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Experiences of Reproductive Coercion in Queensland Women

Elizabeth Price,[1] Leah S. Sharman,[2] Heather A. Douglas, PhD,[2] Nicola Sheeran, PhD,[3] and Genevieve A. Dingle, PhD[2]

Abstract
Reproductive coercion is any interference with a person's reproductive autonomy that seeks to control if and when they become pregnant, and whether the pregnancy is maintained or terminated. It includes sabotage of contraceptive methods and intervention in a woman's access to health care. Our study sought to explore the prevalence and associations with reproductive coercion within Queensland, Australia, where legislation addressing domestic violence and abortion are largely state based and undergoing a period of law reform. The study was a retrospective analysis of 3,117 Queensland women who contacted a telephone counseling and information service regarding an unplanned pregnancy. All data were collected by experienced counselors regarding circumstances within a current pregnancy between January 2015 and July 2017. Overall, experience of current domestic violence was significantly more likely to co-occur with reproductive coercion (21.1%) compared with reproductive coercion identified in the absence of other domestic violence (3.1%). Furthermore, significantly more mental health issues were reported by 36.6% of women affected by reproductive coercion, compared with 14.1% of women with

[1]Children by Choice, Brisbane, Queensland, Australia
[2]The University of Queensland, Brisbane, Australia
[3]Griffith University, Brisbane, Queensland, Australia

Corresponding Author:
Leah S. Sharman, School of Psychology, The University of Queensland, St Lucia, Brisbane, Queensland 4072, Australia.
Email: l.sharman1@uq.edu.au

no reproductive coercion present. Disclosure for reproductive coercion, violence, and mental health issues was much higher among women who made a repeat contact to the counselors about their pregnancy (17.8%) compared with those who disclosed at first contact (5.9%). These findings demonstrate the importance for health services to ensure that appropriate screening (and re-screening) for reproductive coercion is completed as a distinct part of screening for violence during a health care relationship.

Keywords
unplanned pregnancy, reproductive coercion, domestic violence, intimate partner violence, mental health

Reproductive coercion is generally considered to be part of intimate partner violence and is underlined by a woman's compromised ability to use—or have access to—safe contraceptive methods (Clark, Allen, Goyal, Raker, & Gottlieb, 2014). It is used to maintain power and control within a relationship, with perpetrators drawing on physical, psychological, sexual, economic, and other strategies to reproductively coerce (Miller, Jordan, Levenson, & Silverman, 2010). For example, a woman may be threatened with physical harm if she does not become pregnant, continue a pregnancy, or terminate a pregnancy, or she may be psychologically intimidated to prevent her from terminating a pregnancy. Behaviors associated with reproductive coercion include sabotaging birth control such as throwing away contraceptive pills, forced unprotected sex, or intentional misuse of condoms, or financially preventing the woman from obtaining forms of contraception. Importantly, there is no single linear narrative in women's experiences of reproductive coercion. Both nonconsensual and consensual sex may be associated with reproductive coercion (Douglas & Kerr, 2018). For example, a perpetrator may coerce sex to establish a woman's pregnancy or, separately, an unplanned pregnancy may result from consensual sex, with a perpetrator then attempting to control the woman's pregnancy outcome.

Unsurprisingly, clear associations have been found between reproductive coercion, unintended pregnancy, and domestic violence, as well as higher rates of abortion among women in relationships where there is domestic violence (Coker, 2007; Cripe et al., 2008; Fisher et al., 2005; Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006; Leung, Leung, Chan, & Ho, 2002; Pallitto et al., 2013; Sarkar, 2008).

For the purposes of this article and in alignment with the collected service data, we used the below definition, which was adapted from a number of

definitions of reproductive coercion (see American College of Obstetricians and Gynecologists, 2013; Marie Stopes Australia, 2018; Moore, Frohwirth, & Miller, 2010):

> Reproductive coercion is any perpetrator behavior aimed at establishing and maintaining power and control over a person, by interfering with their reproductive autonomy, denying them control, decision-making and access to options regarding reproductive health choices. These behaviors may include pregnancy pressure, contraceptive sabotage, and pregnancy outcome control.

Our definition specifically removes reference to the perpetration of reproductive coercion as occurring within intimate or dating relationships (i.e., not limited to perpetrators who are, were, or wish to be in a relationship with those they coerce). This term was deliberately removed from our working definition of reproductive coercion to recognize that family members also engage in forms of reproductive coercion. This form of reproductive coercion is also recognized in Queensland state legislation in the Domestic and Family Violence Protection Act (2012).

Reproductive Coercion: Prevalence and Associations

Reproductive coercion can occur both with and without the presence of other forms of violence and control, with population estimates placing overall prevalence at approximately 9% of women in America and 18.5% among partnered women in rural France (Black et al., 2010; Clark et al., 2014; McCauley, Falb, Streich-Tilles, Kpebo, & Gupta, 2014; Miller & Silverman, 2010; Moore et al., 2010; Rosenbaum, Zenilman, Rose, Wingood, & DiClemente, 2016). However, rates as high as 40% have been found among women attending sexual and reproductive health services in low socioeconomic communities (Nikolajski et al., 2015). Reproductive coercion has been less commonly investigated within developing countries, with only two published studies, to the authors' knowledge, conducted within a developing country. The first study conducted in India primarily focused on general intimate partner violence and associations with contraceptive use among married couples and did not provide an estimate of reproductive coercion (Forrest, Arunachalam, & Navaneetham, 2018). The other was a large study on prenatal distress as a consequence of reproductive coercion in a sample of Liberian women (Willie & Callands, 2018). The prevalence of reproductive coercion in this sample of women was 9% and showed that those who experienced reproductive coercion showed greater prenatal distress compared with those

who did not report reproductive coercion even after controlling for age, education, relationship status, and employment.

Because of the relatively limited research in this area, attempts to understand the prevalence of reproductive coercion that co-occur with commonly understood forms of domestic violence, such as physical or emotional abuse, have been limited and inconsistent. Current estimates primarily drawn from U.S. samples provide varying ranges from as high as 74% to as low as 8.6% of co-occurring reproductive coercion with domestic violence (Clark et al., 2014; Miller et al., 2007; Moore et al., 2010; Northridge, Silver, Talib, & Coupey, 2017). This evidence suggests that women who experience domestic violence are 2 times as likely to have a male partner refuse contraception and experience an unplanned pregnancy and are more likely to experience five or more births than women without experiences of violence (Miller, Decker, et al., 2010). On the contrary, data on the prevalence of reproductive coercion in the absence of other forms of domestic violence show somewhat more consistent reports of 45% to 53.4% observed in health care settings (Clark et al., 2014; Northridge et al., 2017). However, the relationship between characteristic domestic violence and reproductive coercion is complex with recent research indicating that young couples who experience reproductive coercion used toward either partner to encourage pregnancy may actually be at risk of future psychological partner violence (Willie et al., 2017).

Risk factors related to a woman's risk of reproductive coercion are her age, ethnic background, and relationship status (Grace & Anderson, 2018). Overall, younger women (aged 18-20 years) are at a greater risk for reproductive coercion whether other forms of domestic violence are present or not (Miller et al., 2014; Miller & Silverman, 2010; Northridge et al., 2017). Considerably higher prevalence of reproductive coercion appears to be present for African American women, with significant associations found between reproductive coercion and race/ethnicity (Clark et al., 2014; Holliday et al., 2017; Moore et al., 2010; Nikolajski et al., 2015). Furthermore, women with experiences of reproductive coercion are twice as likely to report being single or dating and 6 times more likely to report being unsure about their relationship status than women in a long-term relationship (Clark et al., 2014). Despite the absence of prevalence data regarding reproductive coercion in Australia, we do know that Australian women who experience characteristic domestic violence are at most risk between the ages of 18 and 39 years, when they are separating from partners, about to end a relationship, or have recently ended a relationship (Australian Institute of Health and Welfare [AIHW], 2018).

There has been only limited exploration of mental health problems that may co-occur with reproductive coercion in the literature, with only one such study investigating this issue and finding that reproductive coercion may be

a large contributor to adverse mental health (McCauley et al., 2014). One other recent study investigating reproductive coercion on pregnant Liberian women examined a similar construct of prenatal distress and similarly found that women with current experiences of reproductive coercion showed more prenatal distress than women with no current experience of reproductive coercion (Willie & Callands, 2018). More broadly, the literature on domestic violence and mental health clearly shows interactions, with women experiencing domestic violence, especially while pregnant, more likely to experience an increased risk of depression, posttraumatic stress disorders, and suicidality (Campbell, 2002; Karmaliani et al., 2008). Furthermore, because of the scarcity of research into reproductive coercion, it is unknown at what stages of pregnancy women experiencing reproductive coercion seek health care and whether, like women experiencing characteristic domestic violence, they are more likely to access health care when gestation is at a later stage than women without experiences of reproductive coercion (Colarossi & Dean, 2014; Foster & Kimport, 2013).

Reproductive Coercion Among Australian Women

Within Australia, evidence suggests that one in six women report domestic or sexual violence from a current or former partner, and women are 3 times more likely than men to experience this violence (Australian Bureau of Statistics [ABS], 2016; AIHW, 2018). However, the prevalence of reproductive coercion is unknown. Unfortunately, with no formal assessment of reproductive coercion included within national household surveys on personal safety, and no profiling included within domestic violence data, we still do not know the extent of this problem among Australian women (ABS, 2016). Notably, statutory frameworks addressing issues of domestic violence and abortion are largely state based. Prior to data collection in Queensland, the state had expanded the definition of domestic violence in civil protection laws to encompass coercive control (Domestic and Family Violence Protection Act, 2012), but abortion was a criminal offense under the state's criminal code (Criminal Code Act 1899, s224-226 and s282 [Qld]). Furthermore, Australia is a culturally diverse country comprising Aboriginal or Torres Strait Islanders (ATSI), representing the oldest continuous culture known, as well as populations established through colonization and diverse immigration. Because of this, cultural constructions of gender roles and of who owns pregnancy decisions influence if and to what extent behaviors may be construed or experienced as coercive.

Some early data (Marie Stopes Australia, 2018) suggest that in clinical abortion settings in Australia, reproductive coercion is disclosed on a weekly

and sometimes daily basis. These disclosures include both coercion into pregnancy and threats to leave a relationship if the pregnancy was not terminated, with the most common type of response in this setting reported to be the concealment of pregnancies and their termination due to fear of the partner (Marie Stopes Australia, 2018). Indeed, associations among domestic violence, unplanned pregnancy, and abortion are well established within the broader literature (Hall, Chappell, Parnell, Seed, & Bewley, 2014; Miller & Silverman, 2010), with a higher prevalence of unplanned pregnancy and abortion for reproductively coerced women, and within populations of women known to have experienced domestic violence (Miller et al., 2014; Moore et al., 2010).

Because of the current lack of available data on reproductive coercion overall, and within Australia, the main purpose of this research was to understand the prevalence of reproductive coercion among women experiencing unintended pregnancy in a sample of Queensland women, both with co-occurring domestic violence and without it, and how this compares with current published studies. A secondary aim was to understand whether this prevalence is heightened among women who are ATSI, or culturally and linguistically diverse (CALD). Furthermore, associations with mental health issues, relationship status, and co-occurring domestic and sexual violence were explored.

We expected that compared with women with no current experience of reproductive coercion, Queensland women disclosing reproductive coercion would (a) show a prevalence of reproductive coercion higher than the overall U.S. population estimate as our sample is from a pregnancy advice and counseling service, and that this prevalence would be higher among ATSI and CALD women; (b) be more likely to experience co-occurring domestic violence; (c) be more likely to self-report mental health issues; (d) be younger (to directly compare with the U.S. sample, women aged 16-19 years were compared with women aged 25-29 years); (e) be single or in a casual relationship; and (f) have higher gestation at time of first contact with a counseling service for unplanned pregnancy. Finally, we expected that women experiencing reproductive coercion who report co-occurring experiences of other forms of domestic violence would report more mental health issues and show a greater proportion of first contacts with counselors at later stages of pregnancy (post-12 weeks) compared with women experiencing reproductive coercion without co-occurring domestic violence. We also expected that these women would be most likely to identify as separated, rather than single or in a casual relationship compared with women who report experiencing reproductive coercion in the absence of other forms of domestic violence. As both the domestic violence and reproductive coercion literature identify that younger women are most at risk for these forms of

violence, given the broader range of ages identified among the domestic violence literature, we predicted that those who report co-occurring domestic violence would be older than women who report reproductive coercion in the absence of other forms of violence.

Method

The following data were collected between January 2015 and June 2017 by an independent organization providing unbiased information and counseling on all unplanned pregnancy options in Queensland, Australia (i.e., abortion, adoption, and parenting), postabortion counseling, and support to access an abortion.

Nature of Service and Data Collection

Data used in this article were gathered by counselors in their contacts with or on behalf of a person seeking support in relation to an unplanned or unwanted pregnancy. Each session was manually recorded via a standard form for each contact. No identifying information of the contacts was recorded to maintain privacy. These data document a wide scope of issues that may affect a woman[1] during their pregnancy and record only the absence or presence of these issues from information known regarding their circumstances at each contact with the counselors.

Contacts with each woman were captured as either the "first contact" or a "repeated contact"; however, given the absence of identifying information, multiple contacts with an individual cannot be linked. As such, we cannot accurately report variables in terms of proportion of women across all contacts with the counselors, only in their disclosure at either "first" or "repeated" contacts. Therefore, we have taken care and caution in comparing and interpreting the data in this article.

The study used a fully deidentified archival dataset. Callers to the service were informed that the information recorded is stored securely, that they have the right to access or amend incorrect information, and that data related to the call are collected and used for reporting. Ethical approval for this research was obtained through the university's human research ethics committee.

Measures

As this article focuses on reproductive coercion and its associations, the following measures were chosen for inclusion within this research to address our research questions.

Reproductive coercion and domestic violence. Counselors measured the presence of reproductive coercion from a single perpetrator action from any of the three temporal domains of reproductive coercion: pregnancy pressure, contraceptive sabotage, or pregnancy outcome control. Although it is recognized that reproductive coercion is one of the behaviors underpinning domestic violence, reproductive coercion was identified independently of other forms of domestic violence. Consequently, where there was no other identified intention of control (i.e., control and violence within other aspects of the relationship not related to pregnancy), reproductive coercion was not identified as co-occurring with domestic violence.

Mental health. Counselors determined the presence of mental health issues if the woman reported a mental health condition experienced by the woman or her partner. Counselors noted that the mental health of the partner was rarely recorded and typically co-occurred with the woman's own self-reported pre-existing mental health condition.

Gestation. At first contact with the counselor, gestation was recorded when disclosed by the woman. This recording relies on either the woman's knowledge from an examination by her health care practitioner or an estimate of when she believes she became pregnant.

Demographic variables. Demographic information used in primary data analysis were also recorded when disclosed throughout the conversation with counselors. These were recorded as age, ethnicity, and relationship status. Ages were recorded within brackets and ranged from "13 years and below" to "above 45 years of age." Ethnicity was recorded when the caller indicated their identification as ATSI or as coming from a CALD background.

Participants

Over the data collection period, 3,117 women were recorded at first contact, and 3,644 repeat contacts were made by these women with counselors due to an unintended pregnancy. Of all women who contacted counselors, 67.9% sought information regarding abortion, 5.5% requested postabortion counseling, 4.3% wanted parenting information, and 2.3% were seeking information about adoption. Overall, these contacts comprised phone calls (77.9%), emails (13.9%), face-to-face contact (3.2%), and text messages (5.1%). Available postcode data reveal that women contacted this organization from across Queensland including far north and regional areas, from Cape York, Central, and Western Queensland to metropolitan areas in the South East.

Results

Analytical Strategy

Because of the policy of anonymity at the service, no identification information was recorded about particular women; thus, data from multiple contacts made to the service in relation to a particular woman were not able to be linked. For this reason, significance testing was only conducted in relation to a woman's first contact with the counselors to maintain independence of sampling. To ensure significance testing of results was not inflated, any repeated contacts to counselors were explored via percentages of overall contacts. All analyses were performed in SPSS version 24 (IBM, 2016). Table 1 provides a breakdown of percentages and sample sizes for comparison across groups for each explored variable at first contact.

Reproductive Coercion and Domestic Violence

Reproductive coercion was reported among 5.9% of women at first contact and 17.8% of the repeat contacts.[2] Those who identified reproductive coercion at first contact were equally likely to identify co-occurring domestic violence (55.2%), compared with those who identified reproductive coercion independent of violence. However, those who identified experiencing domestic violence were more likely to identify the presence of reproductive coercion (21.1%) than women with no other form of domestic violence reported (3.1%), $\chi^2(1, N = 3,117) = 237.86, p < .001$. For women who contacted counselors more than once (repeat contacts), 34% identified co-occurring reproductive coercion and only 5.7% of those identified only reproductive coercion with the absence of other forms of domestic violence.

In total, 147 women identified as ATSI[3] at first contact. Of these, 15 (10.2%) identified as experiencing reproductive coercion at first contact with counselors, with 11 of those 15 women (73.3%) identified as having co-occurring experiences of domestic violence. ATSI women who identified experiences of domestic violence were more likely to identify reproductive coercion (19.6%) compared with ATSI women with no experiences of other forms of domestic violence (4.4%). CALD women also showed a small number of disclosures at first contact with 15 (6.1%) of 247 women disclosing reproductive coercion. CALD women appeared equally likely to identify co-occurring violence (46.7%) or the absence of violence. However, those CALD women who experienced violence were generally more likely to identify the presence of reproductive coercion (25.9%) than CALD women with no experience of violence (3.6%).

Table 1. Comparison of Measured Variables Across Experiences of Reproductive Coercion at First Contact With an Organization Regarding Unplanned Pregnancy Options.

	Reproductive Coercion (*n* = 183)			No Coercion (*n* = 2,934)		
	All Women %	Violence % (*n* = 101)	No Violence % (*n* = 82)	All Women %	Violence % (*n* = 377)	No Violence (*n* = 2,557)
ATSI (*n* = 15)						
CALD (*n* = 15)						
Domestic violence	55.2 (101)	73.3 (11)	46.7 (7)	12.8 (377)	34.1 (45)	8.6 (20)
Mental health	36.6 (67)	71.6 (48)	28.4 (19)	14.1 (414)	37.4 (35)	10.7 (19)
Age[a] (years)						
≤13	0 (0)	0 (0)	0 (0)	0.1 (4)	0 (0)	0.2 (4)
14-15	1.6 (3)	1 (1)	2.4 (2)	1.2 (35)	0.5 (2)	1.3 (33)
16-19	11.5 (21)	9.9 (10)	13.4 (11)	7.2 (210)	4.2 (16)	7.6 (194)
20-24	18.6 (34)	16.8 (17)	20.7 (17)	12.5 (367)	20.7 (78)	11.3 (289)
25-29	22.4 (41)	27.7 (28)	15.9 (28)	10.2 (298)	18.6 (70)	8.9 (228)
30-34	9.8 (18)	10.9 (11)	8.5 (7)	9.1 (267)	16.7 (63)	8 (204)
35-39	13.7 (25)	15.8 (16)	11 (9)	6.9 (202)	13.8 (52)	5.9 (150)
40-44	2.2 (4)	2 (2)	2.4 (2)	3.4 (100)	3.7 (14)	5.9 (86)
≥45	0.5 (1)	0 (0)	1.2 (1)	0.5 (15)	1.1 (4)	0.4 (11)
Relationship status[a]						
Single	15.8 (29)	13.9 (14)	18.3 (15)	15.6 (458)	22.5 (103)	13.9 (355)
Separated	40.4 (74)	58.4 (59)	18.3 (15)	10.3 (303)	44 (166)	5.4 (137)
Married/Defacto	14.2 (26)	9.9 (10)	19.5 (16)	18.1 (532)	8.2 (31)	19.6 (501)
Casual	3.8 (7)	2 (2)	6.1 (5)	2.8 (83)	1.9 (7)	3 (76)
Ongoing	18.6 (34)	11.9 (12)	26.8 (22)	15.3 (449)	11.7 (44)	15.8 (405)
Other	0.5 (1)	0 (0)	1.2 (1)	0.4 (12)	0.8 (3)	0.4 (9)
Gestation in weeks[a]						
≤6	18.0 (33)	12.9 (13)	24.4 (20)	25.0 (733)	14.1 (53)	26.6 (680)
≤12	46.4 (85)	52.5 (53)	39 (32)	40.3 (1,183)	52 (196)	38.6 (987)
≤16	13.7 (25)	16.8 (17)	9.8 (8)	8.1 (237)	14.9 (56)	7.1 (181)
≤20	6.0 (11)	5.9 (6)	6.1 (5)	3.3 (97)	5.6 (21)	3 (76)
>20	5.5 (10)	5.9 (6)	4.9 (4)	1.5 (44)	0.5 (2)	1.6 (42)

Note. ATSI = Aboriginal and Torres Strait Islanders; CALD = culturally and linguistically diverse.
[a]Sum does not equal 100% because some women did not provide or were unsure of these details.

Mental Health

Mental health issues that were disclosed at first contact were more likely to co-occur with reproductive coercion (36.6%) than in the absence of reproductive coercion (14.1%), $\chi^2(1, N = 2{,}458) = 66.83$, $p < .001$. For repeat contacts, disclosure of mental health issues was substantially higher at 60.4% of those experiencing reproductive coercion compared with 35% disclosing mental health issues and no co-occurring reproductive coercion.

At first contact, for those women who disclosed reproductive coercion, a mental health issue was more likely to be disclosed when other forms of

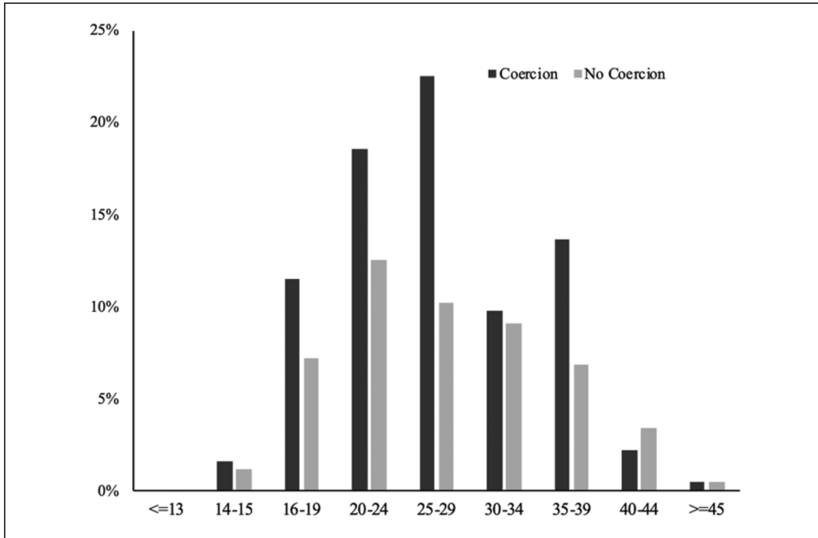

Figure 1. Age ranges among women experiencing reproductive coercion at first contact with an organization regarding unplanned pregnancy options.

domestic violence were also reported (47.5%) compared with when domestic violence was absent (23.2%), $\chi^2(1, N = 183) = 11.57, p = .001$. When no reproductive coercion was present, mental health issues were still more likely, albeit less so, to be present among those who reported experiencing domestic violence (37.4%) compared with those with mental health issues, but with no reports of domestic violence (10.7%), $\chi^2(1, N = 2{,}934) = 193.61, p < .001$.

Age, Relationship Status, and Gestation

Compared with women who did not identify reproductive coercion, all women who disclosed reproductive coercion were most likely to be between the ages of 25 and 29 years (22.4%; see Figure 1), identify as separated (40.4%; see Figure 2), and presented to the counseling service when gestation was greater than 12 weeks (25.2%), $\chi^2(1, N = 2{,}458) = 14.36, p < .001$. When comparing women aged 16 to 19 years with women aged 25 to 29 years, there was no difference in the proportion of women of either age group disclosing reproductive coercion, $\chi^2(1, N = 570) = 1.28, p = .26$.

For those who disclosed reproductive coercion that co-occurred with other forms of domestic violence, they were more likely to be older than women who did not disclose other forms of domestic violence. A total of 28.7% of

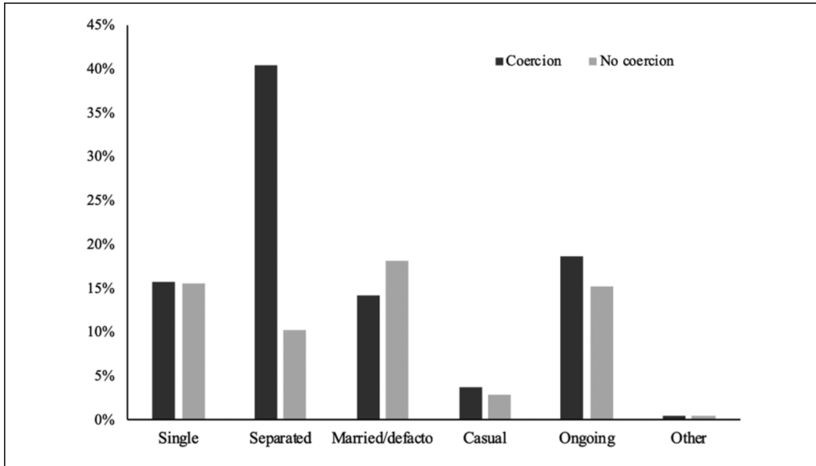

Figure 2. Frequency of relationship status among women experiencing reproductive coercion at first contact with an organization regarding unplanned pregnancy options.

women above 30 years reported experiencing both domestic violence and reproductive coercion, compared with 23% of women who only experienced reproductive coercion. And, 52.4% of women below 30 years reported reproductive coercion in the absence of other forms of domestic violence, compared with 45.4% of women below 30 years who identified both reproductive coercion and domestic violence. Women identifying co-occurring domestic violence were most likely to identify as separated (58.4%) compared with women who did not disclose other forms of domestic violence, who were most likely to report that they were in an ongoing relationship (26.8%). Women experiencing both domestic violence and reproductive coercion were more likely to make first contact after 12 weeks of gestation (21%) than reproductively coerced women with no other forms of domestic violence reported (11.7%) (see Table 1 for all comparisons). For women who disclosed experiences of reproductive coercion that co-occurred with domestic violence, there was no overall difference for women aged 16 to 19 years compared with those aged 25 to 29 years, $\chi^2(1, N = 570) = 2.50, p = .11$.

Discussion

This study aimed to identify the proportion of women experiencing reproductive coercion in an Australian context and understand how this may co-occur

with other forms of domestic violence and mental health issues. Our results revealed that reproductive coercion is occurring among Queensland women, and while a number of women experience this coercion independently of other forms of domestic violence, it most often occurs in its presence. This is consistent with the understanding of domestic violence as a pattern of behavior involving a range of tactics designed to control the victim (Stark, 2007).

Contrary to our prediction, the overall prevalence of reproductive coercion in this sample reported at first contact with counselors was marginally smaller than the U.S. population estimate. Given the lower prevalence reported after first contact with counselors, we speculate that this result may have been due to the inadequacy of a single contact to establish a relationship with a counselor to safely disclose this information. Because of this, repeat contacts with the counselors may provide a better understanding of the prevalence of reproductive coercion among Queensland women, with disclosures approximately 3 times higher in this group. However, interpretations of repeat contacts with women should still be cautioned as the nature of these data do not allow for each individual to be connected longitudinally. Therefore, we cannot know how many times an individual woman would have contacted the service regarding a single pregnancy, and likely, women experiencing greater difficulties may have needed to contact counselors more times than women with fewer difficulties associated with their pregnancy, thus inflating rates of disclosure. On the contrary, as predicted, it was common for women identifying as ATSI or CALD to experience reproductive coercion, with their prevalence even higher than women who did not identify as ATSI or CALD when both domestic violence and reproductive coercion were identified. This result is similar to previous research conducted in the United States that has found that experiences of both domestic violence and reproductive coercion among African American and Latina women are particularly high (Clark et al., 2014; Moore et al., 2010; Nikolajski et al., 2015).

Our results also revealed a clear association between reproductive and mental health issues. This association was particularly pronounced among women who repeatedly contacted counselors (with the caveat of the limitations mentioned above). However, it was generally much higher for women who disclosed experiencing reproductive coercion compared with those with no identified reproductive coercion both at first and repeated contacts. As expected, mental health issues were greater among women experiencing reproductive coercion alongside other forms of domestic violence compared with women who were only experiencing reproductive coercion in the absence of other forms of domestic violence. The high percentage of mental health issues reported by women who have been reproductively coerced, both with and without other forms of domestic violence, raises

further research questions regarding the onset of mental health issues and whether reproductive coercion may increase the complexity or severity of these issues. Furthermore, it is paramount to understand whether access to support from health care providers who identify reproductive coercion also screen, and provide assistance, for mental health issues that may co-exist with reproductive coercion.

Our findings revealed a different pattern of results regarding age, relationship status, and gestation to those found in previous research (Colarossi & Dean, 2014; Foster & Kimport, 2013; Miller et al., 2014). Our predictions with respect to age of the woman were partially supported. That is, despite a high prevalence of reproductive coercion with or without other forms of co-occurring domestic violence for women below 30 years of age, those who were older had a greater risk of experiencing other forms of domestic violence alongside reproductive coercion. However, women aged 16 to 19 years displayed no difference in the proportion of disclosure for experiences of reproductive coercion compared with women aged 25 to 29 years. Although across all groups there was a clear pattern of increased risk of reproductive coercion and other forms of domestic violence among those aged 16 to 29 years, it is likely that we did not find the same age ranges affected by reproductive coercion as previous research because Miller et al.'s (2014) study was only able to recruit women aged between 16 and 29 years, compared with the current, broader sample of Queensland women. Nevertheless, perhaps younger women are more vulnerable to reproductive coercion that results in unwanted pregnancies that they carry to term, this has been suggested among other samples investigating continuing pregnancies and intimate partner violence (Bourassa & Bérubé, 2007), and may explain their absence in representation among our sample. If this is true, it has significant implications for all pregnancy care settings by necessitating thorough reproductive coercion screening in antenatal settings and in specialist support services to pregnant and parenting young women. More research is needed to further understand and explore pregnancy pressure that may be experienced by young women who may not present in traditional settings for pregnancy.

Parallels were clear with the results of this study on timing of contact with a health service and previous research on domestic violence for timing of terminations of pregnancy (Colarossi & Dean, 2014; Foster & Kimport, 2013). Queensland women who disclosed experiences of reproductive coercion at first contact with counselors were more likely than women with no reported experience of reproductive coercion to make contact after 12 weeks of gestation, and this was slightly higher for those who disclosed experiencing co-occurring domestic violence. Contacts made at later stages of a pregnancy pose significant barriers for Queensland women who wish to terminate that

pregnancy (Jones & Kooistra, 2011). Specifically, medication terminations of pregnancy can be performed up to 9 weeks of pregnancy, which is low risk and can be prescribed by a practitioner who has been trained in medical abortion provision (this includes clinics specializing in abortion and general practitioners). In Queensland, pregnancies later than 9 weeks require surgery to terminate the pregnancy, which substantially increases financial and legal risks for the woman, with both cost and risk rising as pregnancies progress. Furthermore, there are a limited number of doctors capable of performing this lengthier and higher risk procedure, especially in Queensland where appropriate abortion training for doctors, and their willingness to undertake it, has historically been lacking (de Costa, Russell, & Carrette, 2010; Douglas, Black, & de Costa, 2013; Portmann, 2008). This difficulty to procure a later-term abortion is additionally compounded in Queensland (especially in regional areas) given strict abortion laws, which were left largely unchanged since 1899 at the time of writing this (Criminal Code Act 1899, s224-226 and s282 [Qld]; *R v. Bayliss and Cullen*, 1986).

Given the considerable association between reproductive coercion and domestic violence, the results from this research invite further research on their temporal associations. Specifically, it is important to understand when and how domestic violence and coerced reproduction are linked (i.e., does reproductive coercion surface before other forms of domestic violence), and what risk factors may be involved in this interplay. Regardless of the order in which these issues present, the number of women experiencing reproductive coercion both in the presence and absence of other forms of domestic violence has significant implications for screening and responding in health settings. It obliges health providers to ensure that appropriate screening for reproductive coercion is completed as a distinct part of screening for issues that may affect a woman's choices and her safety and is not assumed to overlap with commonly understood domestic violence for all women. Furthermore, it is important to note that, given that the group of women experiencing reproductive coercion were also most likely to identify as "separated," it is possible that this group of women were attempting to remove themselves from potentially abusive relationships. By seeking information regarding a termination of pregnancy, they may have been attempting to ensure any potential child is not raised in a violent environment (Chibber, Biggs, Roberts, & Foster, 2014; Ely & Murshid, 2017).

Limitations

There were limitations in the data set concerning an inability to link multiple contacts made in relation to individual women. We recognize a further

limitation that several biases may be present in both the woman's presentation of their own circumstances and counselor's interpretations. Women contacting the service often did so to get abortion access support. As such, they may construct a particular narrative around their experience to secure resources. However, the term "reproductive coercion" is not widely known in the communities of women contacting the service, with counselors noting that this term was usually offered to the woman as a term to explain or summarize the account of events she described. For example, a conversation about future contraception options may unearth past experiences of contraceptive sabotage. As the presence and/or absence of reproductive coercion was determined by the counselor and not against a standardized measure, counselor bias may determine the threshold for a behavior considered coercive. Future research and health care settings generally should consider the use of simple standardized measures to reduce potential bias or inconsistency when judging if reproductive coercion has occurred.

Conclusion

Queensland women experiencing current reproductive coercion were more likely to have other co-occurring experiences of domestic violence, mental health issues, be separated from their partner, and make themselves known in a health care setting at a later gestational stage than women without experiences of reproductive coercion. The significant numbers of women experiencing reproductive coercion both in the presence and absence of other forms of domestic violence has important implications for screening and responding in health settings and obliges health agencies to ensure that appropriate screening for reproductive coercion is completed as a distinct part of screening for violence. Specifically, detecting the presence of reproductive coercion through screening facilitates responses including education about the nature and intent of perpetrator behaviors, provision of information and safe access to contraception, and abortion with the aim of supporting the woman to regain and maintain her reproductive autonomy. Furthermore, disclosure of reproductive coercion may be more likely reported on subsequent contacts suggesting that disclosure may be dependent on a trusting relationship between the woman and the counselor. It is likely that repeated screening will only improve detection of reproductive coercion, so the emphasis is on asking soon and often.

Authors' Note

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ORCID iD

Leah S. Sharman https://orcid.org/0000-0003-1989-6380

Notes

1. We acknowledge that although many persons may have been in contact with counselors regarding pregnancies who identify as gender-nonbinary, recording of gender within these data has been restricted to binary (male/female) recordings, so for the purposes of consistency with these data, we refer only to "women" within this article.
2. Separate, preliminary data were available for contacts from July to December in 2017 indicating that from the 45 women who identified reproductive coercion at first contact, 55.6% (n = 25) reported coercion into a pregnancy and 40% (n = 18) reported coercion into an abortion (two women reported both types of coercion). Of those women who contacted the service more than once, 81.8% were from women reporting coercion into a pregnancy compared with 16.6% of those reporting coercion into an abortion.
3. The sample size of women in each group identifying as Aboriginal or Torres Strait Islander or as culturally and linguistically diverse was too small to analyze through significance testing.

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Author Biographies

Elizabeth Price is an experienced social worker and is passionate about issues that affect women's reproductive health. She has a special interest in the intersection of domestic violence and reproductive coercion with unplanned pregnancy and abortion. She has led initiatives aimed at enhancing the capacity of abortion providers and health care practitioners to respond to the needs women experiencing reproductive coercion.

Leah S. Sharman is a PhD candidate at the University of Queensland with research interests in women's health, emotion, and the influence of music on mental health and emotion regulation. Her PhD is focused on understanding the functionality of crying and sadness and the impact of gendered socialization in responses to sadness.

Heather A. Douglas, PhD, is an Australian Research Council future fellow and researches in the areas of criminal justice and legal responses to domestic violence and child protection. She was appointed a fellow of the Australian Academy of Law in 2013 and a fellow of the Academy of Social Sciences in Australia in 2017.

Nicola Sheeran, PhD, is a clinical psychologist and lecturer at Griffith University. She has research interests in women and family mental health and at the intersection of clinical and social psychology, particularly in relation to preterm birth, pregnancy decisions, birth, parenting, complex family situations, substance abuse/addictive behaviors, and interventions in these areas.

Genevieve A. Dingle, PhD, is a clinical psychologist and associate professor at the University of Queensland. Her primary research interests are in understanding social issues affecting health and mental health, with particular focus on how groups and communities influence mental health and well-being.