

This is the pre-peer reviewed version of the following article: The effects of intimacy and target sex on direct aggression: Further evidence Cross, C. P. & Campbell, A. Aug 2012 In : *Aggressive behavior*. 38, 4, p. 272-280 which has been published in final form at <http://onlinelibrary.wiley.com/doi/10.1002/ab.21430/full>

## **The Effects of Intimacy and Target Sex on Direct Aggression: Further Evidence**

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## **Abstract**

The effects on aggression of target sex and relationship with the target were investigated using self-report data. One hundred and seventy-four participants (115 female) reported on acts of direct aggression in the last two years towards: intimate partners, known and unknown same-sex targets, and known and unknown opposite-sex targets who were well known, and opposite-sex targets. Women's self-reported aggression was higher towards partners than other targets, replicating previous findings regarding women's intimate partner aggression. Women's aggression was consistently higher towards same-sex than opposite-sex targets, but the effect of knowing the target was inconsistent. Men's self-reported aggression was more frequent towards same-sex than opposite-sex targets – including intimate partners – and more frequent towards known than unknown targets. Results are discussed with reference to a partner-specific reduction in women's fear, and sex differences in threshold for classifying someone as 'known well.' Limitations of the present sample and suggestions for future work are discussed.

Calls have come recently from both evolutionary and social psychological perspectives for aggression researchers to consider the complex interactions between sex and other factors (see, e.g. Cross & Campbell, 2011; Richardson & Hammock, 2007). Sex differences in aggression depend on, among other things, the type of aggression studied (Björkqvist, 1994; Richardson & Hammock, 2007) and the target of the aggression (Archer, 2009; Cross, Tee, & Campbell, 2011). The present study focuses on the latter of these factors.

Studies of direct aggression tend to show large sex differences in the male direction when the target is of the same sex (Archer, 2004, 2009). When the target is an opposite-sex partner, however, women use aggressive acts at least as often as men (Archer, 2000a, 2002; Archer, Fernandez-Fuertes, & Thanzami, 2010; Carney, Buttell, & Dutton, 2007; Cross, Tee, & Campbell, 2011; Graham-Kevan & Archer, 2009; Milardo, 1998; Robertson & Murachver, 2007; Straus, 2008a). This might be because women use more aggression towards intimate partners than other targets, because men use less aggression towards intimate partners than other targets, or because both of these are true. It is therefore necessary to measure how target characteristics affect men's and women's aggression separately. Furthermore, it is necessary to consider both the sex of the target and the degree of intimacy between the target and actor. As outlined below, these effects are frequently confounded and difficult to separate.

## **Effects of target sex**

Studies using vignettes have found that aggression is more likely to be directed towards male than female targets – by both sexes of actor (Harris, 1994). Experimental studies have also reported this effect (Golin & Romanowski, 1977; S. P. Taylor & Epstein, 1967), which indicates that the results from vignette studies are not solely the product of socially desirable responding. This finding is typically explained with reference to acceptability; aggression towards a male target is considered more acceptable and less deserving of third-party intervention than aggression towards a female target (Felson & Feld, 2009).

In contrast to vignette or experimental studies, self-report data indicate that aggression is most frequently directed to same-sex targets (Harris, 1992). This might be because social interactions are most frequent between people of the same sex (Mehta & Strough, 2009; Underwood & Rosen, 2009), which suggests that most conflicts are likely to be between people of the same sex. A meta-analysis by Archer (2004) suggested that when people complete a self-report aggression inventory, both sexes tend to have a same-sex target in mind. Apparently conflicting findings, therefore, seem to suggest both a tendency for aggression to be intrasexual and a tendency for aggression to be directed predominantly at men. This apparent discord might be resolved by considering the moderating effect of the relationship between the aggressor and the target.

## **Relationships between actor and target**

***Intimate partners.*** As noted above, men and women use aggressive acts towards intimate partners with similar frequency. Extant evidence suggests that men are less likely to use aggression towards partners than same-sex targets (Archer, Parveen, & Webb, 2010; Felson et al., 2003). Furthermore, men presented with a hypothetical scenario involving provocation by a female partner or a close female friend report being equally unlikely to use direct aggression towards either (Cross et al., 2011). Such findings can be interpreted with reference to normative beliefs held about aggression towards different targets (see, e.g, Huesmann, 1998; Huesmann & Guerra, 1997) It has been proposed that norms of chivalry prohibit aggression towards women, particularly by men (Felson, 2002). Male aggression towards a female partner is therefore considered more reprehensible and more worthy of intervention by a third party than female aggression towards a male partner. (Felson & Feld, 2009; Sorenson & Taylor, 2005)

Women, unlike men, are more likely to use direct aggression towards a partner than a same-sex other (Archer, Parveen et al., 2010; Hilton, Harris, & Rice, 2000). Furthermore, this appears to be a result of the fact that they are partners, not the fact that they are men: Women presented with hypothetical provocations report being significantly more likely to use aggressive acts towards a partner than towards close friends of either sex (Cross et al., 2011). A similar result was obtained by Richardson and Green (2006), who conducted a self-report study in which participants reported aggression towards a same sex-friend, an opposite-sex friend, and a partner. More

aggression was directed towards intimate partners than towards friends of either sex. Richardson and Green found no interaction between target type and participant sex, however, suggesting that this was true of men as well as women. The analysis might, however, have lacked power to detect interaction between target type and sex because there were only 25 male participants in the study (69 female). We therefore tentatively predict that this pattern of results will be observed for female, but not male, participants.

***Known and unknown targets.*** In a self-report study, Felson et al. (2003) reported that verbal aggression was more frequent towards spouses than towards strangers, but less frequent towards 'other known' targets (a catch-all category including friends, work colleagues, and rivals for one's partner) than strangers. When the target was known in any capacity, however, a smaller proportion of verbally aggressive incidents escalated to physical assault than when the target was a stranger. This analysis was not broken down by sex of target but indicates that knowing a target has an inconsistent effect on verbal aggression but a protective effect against escalation to physical aggression.

Criminal victimisation statistics consistently show that women are more likely to be assaulted by someone they know (Rand & Robinson, 2011; Truman & Rand, 2010). Reports on male victimisation are more variable but indicate that men are assaulted by strangers and people they know with similar frequency (Rand & Robinson, 2011; Truman & Rand, 2010). It should be noted, however, that assaults are more likely to be reported – by victims of either sex – when perpetrated by a stranger than by someone who is known to the victim (Felson, 2008). In most datasets, relationship status is confounded with the

sex of the target. Official crime statistics, for example, might give extensive information about victim characteristics and the relationship between victim and offender, but not report the sex of the offender. (e.g. Rand & Robinson, 2011; Truman & Rand, 2010). In other reports, rates of perpetration or arrest are broken down by sex but victim sex is not reported (e.g. U.S. Department of Justice, 2009). The effect on physical aggression of being an acquaintance or a stranger is therefore not easily separable from the effect of the target's or perpetrator's sex.

### **The present study**

The present study used self-report data on aggression towards five different target groups: partners, targets of the same sex who were known well; targets of the opposite sex who were known well; targets of the same sex who were not known well; and targets of the opposite sex who were not known well. These five types of target were chosen so that the effects of target sex and degree of intimacy could be examined separately. It was decided to use 'known well' vs. 'not known well' as target categories because specifying more specific categories of target might make the questionnaire measure too long for participants and could result in floor effects.

Both sexes were expected to direct more aggression towards same-sex than opposite-sex targets. However, it was hypothesised that this general pattern would be overridden in the case of women's aggression towards intimate partners, which was predicted to be higher than aggression towards other targets. It was predicted that both verbal aggression would be more frequent

towards known than unknown targets for both sexes of respondent, but that physical aggression would be less frequent towards known targets. The effect of knowing the target was examined by respondent and target sex to determine whether these factors interacted.

## **Method**

### **Participants**

The participants in this study were the same as in Cross et al. (2011). Students at universities in the UK were invited to participate by an email which linked to the webpage on which the questionnaire was hosted. No payment was offered for participation. Of the 210 respondents, 174 scored 6 or 7 on the Kinsey scale and were coded as being heterosexual. Of the remaining 36 participants, only 18 scored 1 or 2 on the Kinsey scale and could be coded as gay/lesbian (the remainder scored 4 or 5). Because this was not a sufficient number to make a comparison of those in heterosexual and same-sex relationships, only data from those participants scoring 6 or 7 on the Kinsey scale were analysed. This left 115 women and 59 men. All but 16 respondents were university students. The mean ages of male (20.5) and female (20.2) respondents did not differ ( $F(1, 173) = 0.53, n.s.$ )

### **Procedure**

Respondents completed the questionnaire online. Before the questionnaire was presented, an information page and consent form informed participants of



the nature of the study and reminded them of their right to withdraw from the study at any time without penalty. (A button labelled “Withdraw from this study” was placed at the bottom corner of every page).

## **Measures**

Direct aggression was measured using eight items measuring verbal (e.g. “swear at the other person”) and physical aggression (e.g. “kick, bite, or hit the other person with a fist”). These items were taken from Campbell and Muncer (2008) who reported good internal consistency (Cronbach’s alpha = .84) for the scale.

Participants were asked how often in the last two years they had used each of the acts with each of five different kinds of target: partners, same-sex others whom they knew well, same-sex others whom they did not know well, opposite-sex others whom they knew well, and opposite-sex others whom they did not know well. These responses were coded on a Likert scale as follows: Never (0), 1-3 times (1), 4-6 times (2), 7-9 times (3), and 10 times or more (4).

## **Results**

Results of a principal components analysis (not presented here) indicated that the item measuring verbal threats of physical harm loaded on the physical, rather than the verbal, subscale. The physical subscale therefore consisted of five items while the verbal subscale consisted of three. Despite the small number of items on the verbal subscale, Cronbach’s alphas calculated separately for each target were acceptable: Partner, .81; Same-sex known

target, .73; same-sex unknown target, .71, with the exception of opposite-sex known targets, .67, and opposite-sex unknown targets, .58. In these two cases the lower reliability might be explained by low levels of endorsement by participants. Cronbach's alphas were also acceptable for the physical subscale: Partner, .72; Same-sex known target, .83; same-sex unknown target, .76; opposite-sex known target, .83; opposite-sex unknown target, .74.

Prevalence rates for aggressive acts are presented in Table 1. The women's are comparable with figures taken from the International Dating Violence Survey (IDVS; Straus et al., 2004; Straus, 2008b). The IDVS showed that physical aggression was reported by 34% of men and 33% of students in the UK, while prevalence rates for psychological aggression (a measure similar to verbal aggression) were close to 100%. For men in the current sample, the prevalence of physical aggression was considerably lower than in the IDVS: This will be returned to in the discussion.

### **Analytical strategy**

Count data on aggressive acts tend not to be normally distributed, and frequently cannot be transformed to a normal distribution owing to large numbers of zero values (see, e.g. Archer, Fernandez-Fuertes et al., 2010). Because this was the case with the current dataset, ANOVA was not appropriate. Negative binomial regression was therefore used (Gardner, Mulvey, & Shaw, 1995) and a hierarchical model was created with five observations per participant. Relationship to target was coded using two dummy variables, representing unknown (vs. known) targets and intimate (vs.

known) targets. Sex of target was a categorical predictor with two levels, and sex of participant was a between-participants predictor. Of principal interest were the interactions between sex of participant and effect of target relationship. Specifically, it was anticipated that women would show greater aggression towards intimate partners than other targets, while men would show less.

### **Regression models for verbal and physical aggression**

The regression models for physical and verbal aggression gave very similar results. Table 2 shows the results of the regression analysis while Figure 1 shows estimated marginal means for each target type by participant sex.

**Target sex.** There was a significant main effect of target sex: participants directed more aggression towards same-sex targets than opposite-sex targets. As hypothesised, this effect of target did not significantly interact with participant sex, indicating that this pattern held for both male and female participants. Target sex did not interact significantly with relationship to target. This indicates that the difference between known targets and strangers did not depend on the targets' sex. The three-way interaction between participant sex, target sex, and relationship to target was also nonsignificant.

**Known vs. unknown targets.** Known targets received significantly more aggression than unknown targets. There was a significant interaction with participant sex, however: For verbal aggression, both sexes directed more aggression towards known targets, but this tendency was stronger in men.

For physical aggression, women directed more at unknown targets but men directed more aggression at known targets. This interaction between participant sex and effect of knowing the target was not anticipated: Possible reasons will be explored in the discussion.

***Intimate vs. known targets.*** While there was a significant effect of intimate vs. known targets, the interaction between participant sex and intimate status was of principal interest. As hypothesised, this interaction was significant: Women's aggression was higher towards intimates than towards other known targets, while men's aggression was lower towards intimates.

***Target sex and intimacy.*** An interaction term for sex of target by intimate status could not be computed because all intimate partners were of the same sex. Planned comparisons, therefore, were used to compare known targets of both the same and the opposite sex with intimate partners. In order to reduce the number of analyses and thereby the Type I error rate, physical and verbal aggression measures were combined. For women, aggression towards intimate partners was significantly higher than aggression towards both same-sex ( $p < .05$ ) and opposite-sex ( $p < .001$ ) known targets. For men, aggression towards intimate partners was significantly lower than aggression towards both same-sex ( $p < .05$ ) and opposite-sex ( $p < .001$ ) known targets.

## **Discussion**

The present study sought to evaluate the way in which men's and women's aggression differs depending on the sex of the target and the relationship

between target and actor, using self-report measures. The data presented here extend the findings of Cross et al.'s (2011), who used vignette scenarios to evaluate the effects of target on men's and women's self-rated likelihood of aggression in response to hypothetical provocation.

### **Known and unknown targets.**

The significant interaction between sex of participant and the effect of the target being known reflected the fact that only men aggressed consistently more towards known than unknown targets: In contrast, women reported more physical aggression towards unknown than known targets. Two possible explanatory factors are sex differences in the reporting of friendship and sex differences in preference for indirect over direct aggression.

Intimacy is associated with increased levels of conflict (Sheets & Lugar, 2005). This means that it is unsurprising that greater levels of verbal aggression are reported towards targets who are known well. However, intimacy has also been found to have a protective effect against the escalation from verbal aggression to physical aggression (see Felson et al., 2003). This protective effect, however, was only observed for women in the current study. This might be because women report fewer, more intense, friendships than men do (for reviews, see Campbell, 2002; Geary, 2010; Rose & Rudolph, 2006; Vigil, 2007). This suggests that men might report more targets whom they class as 'known well' when they are not at a level of intimacy which inhibits physical aggression, while women might tend to class targets as 'known well' only when they are sufficiently close for physical

aggression to be inhibited. Future work could examine directly the number of people at whom aggressive acts are directed by men and women and how emotionally close they are using a methodology similar to that of Richardson and Green (2006): It might be the case that asking respondents directly about their emotional closeness to the people towards whom they aggress might clarify the relationship between emotional closeness and aggression.

The low levels of physical aggression between women who are well known to one another might also be because, when the target is part of a close social circle, indirect aggression is an effective alternative (see, e.g. Björkqvist, 1994; Björkqvist, Lagerspetz, & Kaukiainen, 1992). Indirect aggression depends on manipulating a social relationship and is therefore more likely to be effective when a target is known well. The use of physical aggression depends on the availability and likely effectiveness of less risky strategies (Björkqvist, 1994; Campbell, 1999). This would account for the protective effect of knowing a target well against physical aggression, although it further suggests that aggression towards known targets might not be less frequent but simply take an indirect form (see also Richardson & Hammock, 2007). This makes it all the more puzzling, however, that women's verbal and physical aggression is highest towards partners.

### **Effects of target sex and women's intimate aggression**

Women are, all other things being equal, more likely to aggress towards targets of the same sex than the opposite sex. Partners, however, are a 'special case,' receiving higher levels of aggression than other targets. One

possible reason for this is that the frequency of conflict is simply higher with intimate partners than with other target: Felson et al (2003) found that, when conflict frequency was taken into account, partner-directed aggression was actually infrequent compared to aggression towards other targets, which suggests that increased frequency of conflict might account – at least in part – for these results. However, when provocation is held constant between targets using vignettes, women report a greater likelihood of using aggression towards a partner than an opposite-sex (Cross et al. 2011). This suggests that conflict frequency alone cannot account for women's greater aggression towards intimate partners than other targets.

It is also possible women aggress more towards intimate partners because the efficacy of indirect aggression is reduced in this context (see Björkqvist, 1994; Campbell, 2002). Indirect aggression might be ineffective in intimate partnerships because encouraging friends to spurn one's romantic partner also has negative consequences for oneself (Richardson & Green, 2006). However, this does not explain why only women's aggression is higher towards partners than towards other targets while men's aggression is not (Archer, Parveen, et al, 2010; Cross et al., 2011; Felson et al., 2003).

An additional process which might contribute to women's greater aggression within intimate partnerships is a reduction in inhibition within the context of an intimate partnership. While both men and women inhibit potentially undesirable emotions and behaviour less over time when in a relationship, women report a greater reduction than men (Driscoll, 2011). Furthermore, while women generally report greater fear of injury than men (Bettencourt &

Miller, 1996; Campbell, 1999), there is no sex difference in fear of physical injury from an intimate partner (Driscoll, 2011) The present data do not enable the effects of impelling factors, such as provocation, and inhibitory factors, such as fear, to be disentangled. It is likely, however, that both are important in determining how aggression varies towards different kinds of target (Davidovic et al., 2011).

### **Effects of target sex and men's intimate aggression**

Like women, men also direct more aggression towards targets of the same sex than the opposite sex. This is in accord with previous research and might be because there are more opportunities for conflict within same-sex dyads (Mehta & Strough, 2009; Underwood & Rosen, 2009). Norms proscribing aggression towards women might also contribute to this effect (Felson, 2002). Unlike women, however, men direct less aggression towards intimate partners than other targets. This is in apparent contradiction to previous research which suggests that it is the sex of the target per se that influences men's aggression (Cross et al., 2011). However, an important limitation of the current dataset is that relationship status of the respondents was not recorded. Therefore men's lower aggression towards intimate partners might reflect an absence of that relationship for some respondents, rather than inhibitions around aggression towards partners. This would also explain why the prevalence of physical aggression for men in the current sample was lower than in the IDVS.



Interpreting the male participants' data is further complicated by the fact that aggression towards ex-partners is well documented (Brownridge et al., 2008) and might account for a substantial amount of men's reported aggression towards known opposite-sex targets. Men's aggression towards opposite-sex targets of the opposite sex therefore needs to be examined more closely to evaluate the role of intimacy in raising or lowering the likelihood of aggression. Overall, then, the male data support previous findings that aggression is substantially more likely towards a same-sex than an opposite-sex target, with caveats regarding the specific role of intimacy in determining levels of aggression.

### **Limitations**

The biggest limitation of the present study is that relationship status was not recorded for participants. This means that partner aggression might be underestimated – in both sexes – because some participants had not been in an intimate partnership in the past two years. With regard to the female data, this is less problematic because aggression directed towards partners was highest: Even if partner aggression has been underestimated we can have confidence in the rank order of target types. However, the male data on partner aggression must be interpreted very cautiously: The relatively low levels of aggression directed at intimate partners cannot be firmly attributed to target characteristics.

The current procedure required participants to define the meaning of the phrase 'someone I know well' for themselves. The results were consistent

with previous literature suggesting that men and women define this term differently but this is indirectly inferred and future work could specify more precisely different categories of relationship. Subdividing target categories further, however, would result in a much larger sample being needed, and possibly a larger pool of items for verbal aggression: It has already been noted that the reliability of the verbal aggression subscale was poor for opposite-sex strangers and this might be because self-reported aggression was low for this category of target.

Another limitation was that the sample did not contain enough gay/lesbian participants for analysis. Intimate partner aggression in same sex relationships is an under-researched area (see, e.g. Klostermann et al., 2011) and future work would benefit from including a comparison of respondents in both heterosexual and same sex relationships, in order to gain a fuller understanding of the effects of intimacy and target sex, and how these might be separable from one another.

## **Conclusions**

The present study revealed sex differences in the effects of target characteristics on direct aggression. The men's data are consistent with previous work indicating that men are most likely to use aggression towards other men who are known to them. This appears to reflect a combination of two non-interacting effects: Aggression is more likely towards targets of the same sex, irrespective of whether the target is known or not; and aggression is more likely towards known targets, irrespective of their sex. Men's

aggression towards intimate partners was lower than their aggression towards other known targets. More data are needed, however, to establish the effects of intimacy on men's aggression because the present dataset did not include relationship status. The women's data support previous work indicating that women's aggression towards non-intimate targets is more likely to be directed at someone of the same sex. Women are less likely to use physical aggression towards targets to whom they are close. This also supports previous work but makes women's heightened levels of physical aggression towards intimate partners all the more salient.

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*Table 1. Prevalence of Verbal and Physical Aggression*

Type of aggression	Target	Prevalence (%)	
		Men	Women
Verbal	Partner	59.3	83.5
	Same-sex, known well	96.6	88.7
	Opposite-sex, known well	67.8	53.9
	Same-sex, not known well	86.4	88.7
	Opposite-sex, not known well	57.6	50.4
Physical	Partner	15.3	30.4
	Same-sex, known well	52.5	16.5
	Opposite-sex, known well	28.8	4.3
	Same-sex, not known well	18.6	26.1
	Opposite-sex, not known well	8.5	9.6

*Note.* Prevalence is defined as the percentage of respondents reporting at least one act in the last 2 years.



Table 2. Negative Binomial Regression of Physical and Verbal Aggression onto Participant Sex, Target Sex, and Relationship to Target

Parameter	df	B	SE	Wald 95% CI	Wald $\chi^2$	p
<b>Physical aggression</b>						
Intercept	1	-1.134	0.269	-1.661/-0.607	17.766	<.001
Participant sex = male	1	1.784	0.341	1.116/2.452	27.402	<.001
Target sex = opposite	1	-1.414	0.464	-2.322/-0.505	9.301	0.002
<b>Relationship to target</b>						
Intimate (vs. known)	1	2.245	0.464	1.335/3.155	23.39	<.001
Stranger (vs. known)	1	-0.516	0.227	-0.960/-0.072	5.19	0.023
Participant sex = male *	1	0.813	0.512	-0.189/1.816	2.529	0.112
Target sex = opposite						
Participant sex * relationship to target	1	-3.195	0.594	-4.358/-2.031	28.943	<.001
Participant sex = male * target = intimate						
Participant sex = male * target = stranger	1	-1.986	0.447	-2.861/-1.110	19.765	<.001
Target sex * relationship to target	1	0.059	0.3123	-0.553/0.671	0.036	0.85
Participant sex = male * target sex = opposite * target = stranger	1	0.116	0.376	-0.621/0.853	0.096	0.757

Parameter	df	B	SE	Wald 95% CI	Wald $\chi^2$	p
Verbal aggression						
Intercept	1	1.349	0.074	1.204/1.493	335.319	<.001
Participant sex = male	1	0.463	0.098	0.270/0.655	22.231	<.001
Target sex = opposite	1	-1.006	0.098	-1.199/-0.813	104.497	<.001
Relationship to target						
Intimate (vs. known)	1	1.086	0.111	0.869/1.303	96.435	<.001
Stranger (vs. known)	1	-0.092	0.046	-0.183/-0.002	3.98	0.046
Participant sex = male * target sex = opposite	1	0.282	0.167	-0.045/0.609	2.86	0.091
Participant sex * relationship to target						
Participant sex = male * target = intimate	1	-1.399	0.232	-1.853/-0.945	36.445	<.001
Participant sex = male * target = stranger	1	-0.341	0.083	-0.505/-0.178	16.765	<.001
Target sex = opposite * Target = stranger	1	0.028	0.061	-0.090/0.147	0.221	0.638
Participant sex = male * target sex = opposite	1	0.003	0.105	-0.202/0.207	0.001	0.981

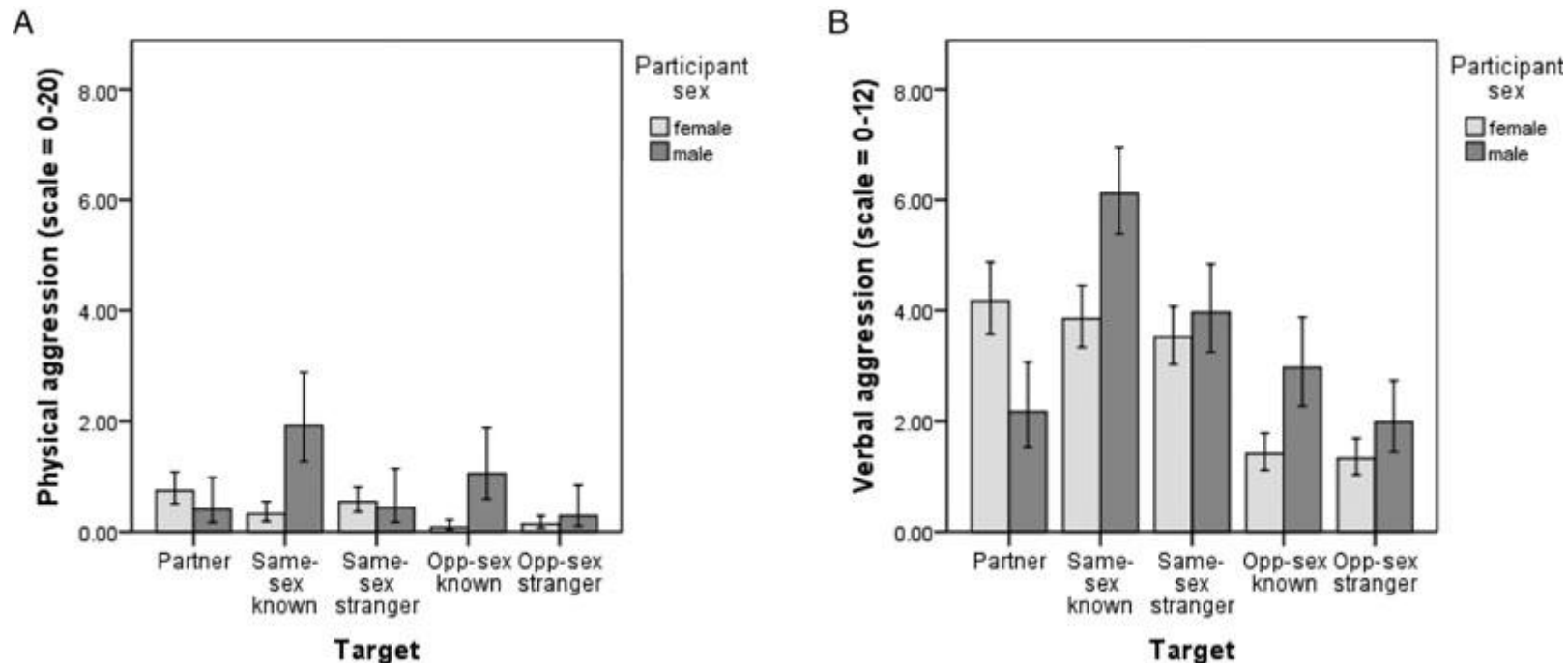


Fig 1. Estimated marginal means for (A) physical and (B) verbal aggression, by participant sex and relationship to target. Error bars are 95% confidence intervals.