. (2006). Relative importance for linear regression in R: The package relaimpo. *Journal of Statistical Software, 17*(1), 1-27.

Hagemann-White, C., Kavemann, B., Kindler, H., Meysen, T., & Puchert, R. (2010). Violence against women, violence against children and sexual orientation violence. Review of the state of the research on factors at play in perpetration. Retrieved from the European Commission website http://ec.europa.eu/justice/funding/daphne3/multi-level_interactive_model/understanding_perpetration_start_uinix.html

Hardesty, D. M., & Bearden, W. O. (2004). The use of expert judges in scale development: Implications for improving face validity of measures of unobservable constructs. *Journal of Business Research, 57*(2), 98-107. doi:https://doi.org/10.1016/S0148-2963(01)00295-8

Harned, M. S. (2005). Understanding women's labelling of unwanted sexual experiences with dating partners. *Violence Against Women, 11*(3), 374-413.

Harned, M. (2013). Treatment of posttraumatic stress disorder and comorbid borderline personality disorder. In E. A. Storch & D. McKay (Eds.), *Handbook of treating variants and complications in anxiety disorders* (pp. 203-221). New York, NY: Springer.

Harrell, F. E. (2015). *Regression modeling strategies with applications to linear models* (2nd ed.). Cham: Springer.

Harris, A., Honey, N., Webster, K., Diemer, K., & Politoff, V. (2015). *Young Australians' attitudes to violence against women: Summary of findings from the 2013 National Community Attitudes towards Violence Against Women Survey from respondents aged 16-24 years*. Melbourne: Victorian Health Promotion Foundation.

Heise, L. (2011). What works to prevent partner violence? An evidence overview. Retrieved from The Organisation for Economic Co-operation and Development Development Asistance Committee Evaluation Resource Centre website https://www.oecd.org/derec/49872444.pdf

Henning, K., Jones, A. R., & Holdford, R. (2005). "I didn't do it, but if I did I had a good reason": Minimization, denial, and attributions of blame among male and female domestic violence offenders. *Journal of Family Violence, 20*(3), 131-139.

Herman, J. L. (2015). *Trauma and recovery: The aftermath of violence – From domestic abuse to political terror*. New York, NY: Basic Books.

Hilton, N. Z., Harris, G. T., Rice, M. E., Lang, C., Cormier, C. A., & Lines, K. J. (2004). A brief actuarial assessment for the prediction of wife assault recidivism: The Ontario domestic assault risk assessment. *Psychological Assessment*, 16(3), 267– 275.

Hinkin, T. R. (2005). Scale development principles and practices. In R. A. Swanson & E. F. Holton III (Eds.), *Research in organizations: Foundations and methods of inquiry* (pp.161-180). San Francisco, CA: Berrett-Koehler Publishers, Inc.

Hinkin, T. R., Tracey, J. B., & Enz, C. A. (1997). Scale construction: Developing reliable and valid measurement instruments. *Journal of Hospitality & Tourism Research, 21*(1), 100-120. doi:10.1177/109634809702100108

Hotaling, G. T., & Sugarman, D. B. (1986). An analysis of risk markers in husband to wife violence: The current state of knowledge. *Violence & Victims*, *1*(2), 101-104.

Houry, D., Rhodes, K. V., Kemball, R. S., Click, L., Cerulli, C., McNutt, L. A., & Kaslow, N. J. (2008). Differences in female and male victims and perpetrators of partner violence with respect to WEB scores. *Journal of Interpersonal Violence, 23*(8), 1041-1055.

Howarth, C. (2006). How social representations of attitudes have informed attitude theories: The consensual and the reified. *Theory & Psychology, 16*(5), 691-714.

Huesmann, L. R., & Guerra, N. G. (1997). Children's normative beliefs about aggression and aggressive behavior. *Journal of Personality and Social Psychology, 72*(2), 408-419.

Human Rights and Equal Opportunity Commission (HREOC). (2006). *Ending family violence and abuse in Aboriginal and Torres Strait Islander communities: Key issues, overview paper of research and findings by the Human Rights and Equal Opportunity Commission 2001-2006*. Canberra: HREOC.

Humphreys, T. P. (2004). Understanding sexual consent: An empirical investigation of the normative script for young heterosexual adults. In M. Cowling & P. Reynolds (Eds.), *Making sense of sexual consent* (pp. 209–226). Burlington, VT: Ashgate.

Hust, S.J.T., Marett, E.G., Ren, C., Adams, P. Willoughby, J. F., Lei, M., Norman, C. (2014). Establishing and adhering to sexual consent: The association between reading magazines and college students' sexual consent negotiation. *Journal of Sex Research*, 51, 280–290. https://doi.org/10 .1080/00224499.2012.727914

Hust, S. J. T., Marett, E. G., Lei, M., Ren, C., & Ran, W. (2015). Law & Order, CSI, and NCIS: The association between exposure to crime drama franchises, rape myth acceptance, and sexual consent negotiation among college students. *Journal of Health Communication, 20*(12), 1369-1381.

Hust, S. J. T., Rodgers, K. B., & Bayly, B. (2017). Scripting sexual consent: Internalized traditional sexual scripts and sexual consent expectancies among college students. *Family Relations, 66*(1), 197-210. doi:10.1111/fare.12230

Indigenous Family Violence Taskforce. (2003). *Indigenous Family Violence Taskforce report 2003*. Melbourne: Department of Victorian Communities.

Jordan, J. (2004). Beyond belief? Police, rape and women's credibility. *Criminal Justice, 4*(1), 29-59.

Jozkowksi, K. N., Peterson, Z. D., Sanders, S. A., Dennis, B., & Reece, M. (2014). Gender differences in heterosexual college students' conceptualizations and indicators of sexual consent: Implications for contemporary sexual assault prevention education. *Journal of Sex Research*, *51*(8), 904–916. https://doi.org/10.1080/00224499.2013.792326

Kahlor, L., & Morrison, D. (2007). Television viewing and rape myth acceptance among college women. *Sex Roles*, *56*(11-12), 729–739. doi:10.1007/s11199-007-9232-2

Kalin, R., & Tilby, P. J. (1978). Development and validation of a sex-role ideology scale. *Psychological Reports*, *42*(3), 731-738.

Kalmuss, D. S. (1984). The intergenerational transmission of marital aggression. *Journal of Marriage and Family*, *46*(1), 11-19.

Karaian, L. (2012). Lolita speaks: "Sexting", teenage girls and the law. *Crime, Media, Culture, 8*(1), 57-73.

Karaian, L. (2014). Policing "sexting": Responsibilization, respectability and sexual subjectivity in child protection/crime prevention responses to teenagers' digital sexual expression. *Theoretical Criminology, 18*(3), 282-299.

Kelty, S. F., Hall, G., & Watt, B. D. (2011). You have to hit some people! Measurement and criminogenic nature of violent sentiments in Australia. *Psychiatry, Psychology and Law*, 18(1), 15-32. doi:10.1080/13218710903566961

Kilmartin, C., Conway, A., Friedberg, A., McQuoid, T. & Tschan, T. (1999). *Social conformity and sexism in all-male peer groups.* Paper presented at the Spring Convention of the Virginia Psychological Association, Virginia Beach, VA.

King, L. A., & King, D. W. (1986). Validity of the Sex-Role Egalitarianism Scale: Discriminating egalitarianism from feminism. *Sex Roles*, *15*(3/4), 207-214.

Kohut, A., Keeter, S., Doherty, C., Dimock, M., & Christian, L. (2012). Assessing the representativeness of public opinion surveys. Retrieved 12 October 2014 from the Pew Research Centre for the People and the Press website http://www.people-press.org/files/legacypdf/Assessing%20the%20Representativeness%20of%20Public%20Opinion%20Surveys.pdf

Knoll, B., R. (2013). Assessing the effect of social desirability on nativism attitude responses. *Social Science Research, 42*, 1587-1598.

Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research, 8*(3), 239-260.

Kowarik A., & Templ, M. (2016). Imputation with the R Package VIM. *Journal of Statistical Software*, *74*(7), 1-16. doi:10.18637/jss.v074.i07

Krieger, M. A. (2017). Unpacking "sexting": A systematic review of nonconsensual sexting in legal, educational, and psychological literatures. *Trauma, Violence & Abuse, 18*(5), 593-601.

Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: A literature review. *Quality and Quantity, 47*(4), 2025-2047. doi:10.1007/s11135-011-9640-9

Kubrin, C. E. and Wo, J. C. (2016). *Social Disorganization Theory's Greatest Challenge: Linking Structural Characteristics to Crime in Socially Disorganized Communities*, in The Handbook of Criminological Theory, Alex R. Piquero (ed) John Wiley & Sons, Inc., pp. 121-136.

Langhinrichsen-Rohling, J., & Monson, C. M. (1998). Marital rape: Is the crime taken seriously without co-occurring physical abuse? *Journal of Family Violence, 13*(4), 433-443.

Latané, B., & Darley, J. M. (1970). *The unresponsive bystander: Why doesn't he help?* New Jersey: Prentice-Hall.

Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Thousand Oaks, CA: Sage Publications.

Layman, M. J., Gidycz, C. A., & Lynn, S. J. (1996). Unacknowledged versus acknowledged rape victims: Situational factors and posttraumatic stress. *Journal of Abnormal Psychology, 105*(1), 124-131.

Lea, S. J. (2007). A discursive investigation into victim responsibility in rape. *Feminism & Psychology, 174*(4), 495-514.

Lehman, P. (2000). A validity study of the Femininity Ideology Scale. (Master's thesis). Florida Institute of Technology, FL, USA.

Leonard, K. E. (2005). Alcohol and intimate partner violence: When can we say that heavy drinking is a contributing cause of violence? *Addiction, 100*(4), 422-425.

Levanon, L. (2012). Sexual history evidence in cases of sexual assault: A critical re-evaluation. *University of Toronto Law Journal, 62*(4), 609-651.

Levant, R. F., Hirsch, L. S., Celentano, E., & Cozza, T. M. (1992). The male role: An investigation of contemporary norms. *Journal of Mental Health Counseling. 14*(3). 325-337.

Levant, R., Richmond, K., Cook, S., House, A. T., & Aupont, M. (2007). The Femininity Ideology Scale: Factor structure, reliability, convergent and discriminant validity, and social contextual variation. *Sex Roles*, *57*(5-6), 373-383.

Lievore, D. (2003). Non-reporting and hidden recording of sexual assault: An international literature review. Retrieved from Australian Institute of Criminology website http://www.aic.gov.au/publications/previous%20series/publications-archive/2000s/non-reporting%20and%20hidden%20recording%20of%20sexual%20assault.html

Lila, M., Herrero, J. & Garcia, E. (2008) Evaluating attribution of responsibility and minimisation by male batterers: Implications for batterer programs. *The Open Criminology Journal, 1*, 4–11.

Lila, M., Oliver, A., Catalá-Miñana, A., Galiana, L., & Gracia, E. (2014). The Intimate Partner Violence Responsibility Attribution Scale (IPVRAS). *The European Journal of Psychology Applied to Legal Context, 6*(1), 29-36. doi:10.5093/ejpalc2014a4

Lim, B. H., Valdez, C. E., & Lilly, M. M. (2015). Making meaning out of interpersonal victimisation: The narratives of IPV survivors. *Violence Against Women, 21*(9), 1065-1086.

Linacre, J. M. (1994). Sample size and item calibration stability. *Rasch Measurement Transactions*, *74*(4), 328.

Linacre, J. M. (2014). *Winsteps Rasch measurement computer program user's guide*. Beaverton, OR: Winsteps.com.

Lisak, D., Gardinier, L., Nicksa, S. C., & Cote, A. M. (2010). False allegations of sexual assault: An analysis of ten years of reported cases. *Violence Against Women, 16*(12), 1318-1334.

Lonsway, K. A., & Archambault, J. (2012). The "justice gap" for sexual assault cases: Future directions for research and reform. *Violence Against Women*, *18*(2), 145-168.

Lonsway, K. A., & Fitzgerald, L. F. (1994). Rape myths: In review. *Psychology of Women Quarterly, 18(2)*, 133-164.

Lonsway, K. A., Cortina, L. M., & Magley, V. J. (2008). Sexual harassment mythology: Definition, conceptualization, and measurement. *Sex Roles, 58*(9-10), 599-615.

Lott, B., Reilly, M. E., & Howard, D. R. (1982). Sexual assault and harassment: A campus community case study. *Signs: Journal of Women in Culture and Society, 8*(2), 296-319.

Loveland, J. E., & Raghavan, C. (2017). Coercive control, physical violence, and masculinity. *Violence & Gender*, *4*(1), 5-10.

Lumley, T. (2004). Analysis of complex survey samples. *Journal of Statistical Software, 9*(1), 1-19.

Lumley, T. (2017). Survey: Analysis of complex survey samples. R package version 3.32. Retrieved from Comprehensive R Archive Network website https://CRAN.R-project.org/package=survey

MacInnis, C., & Hodson, G. (2015). Why are heterosexual men (*vs*. women) particularly prejudiced toward gay men? A social dominance theory explanation. *Psychology & Sexuality, 6* (3), 275-294. doi: 10.1080/19419899.2014.987684

Mackie, G., Moneti, F., Denny, E., & Shakya, H. (2015). *What Are Social Norms? How Are They Measured?* San Diego: UNICEF, & Center on Global Justice, University of California.

Malamuth, N. M. (1998). The confluence model as an organizing framework for research on sexually aggressive men: Risk moderators, imagined aggression, and pornography consumption. In R. Geen & E. Donnerstein (Eds.), *Human aggression: Theories, research, and implications for social policy* (pp. 230–247). San Diego, CA: Academic Press.

Markowitz, F. E. (2001). Attitudes and family violence: Linking intergenerational and cultural theories. *Journal of Family Violence, 16*(2), 205-218.

Markowitz, F. E. (2003). Socioeconomic disadvantage and violence: Recent research on culture and neighborhood control as explanatory mechanisms. *Aggression and Violent Behavior*, *8*, 145-154.

Markus, A. (2017). Mapping social cohesion: The Scanlon Foundation surveys 2017. Retrieved from Scanlon Foundation website scanlonfoundation.org.au/research/surveys/

Marsh, M., Purdin, S., & Navani, S. (2006). Addressing sexual violence in humanitarian emergencies. *Global Public Health*, *1*(2), 133–146.

Massey, D. S., & Tourangeau, R. (2013). Introduction: New challenges to social measurement. *The ANNALS of the American Academy of Political and Social Science*, *645*(1), 6-22.

McCalman, J., Bridge, F., Whiteside, M., Bainbridge, R., Tsey, K., & Jongen, C. (2014). Responding to Indigenous Australian sexual assault. *SAGE Open*, *4*(1). 1-13. doi:10.1177/2158244013518931

McCarry, M., & Lombard, N. (2016). Same old story? Children and young people's continued normalisation of men's violence against women. *Feminist Review, 112*(1), 128-143.

McCausland, R. & Vivian, A. (2009). *Factors affecting crime rates in Indigenous communities in NSW: A pilot study in Wilcannia and Menindee*. Sydney: Jumbunna Indigenous House of Learning, University of Technology, Sydney, NSW.

McGlade, H. (2006). Aboriginal women, girls and sexual assault. *ACSSA Newsletter*, *12*(September), 6-13.

McGregor, K. (2009). *National Community Attitudes towards Violence Against Women Survey: Project technical report*. Canberra: Australian Institute of Criminology.

McKeon, B., McEwan, T. E., & Luebbers, S. (2014). "It's not really stalking if you know the person": Measuring community attitudes that normalize, justify and minimise stalking. *Psychiatry, Psychology and Law, 22*(2), 291-306. doi:10.1080/13218719.2014.945637

McKibbin, G., Duncan, R., Hamilton, B., Humphreys, C., & Kellett, C. (2015). The intersectional turn in feminist theory: A response to Carbin and Edenheim (2013). *European Journal of Women's Studies, 22*(1), 99-103.

McMahon, S. (2007). Understanding community-specific rape myths: Exploring student athlete culture. *Affilia - Journal of Women and Social Work, 22*(4), 357-370.

McMahon, S. (2010). Rape myth beliefs and bystander attitudes among incoming college students. *Journal of American College Health, 59*(1), 3-11. doi:10.1080/07448481.2010.483715

McMahon, S. & Baker, K. (2011). *Changing perceptions of sexual violence over time*. Washington, DC: National Online Resource Center on Violence against Women.

McMahon, S., & Banyard, V. L. (2012). When can I help? A conceptual framework for the prevention of sexual violence through bystander intervention. *Trauma, Violence, & Abuse*, *13*(1), 3-14.

McMahon, S., & Farmer, G. L. (2011). An updated measure for assessing subtle rape myths. *Social Work Reserach, 35*(2), 71-81.

McWhae, L. E., Paradies, Y., & Pedersen, A. (2015). Bystander antiprejudice on behalf of Muslim Australians: The role of ethnocentrism and conformity. *Australian Community Psychologist, 27*(1), 6-20.

Meyer, S. (2018). Motivating perpetrators of domestic and family violence to engage in behaviour change: The role of fatherhood. *Child & Family Social Work*, *23*(1), 97-104.

Meyer, A., Wagner, B., & Dutton, M. A. (2010). The relationship between battered women's causal attributions for violence and coping efforts. *Journal of Interpersonal Violence, 25*(5), 900-918.

Miller, K. M., & Summers, A. (2007). Gender differences in video game characters' roles, appearances and attire as portrayed in video game magazines. *Sex Roles, 57*(9), 733–742

Mills, C. S., & Granoff, B. J. (1992). Date and acquaintance rape among a sample of college students. *Social Work*, *37*(6), 504-509.

Morgado, F. F. R., Meireles, J. F. F., Neves, C. M., Amaral, A. C. S., & Ferreira, M. E. C. (2017). Scale development: Ten main limitations and recommendations to improve future research practices. *Psicologia: Reflexão e Crítica, 30*(3), 1-20. doi:I 10.1186/s41155-016-0057-1

Morgan, J., & Politoff, V. (2012). *Victorian print media coverage of violence against women: Summary report*. Melbourne: University of Melbourne & VicHealth.

Muehlenhard, C. L., & Felts, A. S. (1998). Sexual beliefs scale. In T. D. Fisher (Ed.), *Handbook of sexuality-related measures* (pp. 116-118). New York: Routledge.

Mullaney, J. L. (2007). Telling it like a man. *Men and Masculinities, 10*(2), 222-247.

Murdolo, A., & Quiazon, R. (2015). *How do different forms of discrimination intersect with gender to contribute to violence against women and their children and what are the implications of this for developing inclusive prevention strategies?* Paper prepared for Our Watch.

Murnen, S. K. (2015). A social constructivist approach to understanding the relationship between masculinity and sexual aggression. *Psychology of Men & Masculinity, 16*(4), 370-373. doi:10.1037/a0039693

Näher, A. F., & Krumpal, I. (2012). Asking sensitive questions: The impact of forgiving wording and question context on social desirability bias. *Quality and Quantity, 46*(5), 1601-1616. doi: 10.1007/s11135-011-9469-2

Nash, S. T. (2005). Through Black eyes: African American women's constructions of their experiences with intimate male partner violence. *Violence against Women*, *11*(11), 1420–1440.

Neville, H. A., Lilly, R. L., Lee, R. M., Duran, G., & Browne, L. V. (2000). Construction and initial validation of the Color-Blind Racial Attitudes Scale (CoBRAS). *Journal of Counseling Psychology*, *47*(1), 59-70. doi: 10.1037//0022-0167.47.1.59

Nixon, C., & Cripps, K. (2013). *Failure to protect: Moving beyond gendered responses.* Nova Scotia: Fernwood Publishing.

Nunziato, D. C. (2012). Romeo and Juliet online and in trouble: Criminalizing depictions of teen sexuality (c u l8r): g2g 2 Jail). Northwestern Journal of Technology and Intellectual Property, *10*(3), 57-91.

O'Bryne, R., Hansen, S., & Rapley, M. (2008). "If a girl doesn't say 'no'… ": Young men, rape, and claims of "insufficient knowledge". *Journal of Community & Applied Social Psychology*, *18(3)*, 168–193. https://doi.org/10.1002/casp.922

O'Byrne, R., Rapley, M., & Hansen, S. (2006). "You couldn't say 'no', could you?": Young men's understandings of sexual refusal. *Feminism & Psychology, 16*(2), 133-154.

O'Leary, D. K. (1988). Physical aggression between spouses: A social learning theory perspective. In V. B. Van Hasselt, R. L. Morrison, A. S. Bellack & M. Hersen (Eds.), *Handbook of family violence* (pp. 31-55). New York: Plenum.

Olsen, A., & Lovett, R. (2016). *Existing knowledge, practice and responses to violence against women in Australian Indigenous communities: State of knowledge paper*. Sydney: ANROWS.

Olson, D. E., & Stalans, L. J. (2001). Violent offenders on probation: Profile, sentence, and outcome differences among domestic violence and other violent probationers. *Violence Against Women*, 7(10), 1164– 1185.

O'Neil, M., & Morgan, P. (2010). *American perceptions of sexual violence*. Washington, DC: FrameWorks Institute.

Organization for Economic Cooperation and Development (OECD). (2015). *Gender equality and women's rights in the post-2015 agenda: A foundation for sustainable development. Element 2, Paper 1*. Paris: OECD Publishing.

Our Watch. (2017). Counting on change: A guide to prevention monitoring. Retrieved from https://www.ourwatch.org.au/What-We-Do/Counting-on-change-A-guide-to-prevention-monitorin

Our Watch, ANROWS, & VicHealth. (2015). *Change the story: A shared framework for the primary prevention of violence against women and their children in Australia.* Melbourne: Our Watch.

Ousey, Graham C. and Pamela Wilcox. (2005). Subcultural values and violent delinquency: A multilevel analysis in middle schools. *Youth Violence and Juvenile Justice, 3*, 3−22.

Owens D. J., & Straus Murray, A. (2006). The social structure of violence in childhood and approval of violence as an adult. *Aggressive Behavior, 1*(3), 193-211. doi:10.1002/1098-2337

Page, A. D. (2008). Gateway to Reform? Policy implications of police officers' attitudes toward rape. *American Journal of Criminal Justice, 33*(1), 44-58.

Patton, T. O., & Snyder-Yuly, J. (2007). Any four black men will do: Rape, race, and the ultimate scapegoat. *Journal of Black Studies, 37*(6), 859-895.

Pease, B., & Flood, M. (2008). Rethinking the significance of attitudes in preventing men's violence against women. *Australian Journal of Social Issues, 43*(4), 547-561.

Pedersen, A. (2010). *Attitudes towards Middle-Eastern Australians*. Unpublished raw data.

Pedersen, A. (2012). *Attitudes towards Indigenous Australians*. Unpublished raw data.

Pedersen, A., Paradies, Y., Hartley, L. K., & Dunn, K. M. (2011). Bystander antiprejudice: Cross-cultural education, links with positivity towards cultural "outgroups" and preparedness to speak out. *Journal of Pacific Rim Psychology*, *5*(1), 19-30.

Pederson, A., Greaves, L., & Poole, N. (2014). Gender-transformative health promotion for women: A framework for action. *Health Promotion International, 30*(1), 140–150. doi:doi.org/10.1093/heapro/dau083

Pennay, D. W., & Powell, A. (2012). *The role of bystander knowledge, attitudes and behaviours in preventing violence against women: A full technical report*. Melbourne: The Social Research Centre.

Pennay, D. W., Borg, K., & Lavrakas, P. J. (2016, May 12-14). *Experimenting with advance text messages to increase response rates and improve calling efficiency: Findings from two Australian dual-frame RDD surveys.* Paper presented at the World Association of Public Opinion Research Conference, Austin, TX.

Pepin, J. R. (2016). Nobody's business? White male privilege in media coverage of intimate partner violence. *Sociological Spectrum, 36*(3), 123-141.

Peters, J. (2008). Measuring myths about domestic violence: Development and initial validation of the Domestic Violence Myth Acceptance Scale. *Journal of Aggression, Maltreatment & Trauma*, *16*(1), 1-21. doi:10.1080/10926770801917780

Petretic-Jackson, P., & Genell, S. (1994). Domestic Violence Blame Scale. *Journal of Interpersonal Violence, 18*(7), 695-716.

Pickett, J., Cullen, F., Bushway, S. D., Chiricos, T., & Alpert, G. (2018). The Response rate test: Nonresponse bias and the future of survey research in criminology and criminal justice. *The Criminologist, 43*(1), 7-11.

Pierotti, R. S. (2013). Increasing rejection of intimate partner violence: Evidence of global cultural diffusion. *American Sociological Review, 78*(2), 240-265. doi:10.1177/0003122413480363

Pitts, V. L., & Schwartz, M. D. (1993). Promoting self-blame in hidden rape cases. *Humanity & Society, 17*(4), 383-398.

Pleck, J. H., Sonenstein, F. L., & Ku, L. C. (1994). Problem behaviors and masculinity ideology in adolescent males. In R. D. Ketterlinus & M. E. Lamb (Eds.), *Adolescent problem behaviors: Issues and research* (pp. 165-186). New Jersey: Lawrence Erlbaum Associates.

Polaschek, D. L. L., Collie, R. M., & Walkey, F. H. (2004). Criminal attitudes to violence: Development and preliminary validation of a scale for male prisoners. *Aggressive Behavior, 30*(6), 484-503. doi:10.1002/ab.20081

Potter, H. (2015). *Intersectionality and criminology: Disrupting and revolutionizing studies of crime*. London: Routledge.

Powell, A. (2011). *Review of Bystander Approaches in Support of Preventing Violience Against Women*: Victorian Health Promotion Foundation (VicHealth).

Powell, A. (2012). *More than ready: Bystander action to prevent violence against women in the Victorian community.* Carlton, Victoria: Victorian Health Promotion Foundation.

Powell, A. (2014). *Bystander approaches. Responding to and preventing men's sexual violence against women.* (ACSSA Issues no. 17). Melbourne: Australian Centre for the Study of Sexual Assault.

Powell, A., & Webster, K. (2016). Cultures of gendered violence: An integrative review of measures of attitudinal support for violence against women. *Australian & New Zealand Journal of Criminology*. doi.org/10.1177/0004865816675669

Powell, A., Henry, N., & Flynn, A. (2016). *Development and preliminary validation of the Sexual Image-based Abuse Myth Acceptance (SIAMA) Scale*. Unpublished manuscript.

Power, K. (2012). Luckily he backed off: A mixed methods analysis of undergraduate women's consent, attitudes and behaviors. *Columbia Social Work Review*, *3*(1), 46-62.

Prentice, K., Blair, B., & O'Mullan, C. (2017). Sexual and family violence: Overcoming barriers to service access for Aboriginal and Torres Strait Islander clients. *Australian Social Work*, *70*(2), 241-252. doi:10.1080/0312407X.2016.1187184

R Core Team. (2017). R: A language and environment for statistical computing. Vienna: R Foundation for Statistical Computing. Retrieved from The R Project for Statistical Computing website https://www.R-project.org/

Rasch, G. (1992). *Probabilistic models for some intelligence and attainment tests*. Chicago: MESA Press.

Rebellon, C. J., Mariasse, M. E., Van Gundy, K. T., & Cohn, E. S. (2014). Rationalizing delinquency: A longitudinal test of the reciprocal relationship between delinquent attitudes and behavior. *Social Psychology Quarterly, 77*(4), 361-386. doi:https://doi.org/10.1177/0190272514546066

Reece, H. (2013), Rape myths: Is elite opinion right and popular opinion wrong? *Oxford Journal of Legal Studies,* vol. 33 (3), 445-473.

Reid, S., McConville, S., Wild, A., Burman, M., & Curtice, J. (2015). *Scottish Social Attitudes Survey 2014: Attitudes to violence against women in Scotland*. Scotland: The Scottish Government.

Riggle, E. D., Rostosky, S. S., & Reedy, C. S. (2005). Online surveys for BGLT research: Issues and techniques. *Journal of Homosexuality*, *49*(2), 1-21.

Roberts, D. E. (2004). The social and moral cost of mass incarceration in African American communities, *Stanford Law Review, 56(*5), 1271-1305.

Rubenfeld, J. (2013). The riddle of rape-by-deception and the myth of sexual autonomy. *Yale Law Journal, 122*(6), 1372-1443.

Ryan, K. M. (2011). The relationship between rape myths and sexual scripts: The social construction of rape. *Sex Roles, 65*(11), 774-782. doi:10.1007/s11199-011-0033-2

Salazar, L. K., Baker, C. K., Price, A. W., & Carlin, K. (2003). Moving beyond the individual. Examining the effects of domestic violence policies on social norms. *American Journal of Community Psychology, 32*(3-4), 253-263.

Salter, M., Crofts, T., & Lee, M. (2013). Beyond criminalisation and responsibilisation: Sexting, gender and young people. *Current Issues in Criminal Justice, 24(3)*, 301-316.

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *The American Journal of Sociology*, *94*(4), 774–802.

Sampson, R. J., & Wilson, W. J. (1995). Toward a theory of race, crime, & urban inequality. In J. Hagan & R. D. Peterson (Eds.), *Crime and inequality* (pp. 37-54). Stanford, CA: Stanford University Press.

Saunders, D. G., Lynch, A. B., Grayson, M., & Linz, D. (1987). The inventory of beliefs about wife beating: The construction and initial validation of a measure of beliefs and attitudes. *Violence and Victims, 2*(1), 39-57.

Schick, L. (2014). "Hit me baby": From Britney Spears to the socialization of sexual objectification of girls in a middle school drama program. *Sexuality & Culture, 18*(1), 39-55. doi:10.1007/s12119-013-9172-7

Schwab, D. P. (1980). Construct validity in organization behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior (Vol. 2)* (pp. 3-43). Greenwich, CT: JAI Press.

Schwartz, M. D., & DeKeseredy, W. (1997). *Sexual assault on the college campus: The role of male peer support*. Thousand Oaks, CA: Sage Publications.

Scott, M. B., & Lyman, S. M. (1968). Accounts. *American Sociological Review, 33*(1), 46-62.

Scott, K. & Straus, M. (2007) Denial, minimization, partner blaming, and intimate aggression in dating partners. *Journal of Interpersonal Violence, 22*(7), 851–871.

Segrave, M., & Wilson, D. (2011). *The Station Study report*. Melbourne: Monash University.

Segrave, M., Wilson, D., & Fitz-Gibbon, K. (2016). Policing intimate partner violence in Victoria (Australia): Examining police attitudes and the potential of specialisation. *Australian & New Zealand Journal of Criminology, 51*(1), 99-116.

Sety, M., James, K., & Breckenridge, J. (2014). Understanding the risk of domestic violence during and post natural disasters: Literature review, in L. W. Roeder (Ed.), *Issues of gender and sexual orientation in humanitarian emergencies* (pp. 99-111). doi:10.1007/978-3-319-05882-5

Shih, T. H., & Fan, X. (2008). Comparing response rates from web and mail surveys: A meta-analysis. *Field Methods*, *20*, 249-271.

Sinclair, H. C. (2006). *Stalking myth-conceptions: Consequences of myth endorsement for the perception of stalking cases*. Paper presented at the Advances in Research on Stalking at the American Psychology-Law Society 2006 conference, St. Petersburg, FL.

Sinclair, H. C. (2012). Stalking myth-attributions: Examining the role of individual and contextual variables on attributions in unwanted pursuit scenarios. *Sex Roles, 66*(5-6), 378-391.

Snyder, L. B., Hamilton, M. A., Mitchell, E. W., Kiwanuka-Tondo, J., Fleming-Milici, F., & Proctor, D. (2004). A meta-analysis of the effect of mediated health communication campaigns on behavior change in the United States. *Journal of Health Communication*, 9 Suppl 1, 71-96. doi:10.1080/10810730490271548

Sokoloff, N. J., & Dupont, I. (2005). Domestic violence at the intersections of race, class, and gender: Challenges and contributions to understanding violence against marginalized women in diverse communities. *Violence Against Women, 11*(1), 38-64.

Spangaro, J., Herring, S., Koziol-Mclain, J., Rutherford, A., Frail, M. A., & Zwi, A. B. (2016). "They aren't really black fellas but they are easy to talk to": Factors which influence Australian Aboriginal women's decision to disclose intimate partner violence during pregnancy. *Midwifery*, *41*, 79-88. doi:10.1016/j.midw.2016.08.004

Spence, J. T., & Helmreich, R. (1972). The Attitudes Toward Women Scale (AWS): An objective instrument to measure attitudes toward the rights and roles of women in contemporary society. *Catalog of Selected Documents in Psychology, 2,* 66.

Spence, J. T., Helmreich, R., & Stapp, J. (1973). A short version of the Attitudes Toward Women Scale (AWS). *Bulletin of the Psychonomic Society, 2*(4), 219-220.

Stark, E. (2007). *Coercive control: How men entrap women in personal life.* New York, NY: Oxford University Press.

Stark, L. & Ager, A. (2011). A systematic review of prevalence studies of gender-based violence in complex emergencies. *Trauma, Violence, & Abuse*, *12*(3), 127–134.

Stimson J. A., MacKuen, M. B., & Erikson, R. S. (1995). Dynamic representation. *American Political Science Review*, *89*(3), 543–565.

Straus, M. A. (1983). Ordinary violence, child abuse, and wife-beating: What do they have in common? In D. Finkelhor, R. J. Gelles, G. Hotaling & M. A. Straus (Eds.), *The dark side of families: Current family violence research* (pp. 213-234). Beverly Hills, CA: Sage Publications.

Straus, M. A. (1991). Discipline and deviance: Physical punishment *of* children and violence and other crime in adulthood. *Social Problems*, *38*(2), 133-154.

Straus, M. A., Gelles, R. J., & Steinmetz, S. K. (1980). *Behind closed doors: Violence in the American family*. New York: Anchor Doubleday.

Suarez, E., & Gadalla, T. M. (2010). stop blaming the victim: A meta-analysis on rape myths. *Journal of Interpersonal Violence, 25*(11), 2010-2035. doi:http://dx.doi.org/10.1177/0886260509354503

Surratt, Hilary L., James A Inciardi, Steven P. Kurtz and Marion C. Kiley. (2004). Sex work and drug use in a subculture of violence. *Crime and Delinquency, 50(1)*, 43−59.

Survey Research Centre. (2011). *Guidelines for best practice in cross cultural surveys. Full guidelines* (3rd ed.). Michigan: Survey Research Centre, Institute for Social Research, University of Michigan.

Suarez, E., & Gadalla, T. M. (2010). Stop blaming the victim: A meta-analysis on rape myths. *Journal of Interpersonal Violence, 25*(11), 2010-2035. doi:http://dx.doi.org/10.1177/0886260509354503

Sutherland, G., McCormack, A., Pirkis, J., Easteal, P., Holland, K., & Vaughan, C. (2015). *Media representations of violence against women and their children: State of knowledge paper.* Sydney, NSW: ANROWS.

Swim, J. K., & Cohen, L. L. (1997). Overt, covert, and subtle sexism: A comparison between the Attitudes Toward Women and Modern Sexism Scales. *Psychology of Women Quarterly*, *21*(1), 103-118.

Taylor, N., & Mouzos, M. (2006). *Community Attitudes to Violence Against Women Survey 2006: A full technical report*. Canberra: Australian Institute of Criminology.

Taylor, N., & Putt, J. (2007). *Adult sexual violence in Indigenous and culturally and linguistically diverse communities in Australia*. Trends & Issues in Crime and Criminal Justice No. 345. Canberra: Australian Institute of Criminology.

Taylor, C. A., & Sorenson, S. B. (2005). Community-based norms about intimate partner violence: Putting attributions of fault and responsibility into context. *Sex Roles, 53*(7-8), 573-589. doi:10.1007/s11199-005-7143-7

Thompson, E. H., & Pleck, J. H. (1986). The structure of male role norms. *American Behavioral Scientist, 29*(5), 531-543.

Tougas, F., Brown, R., Beaton, A. M., & Joly, S. (1995). Neosexism: Plus ça change, plus c'est pareil. *Personality and Social Psychology Bulletin*, *21*(8), 842-849.

Tourangeau, R. (2017). Presidential address: Paradoxes of nonresponse. *Public Opinion Quarterly*, *81*(3), 803-814.

Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys. *Psychological Bulletin, 133*(5), 859-883.

Tourangeau, R., Rips, L. J., & Rasinski, K. (2009). *The psychology of survey response*. Cambridge: Cambridge University Press.

Ullman, S. E. (1996). Social reactions, coping strategies, and self-blame attributions in adjustment to sexual assault. *Psychology of Women Quarterly, 20*(4), 505-526. TBC

Ullman, S. E., & Siegel, J. M. (1995). Sexual assault, social reactions, and physical health. *Women's Health (Hillsdale, NJ), 1*(4), 289-308.

United Nations. (1993). *Declaration on the elimination of violence against women*. New York: United Nations Department of Public information.

United Nations Security Council. (2002). Women, peace and security: Study submitted by the Secretary-General Pursuant to Security Council Resolution 1325 (2000). Retrieved from website https://www.un.org/ruleoflaw/files/womenpeaceandsecurity.pdf

Valliant, R., Dever, J., & Kreuter, F. (2013). *Practical tools for designing and weighting survey samples*. New York: Springer.

Velicer, W. F., Huckel, L. H., & Hansen, C. E. (1989). A measurement model for measuring attitudes towards violence. *Personality and Social Psychology Bulletin, 15*(3), 349-363.

Venerables, W. N., & Ripley, B. D. (2002). *Modern applied statistics with S* (4th ed.). New York: Springer.

Ventura, L. A., Lambert, E., White, T. M., & Skinner, K. (2007). Women and men in jail: Attitudes towards and experiences of domestic violence. *American Journal of Criminal Justice, 31*(2), 37-48.

Vernberg, E. M., Jacobs, A. K., & Hershberger, S. L. (1999). Peer victimization and attitudes about violence during early adolescence. *Journal of Clinical Child Psychology, 28*(3), 386-395. doi:10.1207/S15374424jccp280311

VicHealth. (2006). *Two steps forward, one step back: Community attitudes to violence against women: Progress and challenges in creating safe and healthy environments for Victorian women: A summary of findings.* Melbourne: Victorian Health Promotion Foundation.

VicHealth. (2010). *National Survey on Community Attitudes to Violence Against Women 2009. Changing cultures, changing attitudes – Preventing violence against women. A summary of findings.* Melbourne: Victorian Health Promotion Foundation.

VicHealth. (2014). *Australians' attitudes to violence against women. Findings from the 2013 National Community Attitudes towards Violence Against Women Survey (NCAS)*. Melbourne: Victorian Health Promotion Foundation.

Victorian Indigenous Family Violence Task Force. (2003). *Victorian Indigenous Family Violence Task Force: Final report.* Melbourne: Department for Victorian Communities- Aboriginal Affairs Victoria.

Victorian Law Reform Commission. (2004). *Sexual offences: Final report*. Melbourne: VLRC.

Vinson, T., Rawsthorne, M., Beavis, A., & Ericson, M. (2015). *Dropping off the edge 2015: Persistent communal disadvantage in Australia*. Melbourne: Jesuit Social Services and Catholic Social Services Australia.

Visschers, J., Jaspaert, E., & Vervaeke, G. (2017). Social desirability in intimate partner violence and relationship satisfaction reports: An exploratory analysis. *Journal of Interpersonal Violence, 32*(9), 1401-1420. doi:10.1177/0886260515588922

Visser, P. S., Holbrook, A., & Krosnick, J. A. (2008). Knowledge and attitudes. In W. Donsbach & M. W. Traugott (Eds.), *The Sage Handbook of public opinion research* (pp. 127-160). New York: Sage.

Vold, G., Bernard, T., & Snipes, J. (1998). *Theoretical criminology* (4th ed.). New York: Oxford University Press.

Walker, I. (n.d.). Null hypothesis testing and effect sizes. Retrieved from http://staff.bath.ac.uk/pssiw/stats2/page2/page14/page14.htmll

Walker, S. (1997). When "no" becomes "yes": Why girls and women consent to unwanted sex. *Applied & Preventive Psychology*, *6(*3), 157–166. https://doi .org/10.1016/S0962-1849(97)80003-0

Ward, L. M. (2003). Understanding the role of entertainment media in the sexual socialization of American youth: A review of empirical research. *Developmental Review*, *23*(3), 347–388. https://doi .org/10.1016/S0273-2297(03)00013-3

Warren, P., Swan, S., & Allen, C. T. (2015). Comprehension of sexual consent as a key factor in the perpetration of sexual aggression among college men. *Journal of Aggression Maltreatment & Trauma*, *24*(8), 897–913. https://doi.org/10.1080/ 10926771.2015.1070232

Watt, S. E., Maio, G. R., Rees, K., & Hewstone, M. (2007). Functions of attitudes towards ethnic groups: Effects of level of abstraction. *Journal of Experimental Social Psychology, 43*(3), 441-449.

Webster, K., Pennay, D. W., Bricknall, R., Diemer, K., Flood, M., Powell, A., & Ward, A. (2014). *Australians' attitudes to violence against women: Full technical report, findings from the 2013 National Community Attitudes towards Violence Against Women Survey (NCAS)*. Melbourne: Victorian Health Promotion Foundation.

Weiser, D. A. (2017). Confronting myths about sexual assault: A feminist analysis of the false report literature. *Family Relations, 66(1)*, 46-60.

Weiss, K. G. (2009). "Boys will be boys" and other gendered accounts: An exploration of victims' excuses and justifications for unwanted sexual contact and coercion. *Violence Against Women, 15*(7), 810-834.

Weiss, K. G. (2010). Too ashamed to report: Deconstructing the shame of sexual victimisation. *Feminist Criminology, 5*(3), 286-310.

Weldon, S. & Gilchrist, E. (2012). Implicit theories in intimate partner violence offenders. *Journal of Family Violence*, *27*(8), 761–772.

Widom, C. S. (1989). The cycle of violence. *Science, 244*(4901), 160-166.

Willis, G. B. (2005). *Cognitive interviewing: A tool for improving questionnaire design.* Thousand Oaks, CA: Sage Publications.

Winker, G., & Degele, N. (2011). Intersectionality as multi-level analysis: Dealing with social inequality. *European Journal of Women's Studies, 18*(1), 51-66. doi:10.1177/1350506810386084

Wolfgang, M. E., & Ferracuti, F.,& Mannheim, H. (1967). *The subculture of violence: Towards an integrated theory in criminology.* London: Tavistock Publications.

Wolfgang, M. E., & Ferracuti, F. (1982). *The subculture of violence: Towards an integrated theory in criminology.* Beverly Hills: Sage Publications.

Worden, A. P., & Carlson, B. E. (2005). Attitudes and beliefs about domestic violence: results of a public opinion survey: II. Beliefs about causes. *Journal of Interpersonal Violence, 20*(10), 1219-1243. doi:10.1177/0886260505278531

World Health Organization. (2002). *World report on violence and health.* Geneva: WHO.

World Health Organization. (2010). *Preventing intimate partner and sexual violence against women: Taking action and generating evidence*. Geneva: WHO.

Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, *73*(1), 73-90.

Wright, B. D., & Masters, G. N. (1982). *Rating scale analysis: Rasch measurement*. Chicago: Mesa Press.

Wundersitz, J. (2010). *Indigenous perpetrators of violence: Prevalence and risk factors for offending* (AIC Reports, Research and public policy series no. 105). Canberra: Australian Institute of Criminology.

Yamawaki, N. (2007). Rape perception and the function of ambivalent sexism and gender-role traditionality. *Journal of Interpersonal Violence Against Women, 22*(4), 406-423.

Yamawaki, N., Ochoa-Shipp, M., Pulsipher, C., Harlos, A., & Swindler, S. (2012). Perceptions of domestic violence: The effects of domestic violence myths, victim's relationship with her abuser, and the decision to return to her abuser. *Journal of Interpersonal Violence, 27*(16), 3195-3212. doi:10.1177/0886260512441253

Yamawaki, N., Ostenson, J., & Brown, C. R. (2009). The functions of gender role traditionality, ambivalent sexism, injury, and frequency of assault on domestic violence perception: A study between Japanese and American college students. *Violence Against Women, 15*(9), 1126–1142.

Yoshihama, M. (2008). Appendix B. Literature on intimate partner violence in immigrant and refugee communities: Review and recommendations. In M. Runner, M. Yoshihama & S. Novick, *Intimate partner violence in immigrant and refugee communities: Challenges, promising practices and recommendations*. Princeton, NJ: Robert Wood Johnson Foundation.

Yoshioka, M., DiNoia, J., & Ullah, K. (2001). Attitudes toward marital violence: An examination of four Asian communities. *Violence Against Women, 7*, 900-926. doi:10.1177/10778010122182820

Yoshioka, M. R., & Choi, D. Y. (2005). Culture and interpersonal violence research: Paradigm shift to create a full continuum of domestic violence services. *Journal of Interpersonal Violence*, *20*(513). Retrieved January 24, 2014 from http://jiv.sagepub.com/content/20/4/513.

Yassour-Borochowitz, D., & Goussinsky, R., (2006). The interplay between attitudes towards violence and violent behaviour. Cultural and gender differences. *Family Violence and Sexual Assault Bulletin,* 22(3/4), 30-41.

Yount, K. M., Halim, N., Hynes, M., & Hillman, E. R. (2011). Response effects to attitudinal questions about domestic violence against women: A comparative perspective. *Social Science Research, 40*(3), 873-884. doi:10.1016/j.ssresearch.2010.12.009

Zinzow, H. M., & Thompson, M. (2015). Factors associated with use of verbally coercive, incapacitated, and forcible sexual assault tactics in a longitudinal study of college men. *Aggressive Behavior*, *41*(1), 34-43.

ANROWS

AUSTRALIA'S NATIONAL RESEARCH ORGANISATION FOR WOMEN'S SAFETY

to Reduce Violence against Women & their Children