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## Exploring The Malleability Of The Zero-Sum Perspective Of Gender Status

Abigail Marie Kroke

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EXPLORING THE MALLEABILITY OF THE ZERO-SUM PERSPECTIVE OF  
GENDER STATUS

by

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Bachelor of Science, University of North Dakota, 2016  
Master of Arts, University of North Dakota, 2020

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Abigail Kroke  
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## ABSTRACT

Gender equality has broad individual and societal benefits. However, research continues to show evidence of gender-related biases and barriers to equality. One such barrier is the zero-sum perspective (ZSP) of gender status: the belief that any gains by women coincides with equal costs to men. Prior research has focused on between-group differences in ZSP endorsement after receiving a threat to gender status (i.e., women outperforming men in some capacity). The current study aimed to expand upon past research through three main objectives: assessing the between- and within-group malleability of the ZSP of gender status by introducing a threat to gender status quo, assessing whether ZSP endorsement can be diminished via an educational intervention and examining the association between ZSP and subsequent gender-equality behavior. The study utilized a 2 Status quo (threat, affirmation) x 2 Education (education, no education) factorial design with the ZSP of gender status assessed both before and after exposure to the status quo and education conditions. Adults ( $n = 242$ ) from across the United States were recruited via Cloud Research to participate in the two-part study. At Time 1 participants completed demographics and measures of the ZSP of gender status, social dominance orientation, right wing authoritarianism, and hostile sexism. Two weeks later at Time 2, participants were randomly assigned to a Gender Status Quo Condition (threat or affirmation) and a Gender Equality Education Condition (education or control) then completed ZSP and donation measures. Contrary to expectations, the threat to gender status quo did not increase the ZSP and education did not decrease the ZSP.

Surprisingly, there was a significant difference among men in the no-education condition, wherein men who received a threat to status-quo had lower levels ZSP than men who received an affirmation. Additionally, though not statistically significant, there was a trend wherein men who received the threat and education had higher levels of general ZSP than those who did not receive education. Results have implications for identifying potential methods of reducing the ZSP as well as identifying factors that may lead to increased endorsement of this barrier to gender equality.

## **Introduction**

Gender equality has benefits on both individual and societal levels. For example, greater gender equality is associated with better overall well-being and less depression for both men and women, beyond the effects of social factors and income (Holter, 2014). Despite these important benefits, gender equality is often perceived to be an issue of the past or to have “gone far enough” (Holter, 2014, p. 534; Lips, 2003). Regardless of these perceptions, research continues to show evidence of gender-related biases and discrimination, as well as to identify potential barriers to equality within society. The current study focused on one such barrier, a zero-sum perspective of gender status, in terms of whether it can be altered and how it relates to subsequent behaviors associated with gender equality.

### **Intergroup Perceptions and the Zero-Sum Perspective**

Where there is group identification there is often intergroup competition, conflict, and discrimination, especially when resources are scarce (Tajfel, 1982). Past research has indicated that individuals tend to favor their in-group over relevant out-groups (Mullen et al., 1992). When given the opportunity to distribute resources, individuals often show an in-group bias, giving their own group more resources and discriminating against the out-group (Bourhis & Gagnon, 2001; Gagnon & Bourhis, 1996; Hodson et al., 2003; Perreault & Bourhis, 1999; Tajfel et al., 1971). Along these lines, Hodson et al. (2003) presented participants with a zero-sum situation in which allocation of points to one group indicated a loss of points for another. Participants were assigned to Group Y and

asked to assign points to anonymous members of their own group or another group (Group X). Results indicated that individuals who identified strongly with their in-group tended to show the most discrimination against the out-group.

The Zero-Sum Perspective (ZSP), originating from Game Theory (Nash, 1950), posits that one group's social, political, or economic gain coincides with equal loss from another group within that same domain (Norton & Sommers, 2011). This perspective can even occur within situations that involve unlimited resources (Meegan, 2010). In other words, group members may hold the ZSP, even if the situation is not objectively zero-sum. This win-lose perspective presents an obstacle to intergroup relations and equality (Kosakowska-Berezecka et al., 2020; Kuchynka et al., 2018) with members of the high-status or dominant group endorsing the ZSP more than those who belong to the low-status group (Wilkins et al., 2015). For example, early research on the ZSP was applied to social progress toward racial equality and found White individuals perceived lessened discrimination against Black individuals to directly coincide with more discrimination toward White individuals across several decades (Norton & Sommers, 2011). This between-groups perspective has also been examined within the context of gender and social progress toward gender equality wherein any gains by women are perceived as directly corresponding with losses for men (Bosson et al., 2012; Kehn & Ruthig, 2013; Kuchynka et al., 2018; Sicard & Martinot, 2018).

## **The Zero-Sum Perspective of Gender Status**

Analogous to Norton and Sommers's (2011) finding that reduced discrimination against Black individuals was perceived to directly coincide with increased discrimination against White individuals, Kehn and Ruthig (2013) applied the ZSP to gender status. They asked participants about the extent to which men have been the target of gender discrimination across several decades from 1950-2010 and then asked the same for women. Overall, men viewed decreased discrimination against women over time to directly coincide with increased discrimination toward men within that same time frame, suggesting the presence of a ZSP within the domain of gender status (Kehn & Ruthig, 2013). Similarly, Bosson et al. (2012) examined estimates of gender discrimination against both men and women in the United States since the 1950s. Bosson et al.'s (2012) research indicated some patterns of zero-sum thinking, with men perceiving the discrimination gap to be closing much faster than women do. In particular, conservative men indicated the smallest difference between men and women's discrimination experiences at each decade, with men's discrimination exceeding women's at present time.

Aside from exploring perceived levels of gender discrimination across decades, other research has assessed whether or not people endorse the win/lose perspective of gender status: the belief that any gains made by women come at a direct and equivalent cost to men. Endorsement of the ZSP of gender status has been assessed using a broad, single-item measure of whether or not individuals believe declines in discrimination

against women correspond with increased discrimination against men (Ruthig et al., 2017). Specifically, among a sample of 387 adult men and women, Ruthig et al. (2017) found this measure to correlate with less education, a conservative political orientation, previous experience with discrimination, and greater social dominance orientation (SDO), hostile sexism, and modern sexism, as well as a domain-specific measure of ZSP, demonstrating both convergent and discriminant validity (Ruthig et al., 2017).

Alternative assessments of the ZSP have used domain-specific measures including occupational, power, economic, political, social, and familial contexts (Ruthig et al., 2017). This six-item scale developed by Ruthig et al. (2017) was reported to have good internal reliability ( $\alpha = .93$ ) and strong unidimensionality (the one-factor solution explains 70.6% variance).

Another domain-specific ZSP measure developed by Wilkins et al. (2015) focused on rights and employment. For example: “when women get rights, they are taking rights away from men” or “when women work, they are taking jobs away from men” (Wilkins et al., 2015, p. 3). Using this measure, Wilkins et al. (2015) found men endorsed the ZSP more than women, and that endorsing the ZSP is a reliable predictor of perceived gender bias across decades. Other research has taken a similar approach in assessing the ZSP using items such as “rights for women mean that men lose out” to identify the extent to which individuals may endorse the ZSP of gender status (Kuchynka et al., 2018; Wilkins et al., 2015; Wong et al., 2017).

## **Predictors of ZSP of Gender Status Endorsement**

Much of the past research on the ZSP of gender status has focused on identifying individual difference factors associated with endorsing this win-lose view. One such individual difference factor that is intuitively related is gender. Due to the competitive nature of the ZSP, the high-status or “dominant” group typically endorses the perspective more than the lower-status or “non-dominant” group as the former group may lose resources if the latter group is gaining finite resources (Hodson et al., 2003; Wilkins et al., 2015). As expected, men endorse the zero-sum perspective of gender status to a greater degree than women do, believing that any gains by women come at an equal cost to men (Bosson et al., 2012; Kehn & Ruthig., 2013; Wilkins et al., 2015). In particular, being a man over the age of 35 is associated with a greater likelihood of holding this perspective (Bosson et al., 2012; Kehn & Ruthig, 2013; Wilkins et al., 2015). As Kehn and Ruthig (2013) explain, fewer younger men may hold this perspective because they tend to be less conservative in their political beliefs and likely experience less distinct gender roles compared to older men.

Interestingly, some women also endorse the ZSP of gender status. In a study of 313 adults from across the United States, Ruthig et al. (2017) found that although men endorse the ZSP to a greater degree than women, some women did show ZSP endorsement. Although men have historically been in the socially dominant position and benefitted more from inequality and social hierarchies, some women may perceive their lower status in the social hierarchy as legitimate and view changes to the gender status



quo or hierarchy as going against the “natural order” and undesirable, despite the potential gain for themselves (Radke et al., 2018; Roets et al., 2012; Ruthig et al., 2017).

Apart from age and gender, another factor found to predict endorsement of the ZSP of gender status is political orientation. More specifically, a more conservative political orientation and greater endorsement of right-wing authoritarianism (RWA) is associated with the ZSP. RWA, or the belief that people should submit to authority without objection, have strict adherence to norms and values, and that those who violate these norms should be punished (Rattazzi et al., 2007), has been found to predict greater endorsement of the ZSP of gender status (Bosson et al., 2012; Ruthig et al., 2017; Ruthig et al., 2020). An individual’s political orientation tends to influence perspectives on various topics such as gender equality (Cokley et al., 2010) and thus, contribute to endorsement of the ZSP of gender status.

Similarly, sexist beliefs reflect and support gender inequalities. Greater endorsement of hostile sexism, or the explicit endorsement of traditional gender roles and hostile attitudes toward those who challenge the gender status quo and gender roles (Glick et al., 2004), has been found to predict the ZSP of gender status (Ruthig et al., 2017). Modern sexism, or the belief that gender discrimination and inequality no longer exist (Swim et al., 1995), is also associated with the ZSP, but not to the same degree as hostile sexism (Ruthig et al., 2017).

Another predictor of the ZSP of gender status is social dominance orientation (SDO; Sibley et al., 2007). SDO is one’s preference for maintaining hierarchical groups

(Sidanius & Pratto, 2001) and has been described by Duckitt et al. (2002) as an expression of the motivational goal of group dominance and superiority (Sibley et al., 2007). Although typically found among the dominant group that is motivated to maintain the beneficial status hierarchy, SDO has also been found among members of the non-dominant group. Within the context of gender, men have been traditionally viewed as the dominant group and have benefited from their dominant position on the status hierarchy, whereas women who endorse SDO may perceive their lower status to be legitimate and in need of protection from men (Radke et al., 2018). Prior research has shown a relationship between SDO and sexism, with greater endorsement of SDO relating to stronger sexist beliefs (Sibley et al., 2007), SDO has also been found to predict a ZSP of gender status among women, wherein women with greater SDO also expressed greater endorsement of a ZSP of gender status (Ruthig et al., 2017).

To summarize, correlates of the ZSP include political orientation, RWA, SDO, and sexism. Individuals who hold a conservative political orientation and high levels of RWA, SDO, and hostile sexism are more likely to endorse the ZSP of gender status. Further, men over the age of 35 are more likely to endorse this win-lose perspective compared to women and younger men. Having established who endorses this view, it is important to consider the implications of this perspective.

### **Consequences of the Zero-Sum Perspective of Gender Status**

Some research on the ZSP of gender status has focused on the consequences of this perspective, such as being an obstacle to achieving gender equality. In particular,

Kosakowska-Berezecka et al. (2020) conducted a large-scale study of 6,781 men across 42 countries on men's collective action intentions to support gender equality. They found men who perceived women as competition, endorsing the ZSP, reported lower collective action intentions for gender equality.

In another study, Kuchynka et al. (2018) examined how either a threat to or affirmation of gender status hierarchy impacts zero-sum thinking and in turn, how that impacts support for gender fair workplace policies. Kuchynka et al. (2018) found that after exposure to information that threatened the gender hierarchy status quo, men had higher levels of zero-sum thinking and consequently supported gender fair policies significantly less than those who received information that affirmed the gender hierarchy status quo. This finding indicates that the ZSP may also serve as a barrier to men's cooperation in workplace equity efforts with higher endorsement of the ZSP being associated with less support of gender fair policies (Kuchynka et al., 2018).

Likewise, in a recent set of studies, Ruthig et al. (2020) assessed whether individuals who endorse a ZSP showed later discrimination. These researchers found greater endorsement of the ZSP to predict both men and women's later reluctance to work with female leaders and collaborators, even when controlling for other known covariates. Results from Ruthig et al. (2020) indicate that females may be at a disadvantage if those evaluating them, such as voters, clients, or collaborators, hold the ZSP of gender status, resulting in a barrier for women.

While each of the above studies show an obstacle to achieving equality in the workplace, the consequences of a ZSP of gender status extend beyond limiting efforts toward achieving gender equality. In a study of the relationship between men's zero-sum beliefs and their mental health, Wong et al. (2017) analyzed archival cross-sectional survey data from a multinational project comprised of 1,224 men. These researchers found that men who strongly endorsed the ZSP of gender status reported greater psychological distress and poorer relationship satisfaction. This finding indicates that the ZSP may be harmful to men's psychological well-being in addition to hampering gender equality initiatives.

Given the potential consequences of the ZSP, efforts are needed to examine whether this perspective can be altered. However, limited past research has explored the malleability of the ZSP. Kuchynka et al. (2018) experimentally tested differences in ZSP endorsement as a result of a threat to gender status. Specifically, participants read hypothetical news articles that either upheld the status quo (i.e., a bogus *Guardian Unlimited* article titled "Women Still Losing the War in the Battle of the Sexes") or threatened the status quo (a bogus *Guardian Unlimited* article titled "Women May Win the War in the Battle of the Sexes"). Compared to the control (status quo) group, Kuchynka et al. (2018) found exposure to the gender status quo threat was associated with greater endorsement of the ZSP for men, but not women, and consequently, a decrease in support for workplace equality policies. This finding suggests that when faced with a threat to the gender status hierarchy, zero-sum thinking may increase.

The malleability of the ZSP of gender status has also been tested within the academic setting. Sicard and Martinot (2018) exposed middle school students to threatening gender comparison conditions in which one gender was presented as outperforming the other. In the threatening condition the out-group (boys or girls) was described as outperforming the in-group (girls or boys), in the low-threatening condition the in-group (boys or girls) was described as being more successful than the out-group (girls or boys). Results indicated that male students, but not female students, in the threatening comparison group showed greater endorsement of the ZSP of gender status compared to the low-threatening condition group (Sicard & Martinot, 2018). These findings indicate that success of the outgroup was perceived as coming at the expense of success of the in-group, at least among male students.

Overall, the limited research on the malleability of the ZSP of gender status has indicated that threats to gender status are associated with greater ZSP endorsement, which in turn has the potential for negative consequences such as reduced support for workplace equality policies (Kuchynka et al., 2018; Sicard & Martinot, 2018). Nonetheless, several issues warrant further consideration due to limitations of the past research in this area. One limitation of prior research is the focus on between-group differences in ZSP and the lack of baseline measures to assess within-group changes to determine if the ZSP significantly increases after a threat to gender status. Establishing individuals' baseline endorsement of the ZSP prior to any manipulation would enable researchers to better assess whether the greater ZSP endorsement seen in prior research is

due to threat exposure. Another limitation of prior research is that outcomes associated with the ZSP have been comprised of self-reported attitudes rather than behavioral outcomes. Examining overt behavior may provide more insight into how the ZSP impacts behavioral outcomes.

A final limitation of past research is the focus on the impact of threats on increasing the ZSP, neglecting to consider interventions intended to reduce the ZSP. In particular, the impact of an educational intervention aimed at reducing the ZSP is worth considering. For instance, one study by Meegan (2010) explored the ZSP in an academic setting utilizing high or low grades as a competitive resource. When educated on grading policies and reminded that instructors can assign an unlimited number of high grades, this educational intervention reduced the perception that assignment of high grades was a competitive zero-sum outcome. Tying the need for education to gender equality, Holter (2014) posited that some resistance to gender equality exists due to an information gap wherein men simply do not know the benefits of gender equality as data often show more benefits for men than men acknowledge. Providing education that gains toward gender equality actually benefit, rather than harm, men may serve to lower endorsement of this perspective and contribute to eliminating this barrier to gender equality. This information gap may also extend to some women who show resistance to gender equality.

### **Current Study**

The current study contributes to the extant literature by assessing the malleability of the ZSP of gender status. Consistent with prior research (Kuchynka et al., 2018; Sicard

& Martinot, 2018; Wilkins et al., 2015), this study aimed to determine if exposure to an experimentally manipulated threat increased endorsement of the ZSP. Moreover, this study builds upon past research with the addition of a baseline measure of the ZSP of gender status. This pre- and post-threat exposure design allowed for between-group comparisons and assessment of within-group changes in levels of the ZSP of gender status, providing a more accurate examination of the malleability of the perspective. Past research (Kosakowska-Berezecka et al., 2020; Kuchynka et al., 2018; Ruthig et al., 2020; Sicard & Martinot, 2018) has identified the ZSP to be an obstacle to gender equality and assessing the malleability is an important next step to determine how to overcome this obstacle.

The first main study objective was to assess the malleability of the ZSP of gender status by introducing a threat to the gender status quo, specifically by threatening men's dominant status. This objective was intended to replicate past findings wherein participants exposed to a gender status quo threat had higher levels of ZSP than those not exposed to a gender status quo threat (i.e., gender status quo affirmation; Kuchynka et al., 2018; Sicard & Martinot, 2018; Wilkins et al., 2015). The current project expanded upon past findings by assessing both pre- and post-threat exposure levels of the ZSP, allowing for a more accurate assessment of the malleability of the perspective. This was addressed by randomly assigning participants to a threat condition comprised of a fictitious article (adapted from Kuchynka et al. (2018)) either depicting a threat to gender status quo

(“Men Losing the War in the Battle of the Sexes”) or affirming the status quo ( “Women Losing the War in the Battle of the Sexes”).

***Hypothesis 1a:*** Men exposed to the gender status quo threat condition will endorse the ZSP to a greater extent than men exposed to the gender status quo affirmation condition. Although no hypothesis was formulated, we will also explore the impact of exposure to these two gender status conditions on women’s endorsement of the ZSP.

***Hypothesis 1b:*** Men in the gender status quo threat condition will show the greatest increase in the ZSP from pre- to post-threat exposure when compared to men in the gender status quo affirmation condition. We will explore similar comparisons among women within each of these conditions.

In addition to exploring whether the ZSP of gender status can be directly increased through an experimentally manipulated threat exposure, it is important to consider whether the ZSP can be diminished. Accordingly, the second main study objective was to assess whether ZSP endorsement can be diminished via an educational intervention. Considering that research suggests some men are unaware of the broad benefits of gender equality (Holter, 2014), it is feasible that increasing this awareness through education will diminish the ZSP. This objective was addressed by implementing a randomly assigned education condition wherein participants were exposed to a short



presentation explicitly stating the benefits of gender equality for everyone, followed by a short quiz and reflective essay for consolidation purposes. As with the first objective, ZSP endorsement was assessed both pre- and post-exposure to the gender equality education intervention.

***Hypothesis 2a:*** Men who receive the education condition will endorse the ZSP less than men in the control (no-education) condition. We will also explore this post-educational comparison of the ZSP among women.

***Hypothesis 2b:*** Men who receive the education condition will show a decrease in the ZSP from pre- to post-education intervention. We will examine similar within-group changes in the ZSP among women.

***Hypothesis 2c:*** Men in the status quo threat condition + education condition will show the largest decrease in the ZSP when compared with status quo threat condition + no education condition. We will also explore this among women.

The third study objective was to determine how endorsement of the ZSP relates to subsequent relevant behavior. Specifically, we assessed participants' intention to donate their modest financial compensation for completing the study to the Foundation for Gender Equality. This allowed for examining the direct association between endorsement of the ZSP and short-term behavioral outcomes, as well as whether the education intervention served to impact behavior.

***Hypothesis 3a:*** Men in the status quo threat condition + no-education condition will be the least willing to donate to charity and men in the status quo affirmation condition + education condition will be the most willing to donate compared to men in the other three conditions. This will also be explored among women.

***Hypothesis 3b:*** Men in the status quo threat condition will donate less of their study earnings to charity and be less willing to donate in the future compared to men in the status quo affirmation condition. We will also explore this between-groups comparison among women.

***Hypothesis 3c:*** Men who receive the education condition will donate more of their study earnings to charity and be more willing to donate in the future than men in the control (no education) condition. We will also explore this between-groups comparison among women.

***Hypothesis 3d:*** Stronger endorsement of the ZSP of gender status will be associated with less likelihood of donating earnings to The Foundation for Gender Equality and smaller donations.

## **Method**

### **Participants**

Initial participants were 287 adults residing within the United States and recruited via Cloud Research/Amazon's Mechanical Turk to complete a two-part online study on the views of men's and women's societal roles. Data were omitted from analyses for 45

participants due to failed attention checks ( $n = 29$ ) and data missing at random ( $n = 16$ ). These omissions resulted in a final sample of 242 participants on which all subsequent analyses are based.

Participants self-identified as male ( $n = 123$ ; 50.8%), female ( $n = 116$ ; 47.9%), transgender ( $n = 2$ ; 0.8%), or non-binary ( $n = 1$ ; 0.4%). On average, participants were 41.97 years old ( $SD = 12.93$ ) ranging from 20 to 81 years old. Most participants identified as White/Caucasian ( $n = 177$ ; 73.1%), with the remaining 26.9% of participants identifying as Asian ( $n = 21$ ; 8.7%), Black/African American ( $n = 29$ ; 12%), Mexican or Latin American ( $n = 8$ ; 3.4%), or multi-ethnic ( $n = 7$ ; 2.9%). Many participants had at least a high-school diploma or GED ( $n = 84$ ; 34.7%), trade school or associate degree/training ( $n = 27$ ; 11.2%), bachelor's degree ( $n = 110$ ; 45.5%), or graduate degree ( $n = 21$ ; 8.7%).

## Measures

**Demographics.** Participants were asked to report several demographics including age, gender, education, race/ethnicity, annual household income, and political orientation. See Appendix A.

**Zero-Sum Perspective of Gender Status.** The 6-item ZSP of Gender Status scale (Ruthig et al., 2017) was used to assess participants' endorsement of the perspective. The scale measures the ZSP across specific domains, including occupational, power, economic, political, social status, and familial domains. An additional, single-item general ZSP measure was also included (i.e., "Declines in discrimination against women

are directly related to increased discrimination against men”; Ruthig et al., 2017). Participants rated their agreement with each statement (e.g., “The more power women gain, the less power men have”), on a 10-point Likert scale from 1 (not at all) through 10 (very much). Participants also had a “Not applicable” option they could select. Responses to these items are averaged such that higher scores indicate greater endorsement of the ZSP. The scale is reported to have strong unidimensionality (the one-factor solution explains 70.6% variance), and to be correlated to SDO, political orientation, and hostile sexism as expected, based on prior research (Ruthig et al., 2017). Internal reliability for the scale was  $\alpha = .97$  for both Time 1 and Time 2 in the current sample and there was good two-week test-retest reliability (General:  $r = .69, p < .001$ ; Domain Specific:  $r = .81, p < .001$ ). See Appendix B for a list of all seven items.

**Social Dominance Orientation.** Social dominance orientation (SDO) is an individual difference factor associated with endorsement of the ZSP (Kehn & Ruthig, 2013) As such, SDO was examined as a potential covariate in the current study. The 16-item SDO scale (Pratto et al., 1994) was utilized to assess participants’ SDO by having them rate their feelings toward each statement (e.g., “Some groups are simply inferior to others”), on a 7-point Likert scale, ranging from 1 (very negative) through 7 (very positive). Eight items are reverse coded and then responses to all items are averaged such that higher scores indicate stronger SDO. Internal reliability for the scale was  $\alpha = .96$ . See Appendix C for all 16 items.

**Right Wing Authoritarianism.** Past research has identified right-wing authoritarianism (RWA), as an individual difference factor associated with endorsement of the ZSP (Ruthig et al., 2020) and as such was considered as a potential covariate in the current study. In order to assess participant's level of RWA the shortened 14-item RWA scale (Rattazzi et al., 2007) was utilized. Participants rated their agreement with each statement (e.g., "What our country really needs instead of more "civil rights" is a good stiff dose of law and order"), on a 7-point Likert scale that ranges from -3 (totally disagree) to +3 (totally agree). Seven items are reverse coded, then responses to all items are averaged such that higher scores indicate a higher level of RWA. Internal reliability for the scale was  $\alpha = .93$ . See Appendix D.

**Hostile Sexism.** Hostile sexism is an individual difference factor associated with the ZSP (Ruthig et al., 2017) and as such was assessed as a potential covariate in the current study using the 11-item Hostile Sexism subscale of the Ambivalent Sexism Inventory (Glick & Fiske, 1996). Participants were asked to report their level of agreement with each statement (e.g., "When women lose to men in a fair competition, they typically complain about being discriminated against"), rated on a 6-point Likert scale from 0 (disagree strongly) to 5 (agree strongly). Three items are reverse coded and then responses to all items are averaged such that higher scores indicate greater hostile sexism. Internal reliability for the subscale was  $\alpha = .93$ . See Appendix E.

**Gender Status Quo Conditions.** Past research has identified greater endorsement of the ZSP among those who receive a threat to the dominant group status compared to

those who do not receive a threat (Kuchynka et al., 2018; Sicard & Martinot, 2018; Wilkins et al., 2015). As such, participants were exposed to one of two gender status quo conditions adapted from Kuchynka et al. (2018), depicting a news article. Participants were instructed to read the articles. The conditions and article titles are as follows: Gender Status Quo Threat: “men losing the war in the battle of the sexes”, and Gender Status Quo Affirmation: “women losing the war in the battle of the sexes.” See Appendix F for full articles.

**Gender Equality Education.** Based on Meegan’s (2010) findings that an education intervention may decrease ZSP endorsement and Holter’s (2014) suggestion that some resistance to gender equality may exist due to an information gap or lack of knowledge, this study implemented an education intervention to further investigate the impact of education on ZSP endorsement. After receiving the threat to gender status quo condition or an affirmation of gender status quo condition, participants were randomly assigned to either receive the education intervention or a control (no education) condition. The education contained information regarding the benefits of gender equality on individual and societal levels. See Appendix G.

Importantly, simply informing individuals of how something may benefit them can be threatening and intensify negative reactions (Hulleman et al., 2010). A more effective approach is to use a consolidation process in which individuals generate their own connections to material and discover personal relevance and benefits. For this reason, following the education presentation participants completed a brief five question

quiz with immediate feedback to gauge their comprehension and facilitate consolidation of the education material. Following the quiz, participants were also asked to describe the most important benefit of gender equality from the education presentation that applies to their own life. This reflective short essay, similar to the format of utility interventions used in educational motivation research (Hulleman et al., 2010; Rosenzweig et al., 2020), engages participants with the material in a way that allows them to form connections to the material within the context of their own lives. Utility interventions have also been shown in an educational context to increase utility value, interest, and performance in the subject the intervention is focused on (Hulleman et al., 2010; Rosenzweig et al., 2020).

The education condition was pilot tested among a sample of 70 adults from across the United States via Cloud Research/Amazon's Mechanical Turk to determine whether receiving this education would result in significantly lower levels of ZSP when compared to those who did not receive the education. Of the initial 70 adults, data for 16 participants were excluded because they failed at least one attention check ( $n = 13$ ), scored a 20% on the education quiz ( $n=1$ ), or chose "not applicable" on the ZSP scale, indicating they do not believe discrimination against women has been reduced ( $n = 2$ ). The remaining sample of 54 adults was comprised of mostly White participants (79.6%). Individuals in the sample identified as male (51.9%), female (46.3%), or transgender (1.9%). The mean age of the sample was 38.72 years old ( $SD = 11.64$ ). An independent samples t-tests revealed a significant difference between the gender equality education ( $M = 2.05$ ,  $SD = 2.05$ ) versus the no education ( $M = 4.75$ ,  $SD = 3.41$ ) conditions on

endorsement of the ZSP (based on Ruthig et al.'s domain-specific scale:  $t(52) = 2.85$ ,  $p < .001$ , 95% CI [0.65, 3.72]). Thus, pilot results suggest the education intervention has the intended impact on ZSP endorsement following the threat to gender status quo condition.

**Donation to Charity.** Past research has shown that greater endorsement of the ZSP predicts lower collective action intentions for gender equality, serves as a barrier to men's cooperation in workplace equity efforts, and contributes to men and women's later reluctance to work with female leaders and collaborators (Kosakowska-Berezecka et al., 2020; Kuchynka et al., 2018; Ruthig et al., 2020). Similarly, as a way to assess behavioral outcomes and implications of holding the ZSP in the current study, each participant was presented with the opportunity to donate a portion of their study earnings to The Foundation for Gender Equality, an organization "dedicated to creating an urgent call to action on behalf of women and girls globally" (The Foundation for Gender Equality, n.d.).

Prior research has successfully utilized study earning donations as a way to assess behavioral outcomes. One study found 38% of their participants chose to donate, whereas 62% of their participants indicated they would not donate (Jones, 2016). Moreover Ashar et al. (2016) suggest that donation requests may be less susceptible to expectancy effects or demand characteristics due to their costly nature. However, Ashar et al. also note that participants may choose to take a no-donation policy despite their desire to donate due to either negative attitudes towards charities or financial pressure (i.e., they may feel as though they need the money more than the charity recipients). Overall, while evidence of



prosocial behavior, such as donating, being inflated in experimental settings does exist, research also indicates that prosocial behavior in experiments is correlated with actual behavior (Benz & Meier, 2008). As such, participants were provided information regarding the organization, their mission statement, and goals. After, participants responded to a dichotomous question regarding whether they want to donate to the organization (yes/no response options). Then, in a method similar to Ashar et al. (2016), participants were provided with a sliding scale allowing for them to donate \$0.00 (0%) to \$0.90 (100%) of their study earnings.

Finally, a follow-up question regarding their willingness to donate money to this organization in the future was asked with participants indicating a response from 1 (*not at all likely*) to 5 (*very likely*). As mentioned previously (see Demographics), participants' annual household income was assessed to account for the possibility of financial hardship impeding willingness to donate. Following their responses to these questions, participants were debriefed that no study earnings would actually be donated. See Appendix H.

## **Procedure**

The current study consisted of two phases (Times 1 and 2), approximately two weeks apart. At Time 1 participants completed measures of SDO, RWA, hostile sexism, and sociodemographic factors, as well as baseline ZSP endorsement. Participants were paid \$0.60 for their participation in Time 1 of the study.

Individuals who completed the Time 1 measures were invited to participate in Time 2 via email through Cloud Research. At Time 2, participants were randomly

assigned to one of two experimental conditions and were asked to read a news article either depicting a threat to the gender status quo or affirming the gender status quo. After reading the article, participants were randomly assigned to one of two gender equality education conditions (education or no education). At this point, those who received the education condition completed the education quiz and short answer question. Next, participants again completed measures of the ZSP, as well as some filler questions. Finally, participants were asked about their willingness to donate to The Foundation for Gender Equality. After responding, participants were debriefed and paid \$0.90 for completion of Time 2 of the study.

## **Results**

### **Preliminary Analyses**

Participants' Time 1 and Time 2 data were merged based on their unique identifiers. Next, data were screened for any outliers or missing data, as well as for assumptions of normality. Inter-item reliability was computed for each scale and composite scores were averaged following the scale's procedures with items reverse-coded as necessary.

Descriptive statistics for measures of all Time 1 study variables were computed separately for men and women as detailed in Table 1. Overall, men indicated moderate levels of ZSP (General:  $M = 4.61$ ,  $SD = 3.04$ ; Domain Specific:  $M = 4.00$ ,  $SD = 2.95$ ). Women indicated low-moderate levels of ZSP (General:  $M = 3.28$ ,  $SD = 2.64$ ; Domain Specific:  $M = 2.93$ ,  $SD = 2.39$ ). Additionally, men also reported low-moderate levels of

RWA ( $M = -0.89$ ,  $SD = 1.33$ ), low levels of SDO ( $M = 2.46$ ,  $SD = 1.33$ ), and low-moderate levels of hostile sexism ( $M = 2.08$ ,  $SD = 0.89$ ) as well as a liberal – moderate political orientation ( $M = 3.20$ ,  $SD = 1.72$ ). Women reported low-moderate levels of RWA ( $M = -0.82$ ,  $SD = 1.49$ ), low levels of SDO ( $M = 2.03$ ,  $SD = 1.24$ ), and low levels of hostile sexism ( $M = 1.80$ ,  $SD = 0.73$ ) as well as liberal – moderate political orientation ( $M = 3.28$ ,  $SD = 1.82$ ).

A Multivariate Analysis of Variance (MANOVA) was computed to compare men and women on Time 1 levels of ZSP, RWA, SDO, and hostile sexism. The overall multivariate test was significant [Pillai's Trace = .110,  $F(5, 222) = 5.48$ ,  $p < .001$ ,  $\eta_p^2 = .11$ ]. The subsequent univariate  $F$  tests showed a significant difference between men and women in general ZSP, with men reporting greater endorsement of general ZSP ( $M = 4.61$ ,  $SD = 3.04$ ) than women ( $M = 3.28$ ,  $SD = 2.64$ ), [ $F(1, 226) = 12.34$ ,  $p < .001$ ,  $\eta_p^2 = .05$ ]. Likewise, men reported significantly higher domain specific ZSP ( $M = 4.00$ ,  $SD = 2.93$ ) compared to women ( $M = 2.93$ ,  $SD = 2.40$ ), [ $F(1, 226) = 9.05$ ,  $p = .003$ ,  $\eta_p^2 = .04$ ]. Men also had significantly higher SDO scores ( $M = 2.46$ ,  $SD = 1.33$ ) than women ( $M = 2.03$ ,  $SD = 1.24$ ) [ $F(1, 226) = 6.18$ ,  $p = .014$ ,  $\eta_p^2 = .03$ ], as well as greater hostile sexism than women (Men:  $M = 2.08$ ,  $SD = 0.89$ ; Women:  $M = 1.80$ ,  $SD = 0.73$ ) [ $F(1, 226) = 6.63$ ,  $p = .011$ ,  $\eta_p^2 = .03$ ]. Men and women did not significantly differ in their reported levels of RWA. In summary, preliminary analyses indicated that men and women differed on most Time 1 measures, with men reporting higher levels of ZSP, SDO, and hostile sexism, but men and women did not differ in RWA.

Bivariate correlations among study variables at Time 1 were also examined separately for men and women to determine which variables to include as covariates in the main analyses. As shown in Table 2, general and domain specific ZSP measures were positively correlated with each other, and both were positively correlated with SDO, RWA, hostile sexism, and political orientation. That is, greater endorsement of the ZSP was associated with greater SDO, RWA, hostile sexism and a more conservative political orientation. All other study variables were also positively correlated with each other, with the exception of political orientation which did not correlate with hostile sexism among women.

Next, in order to rule out pre-existing differences among the experimental conditions (i.e., threat vs. affirmation of gender status quo and education vs. no education conditions), MANOVAs were computed to compare groups on Time 1 measures. For the threat versus affirmation conditions, no significant Time 1 differences were found among Time 1 variables for men [Wilks' Lambda = .946,  $F(5, 111) = 1.28$ ,  $p = .28$ ] or for women [Pillai's Trace = .017,  $F(5, 101) = .345$ ,  $p = .89$ ]. For the education versus no education conditions there were no pre-existing Time 1 differences for men [Wilks' Lambda = .946,  $F(5, 111) = .493$ ,  $p = .78$ ] or for women [Pillai's Trace = .046,  $F(5, 101) = .97$ ,  $p = .44$ ]. Additionally, there were no Time 1 differences in the interaction between the threat and affirmation conditions and education and no education conditions among the men [Wilks' Lambda = .911,  $F(5, 111) = 2.18$ ,  $p = .06$ ] or the

women [Pillai's Trace = .024,  $F(5, 101) = .497$ ,  $p = .79$ ]. Overall, no differences between conditions were found for either men or women on the Time 1 measures.

### **Main Analyses**

The first two study objectives were to assess the malleability of the ZSP of gender status by introducing a threat to the gender status quo, and to assess whether ZSP endorsement can be diminished via an educational intervention regarding the benefits of gender equality. In order to address these two objectives, a repeated-measures general linear model (GLM) was computed among male participants wherein the between-group factors were Gender Status Quo (threat vs. affirmation) and the Gender Equality Education (education vs. no education) conditions. The within-group factor was pre- and post- ZSP, and the dependent measures were change in ZSP and between-group differences in post-ZSP. Additionally, hostile sexism was included as a covariate in the model because it was most strongly correlated with ZSP for both men and women. This GLM was computed to test the following hypotheses:

***Hypothesis 1a:*** Men exposed to the gender status quo threat condition will endorse the ZSP to a greater extent than men exposed to the gender status quo affirmation condition.

***Hypothesis 1b:*** Men in the gender status quo threat condition will show the greatest increase in the ZSP from pre- to post-threat exposure when compared to men in the gender status quo affirmation condition.

**Hypothesis 2a:** Men who receive the gender equality education condition will endorse the ZSP less than men in the control (no-education) condition.

**Hypothesis 2b:** Men who receive the education condition will show a decrease in the ZSP from pre- to post-educational intervention.

**Hypothesis 2c:** Men in the gender status quo threat + education condition will show the largest decrease in the ZSP when compared with men in the gender status quo threat + no education condition.

The repeated-measures GLM among men yielded a significant Gender Status Quo x Gender Equality Education interaction: [Pillai's Trace = .060,  $F(2, 109) = 3.47$ ,  $p = .035$ ,  $\eta_p^2 = .06$ ]. The univariate tests revealed a significant difference in ZSP among men who did not receive the gender equality education. As depicted in Figure 1a, men exposed to the threat to status quo had lower general ZSP ( $M = 3.71$ ,  $SE = 0.47$ ) than those exposed to the affirmation ( $M = 4.96$ ,  $SE = 0.41$ ) condition:  $F(1, 110) = 4.09$ ,  $p = .05$ ,  $\eta_p^2 = .036$ . Likewise, as shown in Figure 1b, these groups also differed in domain specific ZSP endorsement: threat ( $M = 3.35$ ,  $SE = 0.41$ ) versus affirmation ( $M = 4.44$ ,  $SE = 0.35$ ) conditions:  $F(1, 110) = 4.15$ ,  $p = .04$ ,  $\eta_p^2 = .036$ . To summarize, among men who did not receive the educational intervention, those in the threat condition had lower levels of both general and domain specific ZSP than men in the affirmation condition.

Although not statistically significant, there was also a trend toward a difference in general ZSP between the Threat/Education ( $M = 4.92$ ,  $SE = 0.41$ ) and Threat/No

education conditions ( $M = 3.70, SE = 0.52$ )  $F(1, 110) = 3.88, p = .051, \eta_p^2 = .034$ . Among men in the threat condition, those who also received the education condition had higher levels of general ZSP than those who did not receive the education.

The multivariate results were not significant for the interactions between time and gender status quo condition (threat versus affirmation; Pillai's Trace = .020,  $F(2, 109) = 1.14, p = .331$ ); between time and gender equality education condition (education versus no education; Pillai's Trace = .031,  $F(2, 109) = 1.75, p = .17$ ); or the for the interaction between time, gender status quo condition and gender equality education condition: Pillai's Trace = .016,  $F(2, 109) = .86, p = .43$ . Therefore, Hypotheses 1b, 2b, and 2c were not supported.

Similarly, the multivariate results were not significant for the main effect of gender status quo condition (threat versus affirmation; Pillai's Trace = .013,  $F(2, 109) = .712, p = .49$ ) or gender equality education condition (education versus no education; Pillai's Trace = .001,  $F(2, 109) = .054, p = .947$ ). Therefore, Hypotheses 1a & 2a were not supported.

Overall, there was no significant change in men's Time 1 vs. Time 2 ZSP endorsement, regardless of the experimental conditions that they received (threat vs. affirmation and education vs. no education). However, among men who did not receive the education intervention, there was a difference between the threat and affirmation conditions. Specifically, men in the threat condition had lower ZSP compared to those in the affirmation condition. Additionally, among men in the threat condition, those who

received education had higher ZSP endorsement than those who did not receive education, though this difference was not statistically significant.

The GLM that was used to assess Hypotheses 1a to 2c was recomputed for the female participants in order to explore these relationships among women. However, no significant results were found in the interaction between gender status quo and education conditions (Wilks Lambda = .973,  $F(2, 101) = 1.39$ ,  $p = .25$ ), or in the main effects of gender status quo condition (Wilks Lambda = .995,  $F(2, 101) = 0.25$ ,  $p = .78$ ) and gender equality education condition (Wilks Lambda = .991,  $F(2, 101) = 0.47$ ,  $p = .63$ ). Similarly, no significant results were found within groups among women for the interactions of time and gender status quo conditions (Wilks Lambda = .999,  $F(2, 101) = 0.07$ ,  $p = .93$ ), time and gender equality education conditions (Wilks Lambda = .964,  $F(2, 101) = 1.91$ ,  $p = .15$ ) or time, gender equality education, and gender status quo conditions (Wilks Lambda = .974,  $F(2, 101) = 1.34$ ,  $p = .27$ ).

In order to address the third main study objective of determining how endorsement of the ZSP relates to subsequent pro-gender equality behavior (i.e., donating to the Foundation for Gender Equality), initial bivariate correlations were computed among the sliding scale and Likert donation measures and annual household income. There was a significant correlation between annual household income and the Likert scale donation measure (i.e., “Please indicate your willingness to donate to the Foundation for Gender Equality”) such that higher annual income was associated with a greater willingness to donate ( $r = .20$ ,  $p = .028$ ). The correlation between annual income



and amount donated was not significant (sliding scale;  $r = -.15, p = .37$ ), nor was the correlation between amount donated and willingness to donate in the future ( $r = .13, p = .44$ ). None of these correlations were significant among women.

Next, a t-test was computed comparing annual household income between the binary measure options (Would you be willing to donate a portion of your study earnings to the Foundation for Gender Equality: Yes/No). The t-test indicated no significant difference in household income between those who were willing to donate to the foundation and those who were unwilling to donate:  $t(121) = 1.27, p = .21, 95\% \text{ CI } [-0.30, 1.36]$ . Among women in the sample, the t-test also indicated no difference in annual income between these groups:  $t(114) = .443, p = .66, 95\% \text{ CI } [-0.62, 0.98]$ . However, given the significant correlation between annual household income and the Likert measure, annual household income was included as a covariate in subsequent analyses.

A Chi-square was then computed to test Hypothesis 3a that men in the status quo threat + no-education condition would be the least willing to donate to charity and men in the status quo affirmation + education condition would be the most willing to donate compared to men in the other three conditions. Results from the Chi-Square test indicated no significant differences between those who chose to donate or not donate based on the assigned conditions:  $X^2(3, N = 123) = 2.76, p = .43$ . Therefore, Hypothesis 3a was not supported. Similarly, no significant difference based on assigned conditions was found among women:  $X^2(3, N = 116) = 3.82, p = .28$ .

Next, a MANCOVA was computed to compare amount donated and willingness to donate in the future between the two threat conditions (threat and affirmation) and the two education conditions (education and no education) while controlling for annual household income. This MANCOVA was utilized to test the following hypotheses:

***Hypothesis 3b:*** Men in the gender status quo threat condition will donate less of their study earnings to charity and be less willing to donate in the future compared to men in the gender status quo affirmation condition.

***Hypothesis 3c:*** Men who receive the gender equality education will donate more of their study earnings to charity and be more willing to donate in the future than men in the control (no education) condition.

The multivariate result indicated no significant difference between the gender status quo conditions in the amount donated or likelihood of donating in the future [Wilks Lambda = .949,  $F(2,31) = .841$ ,  $p = .44$ ]. Therefore, Hypothesis 3b was not supported. This relationship was also explored among women, but similarly indicated no significant difference between the gender-status quo conditions in the amount donated or likelihood of donating in the future [Wilks Lambda = .973,  $F(2,30) = .413$ ,  $p = .67$ ].

For the education and no education conditions, the multivariate result indicated a significance difference [Wilks Lambda = .734,  $F(2,31) = 5.62$ ,  $p = .008$ ,  $\eta_p^2 = .27$ ]. The univariate follow-up indicated a significant difference in men's willingness to donate in

the future as a function of whether or not they received the gender equity education, but these men did not differ in the amount donated. Contrary to Hypothesis 3c, and as shown in Figure 2, those in the education condition reported *less* rather than greater willingness to donate in the future than those in the no education condition (Education:  $M = 3.59$ ,  $SD = 0.71$ ; No Education:  $M = 4.40$ ,  $SD = 0.82$ ). Additionally, the same analyses were computed for women in order to explore these relationships. No significant difference was found between women who received the gender equality education and those who did not in terms of either amount donated or willingness to donate in the future [Wilks Lambda = .924  $F(2,30) = 1.24$ ,  $p = .30$ ].

In order to test Hypothesis 3d, that greater endorsement of the ZSP of Gender Status would be related the lower donation amounts and less likelihood of donating, a partial correlation was computed between general and domain specific ZSP and amount donated (sliding scale) as well as whether participants donated (binary) while controlling for annual household income. Although a negative association was present for men between ZSP and the amount donated, these relationships were not statistically significant (Domain Specific:  $r = -0.09$ ,  $p = .61$ ; General:  $r = -0.07$ ,  $p = .69$ ). Similar results were found among ZSP and whether participants donated (Domain Specific:  $r = -0.29$ ,  $p = .10$ ; General:  $r = -0.29$ ,  $p = .09$ ). Consistent with the findings among men, these associations were not significant among women for ZSP and amount donated (Domain Specific:  $r = -0.18$ ,  $p = .31$ ; General:  $r = 0.01$ ,  $p = .98$ ) or whether participants donated

(Domain Specific:  $r = -0.29, p = .09$ ; General:  $r = -0.29, p = .10$ ). Therefore, Hypothesis 3d was not supported.

Additionally, in order to identify the strongest predictor of willingness to donate in the future, an exploratory linear regression model was computed for the full sample (men and women) using all Time 1 measures of ZSP, SDO, RWA, hostile sexism, and demographics. Political orientation and annual income significantly predicted willingness to donate (Political Orientation:  $\beta = -.18, t(216) = -2.08, p = .039$ ; Annual Income:  $\beta = .14, t(216) = 2.12, p = .036$ ) explaining a significant amount of the variance in willingness to donate ( $R^2 = .121, F(11, 216) = 2.70, p = .003$ ). Overall, a more liberal political orientation and a higher annual income significantly predicted greater willingness to donate in the future. Perhaps surprisingly given stereotypes surrounding women as the “more helpful” sex (Andreoni & Petrie, 2008), there was no significant difference between men and women in willingness to donate.

## **Discussion**

The ZSP is the belief that gains by one group come with equivalent losses for another group (Norton & Sommers, 2011). In the context of gender status, gains by women are often perceived as accompanying equivalent losses for men (Bosson et al., 2012; Kehn & Ruthig, 2013; Kuchynka et al., 2018; Sicard & Martinot, 2018). The ZSP of gender status is a potential barrier to gender equality and equity efforts (Kuchynka et al., 2018; Sicard & Martinot, 2018). As such, understanding the perspective and how it may be reduced is important. The current study aimed to understand this perspective

better in three main ways. First, we examined whether individuals' ZSP increases in response to a threat to the gender status quo. Second, we examined how endorsement of the ZSP changes following education about the benefits of gender equality for men, women, and society as a whole. Third, we examined how the ZSP relates to subsequent behavior by offering an opportunity to donate to a gender equality foundation.

Initial study findings were consistent with prior research in overall gender differences. Specifically, as in Ruthig et al. (2017), men in the current study reported higher levels than women in ZSP (both domain specific and general), SDO, and hostile sexism. Unlike prior research, however, men and women did not differ in RWA. These results make sense considering that women are typically seen as the lower-status and non-dominant group, and thus tend to endorse views such as the ZSP and SDO to a lesser degree than men.

Consistent with past research on the ZSP (Ruthig et al., 2017; Ruthig et al., 2020; Sicard & Martinot, 2018), the current study examined men and women separately. The lack of significant results among women in the present study is in line with previous research (Sicard & Martinot, 2018). However, future studies should continue to investigate the ZSP among women, as past research has indicated that some women do endorse the perspective (Ruthig et al., 2017) and women in the current study also indicated endorsement of the perspective, just to a lesser extent than men. Despite women's overall lower endorsement, the ZSP can still be a barrier to equality efforts. Despite arguably having the most to gain, some women choose not to support gender-fair

policies, equality, or feminism – sometimes taking an anti-feminism stance (Chafetz & Dworkin 1987; Elder et al., 2021). However, it should be noted that some individuals identify as anti-feminist but do still support policies that may traditionally be labeled as “feminist” (Elder et al., 2021). As such, further exploration of the relationship between ZSP and women is warranted.

### **Is the ZSP Malleable?**

Given the negative impact of the ZSP on equality efforts (Kosakowska-Berezecka et al., 2020; Kuchynka et al., 2018; Ruthig et al., 2020; Sicard & Martinot, 2018), the current study directly assessed the malleability of the ZSP in two ways. The first objective aimed to assess changes in the ZSP after a threat exposure. This was addressed by examining whether receiving a threat to the gender status quo led to increased endorsement of the ZSP among men. Additionally, ZSP among men who received the threat was also compared to ZSP among men who received an affirmation to the gender status quo. The second objective of the study was to expand upon past research (Kuchynka et al, 2018) by examining whether endorsement of the ZSP could be diminished via an educational intervention regarding the benefits of gender equality for all.

Results from an initial pilot study of the educational intervention among a small sample of men and women who were first exposed to a threat to gender status quo, found the education to be effective. Men and women who received the education subsequently endorsed the ZSP less than those who did not receive the education. This post-

intervention difference was not found among men in the main study. That is, among men who received the threat condition, those who received the education did not differ from those who did not receive the education in terms of their subsequent ZSP. There was, however, a significant difference among men who did not receive gender equality education. Specifically, there was a significant difference in ZSP between the men who received the threat vs. affirmation gender status quo conditions. However, contrary to past research (Kuchynka et al., 2018), those men who received the affirmation article actually had higher ZSP than those who received the threat. In other words, men who were reaffirmed of their dominant status in society had higher levels of ZSP compared to men presented with a threat that indicated women were making gains. This pattern of results is contrary to other research that has found ZSP endorsement is higher following a threat to status (Kuchynka et al., 2018).

Aside from the above findings, there were no significant between- or within-group differences in endorsement of the ZSP among men or women when introduced to a threat to the gender status quo. Thus, the current findings did not replicate results found in past research (Kuchynka et al., 2018; Sicard & Martinot, 2018; Wilkins et al., 2015), nor support the proposed hypotheses.

There were also no significant between- or within-group differences for men or women with the addition of an educational intervention. Past research by Meegan (2010) developed an effective educational intervention reminding students that grading practices are non-zero-sum as opposed to zero-sum, however, while education seemed effective in

the pilot study, with those who received the education endorsing the ZSP less than those who did not, this did not appear to replicate within the domain of gender status for the main study. Specifically, ZSP endorsement did not differ between those who did and those who did not receive the education about how gender equality is beneficial for men, women, and society as a whole. A post-hoc exploratory analysis including both men and women (as in the pilot study) did indicate a significant difference in ZSP endorsement from Time 1 to Time 2 wherein those who received the education had lower endorsement after the education compared to prior to receiving the education. There was no difference in ZSP from Time 1 to Time 2 among those who did not receive the education. This exploratory result indicates that the educational intervention may have promise and should be further explored.

There are a number of reasons why the current findings may have differed from prior research. An optimistic reason could be that the lack of change in ZSP endorsement after exposure to a threat to the gender status quo indicates a shift in societal perceptions of gender equality and equity efforts from that of past research. Perhaps women making gains is not viewed as being as threatening as it previously was. Indeed, a 2020 poll indicated that the majority of Americans (76%) believe women's gains do *not* come at men's expense (Barroso, 2020). Of the 22% that indicated women's gains *do* come at a cost for men, Republican men were twice as likely as Democratic men to endorse a ZSP and men more likely than women (Barroso, 2020).



Perhaps more pessimistically and despite efforts to mask the true objective of the study, participants may have responded to questions in a socially desirable and politically correct manner. In other words, participants may have intentionally responded to questions in a way that would suggest less endorsement of items indicative of higher ZSP, hostile sexism, etcetera. As such, the current study may not have accurately captured participants' true feelings and beliefs. The contrary finding of those in the affirmation condition endorsing the perspective more than those in the threat condition may be partially due to social desirability. Those who received the threat may have felt more apt to respond in a socially desirable manner to match the more progressive feel of the threat article indicating women are catching up and at times outpacing men. Indeed, the means in the current study were lower for hostile sexism, SDO, and RWA than in previous research (Ruthig et al., 2017; Ruthig et al., 2020), though ZSP endorsement was similar if not higher than past research.

### **ZSP and Behavioral Outcomes**

The third objective of the current study was to examine how the ZSP relates to subsequent relevant behavior. Given that the ZSP has been found to be a barrier to gender equality efforts (Kosakowska-Berezecka et al., 2020; Kuchynka et al., 2018; Ruthig et al., 2020; Sicard & Martinot, 2018), this study aimed to expand upon that past research with an opportunity to donate study earnings to a foundation that focuses on gender equality initiatives. However, the current findings yielded no significant relationship between ZSP

endorsement and whether people chose to donate to the foundation, the amount they donated, or their willingness to donate in the future.

It is important to note that only a third of participants chose to donate to the foundation (i.e., 67.1% of people did not donate, 32.9% did donate). It is possible that this reluctance to donate reflected various factors apart from the ZSP. For instance, it may be that participants did not want to donate to a foundation that they did not know much about or that they have hesitations about making online donations in general. Though income was controlled for, individuals may have not donated because they felt they needed the money more. Last, some individuals may have not donated because they suspected that the opportunity to donate was not real.

### **Limitations & Future Directions**

The current study has a few limitations. A methodological limitation is that although we oversampled to account for attrition, due to the number of bots and suspicious responses (e.g., inconsistent age demographics from Time 1 to Time 2), more cases were excluded from analyses than anticipated which may have resulted in insufficient power for some of the analyses conducted. Specifically, the difference in general ZSP among the threat education and no education groups that was approaching significance may have been underpowered. Indeed, a post-hoc power analysis with significance criterion of  $\alpha = 0.05$  indicated that the power for the current sample among the men for a between x within interaction was  $\beta = 0.59$  and for between comparisons was  $\beta = 0.64$ . Future research should continue to carefully check and clean data for

suspicious and bot-like responses when using online sampling platforms such as MTurk. Future research could also consider utilizing other survey platforms such as Prolific, which claim to have higher quality data, or collect data in-person to attempt to reduce the number of bad data. At a minimum, oversampling should be used when employing platforms such as MTurk.

Another potential limitation of this study is desirability bias. In particular, desirability bias may have led participants to respond in a less sexist and more egalitarian manner. Participants in the study also scored low-moderate on measures of the ZSP as well as liberal-moderate in terms of political affiliation, making the sample quite homogenous in terms of political beliefs and possibly, perceptions of gender equality.

In terms of the educational intervention, it could be the case that one short presentation wasn't enough to capture substantial attitude change. Future research could assess different types or modes of education interventions such as adding audio or assigning an article vs. a presentation. Adding audio to the educational presentation as opposed to a silent presentation that is just meant to be read might better engage participants and hold their attention more effectively. Indeed, research has indicated that the use of audio-visual materials has a positive impact on learning as it tends to be more engaging and interesting (Afriza & Nasution, 2022; Prayekti et al., 2019). An article also may be perceived as more legitimate than a PowerPoint presentation. Nyhan and Reifler (2010) indicate that information is not typically presented to people in straightforward factual bullet points, but more often embedded in other materials such as within news

articles or other media. As such, the PowerPoint which presented the material in a straightforward factual bullet point manner may not have been viewed favorably by participants, perhaps making them suspicious of the content or generally uninterested. Additionally, presenting information in this manner may have lacked mundane realism.

Another area future research should examine is the intersection between race and gender in terms of the ZSP. Since the ZSP has been linked to both race and gender (Bosson et al., 2012; Norton & Sommers, 2011; Kehn & Ruthig, 2013), identifying how the intersection of these identities impacts the ZSP may be beneficial in determining a potential barrier to societal equality and equity. For example, are gains by non-white women seen as more or less threatening to men than gains by white women? Further, how do individuals who represent minority groups on multiple levels perceive gains by other groups? The current study did not include a sufficiently diverse sample to test possible intersectional differences, however, this is an avenue that future research should investigate.

Additionally, research could examine current public opinions on gender equality and equity in order to get a sense of how these social issues are currently being viewed. Specifically, research could examine whether gender equality and equity are generally viewed favorably or unfavorably as well as if the public perceives them to have “gone far enough” and be an issue of the past, as in previous research (Holter, 2014, p. 534; Lips, 2003). In addition to general opinions and attitudes, determining what knowledge and benefits the public recognizes and using that information to frame a future education may

be beneficial. Particularly, getting a sense of what the “information gap” (Holter, 2014) currently looks like. In other words, future research could examine the gap between the benefits that exist and are associated with gender equality (such as lower child mortality) and the benefits that are currently perceived and acknowledged by individuals. This would allow future research to use that information to tailor education and determine what may be particularly important to highlight in future research education interventions.

A final suggestion for future research would be to further examine how gender equality education interacts with a threat to the gender status quo. In the current study, the difference in general ZSP endorsement between the education and no-education conditions among those who received the threat to the gender status quo was approaching significance. However, contrary to what was hypothesized and pilot study results, those who read the article depicting a threat to the gender status quo and then received education had higher levels of ZSP than those in the no education condition. While efforts based in past research (Hulleman et al., 2010) were taken to avoid intensifying negative reactions with an opportunity to generate connections from the education to their own life, this greater ZSP endorsement among men who received the threat and then education may still be due to a “doubling down” on beliefs in the presence of a threat as the education may have still been viewed as threatening. This “doubling down” is sometimes referred to as the “backfire effect” and is when individuals who are faced with unwelcome information that challenge their beliefs come to support their beliefs even

more strongly rather than simply resisting the new information or changing their beliefs (Nyhan & Reifler, 2010). The backfire effect could be in part due to reactance, or the unpleasant motivation one feels to restore personal freedom, when they perceive personal freedoms are threatened (Brehm & Brehm, 2013). By supporting these beliefs even more strongly, individuals may feel that they are restoring some of their freedom they perceived as being threatened.

## **Conclusion**

The win-lose view of the ZSP is detrimental to gender equality and equity efforts and as such, understanding how it may be reduced is crucial. The current study expanded upon past research by examining the ZSP using both within-group changes and between-group comparisons, as well as assessing whether the ZSP could be reduced via an educational intervention. Although many hypotheses were not supported by the current results, there remain plenty of suggested research avenues to explore. As such, future studies should continue to examine the potential impacts endorsement of the ZSP of gender status may have as well as the malleability of the perspective, particularly whether it can be reduced. Through continued efforts, researchers may succeed in getting closer to overcoming this barrier to gender equality.

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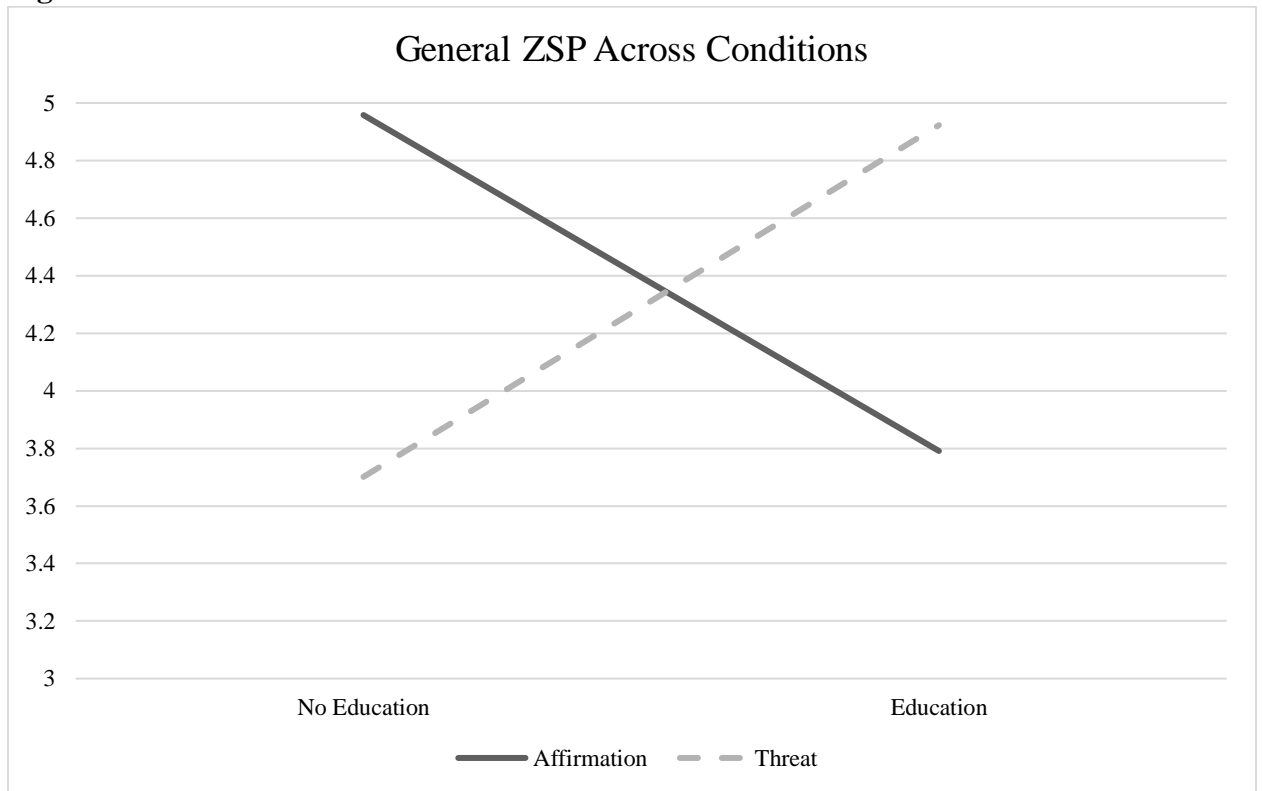
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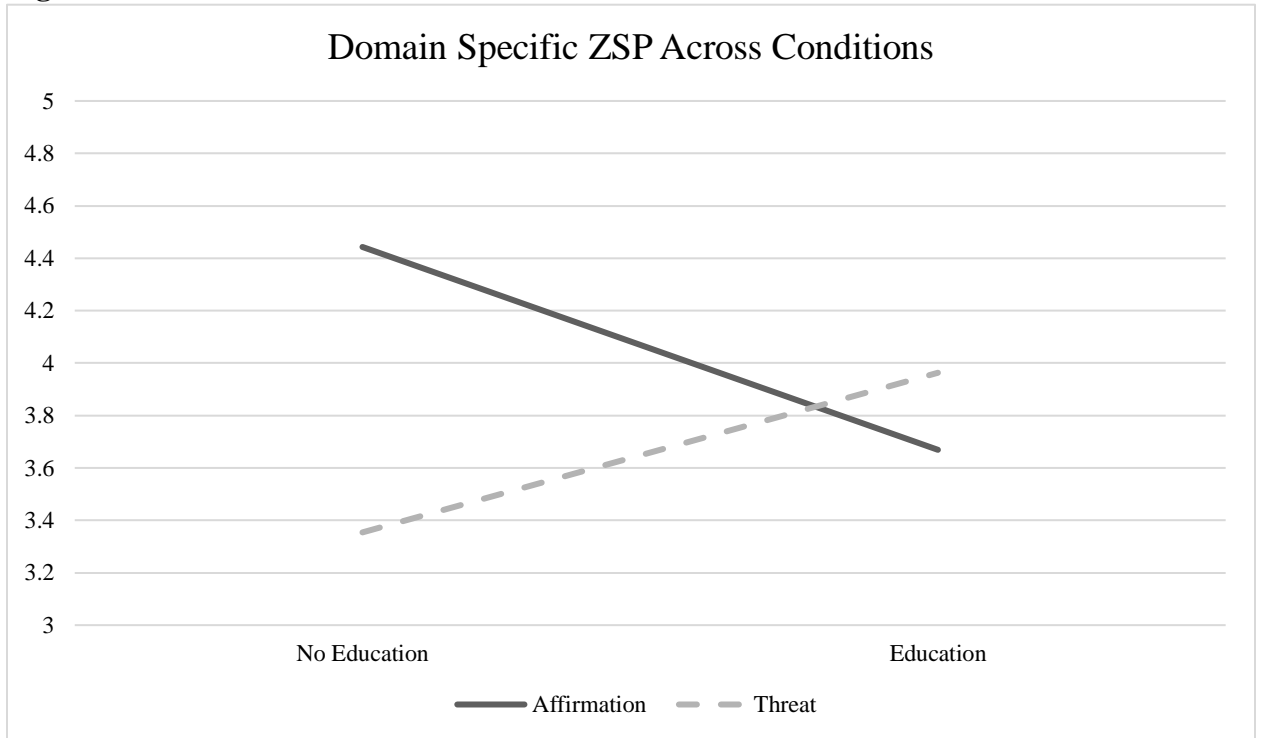
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**Figure 1a.**

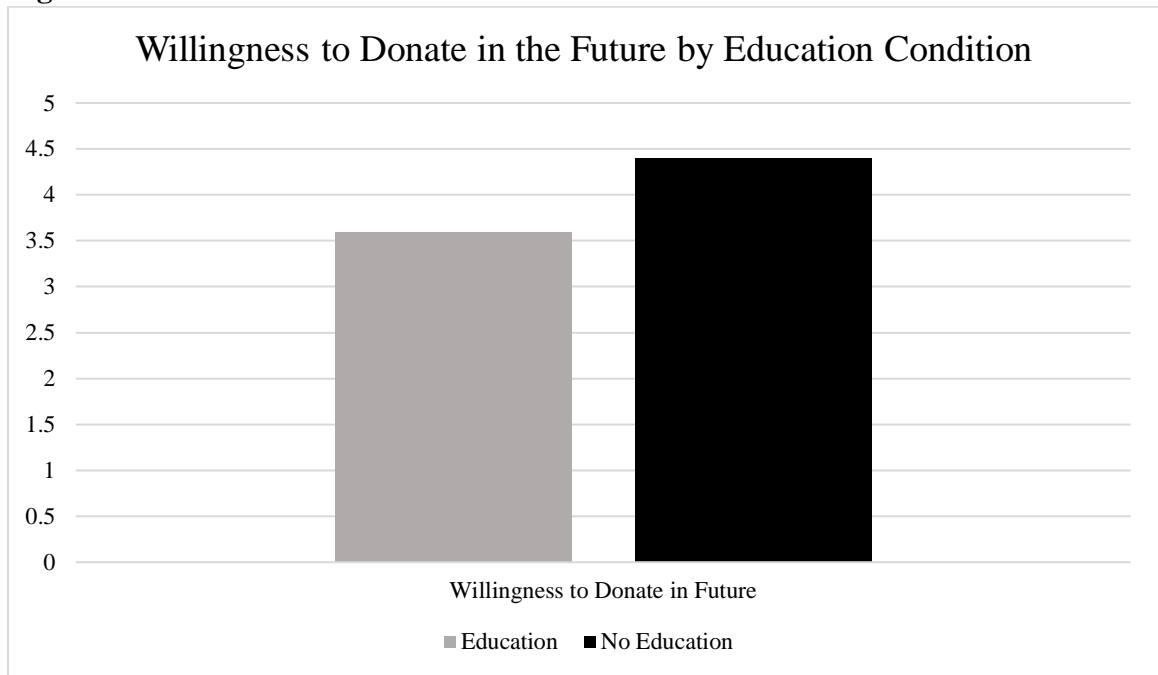


**Figure 1b.**





**Figure 2.**



**Table 1.** Descriptive Statistics of Study Variables

Variables		N	M	SD	Possible Range	Actual Range
General ZSP T <sub>1</sub>	Men	119	4.61	3.04	1-10	1-10
	Women	109	3.28	2.54		
Domain-Specific ZSP T <sub>1</sub>	Men	119	4.00	2.95	1-10	1-10
	Women	109	2.93	2.39		
Social Dominance Orientation	Men	119	2.46	1.33	1-7	1-7
	Women	109	2.03	1.24		
Right-Wing Authoritarianism	Men	119	-.89	1.33	-3-3	-3-3
	Women	109	-.82	1.49		
Hostile Sexism	Men	119	2.08	.89	0-5	0-4.18
	Women	109	1.80	.73		
Political Orientation	Men	119	3.20	1.72	1-7	1-7
	Women	109	3.28	1.82		

**Table 2.** Bivariate Correlations Among Time 1 Study Variables for Women and Men

Variables	1	2	3	4	5	6
1. General ZSP T <sub>1</sub>	---	.65**	.33**	.42**	.48**	.25**
2. Domain-Specific ZSP T <sub>1</sub>	.73**	---	.27**	.29**	.52**	.21*
3. Social Dominance Orientation	.55**	.61**	---	.59**	.25**	.47**
4. Right-Wing Authoritarianism	.66**	.60**	.65**	---	.27**	.63**
5. Hostile Sexism	.51**	.69**	.54**	.53**	---	.16 <sup>NS</sup>
6. Political Orientation	.49**	.42**	.66**	.59**	.30**	---

*Note.* Upper right corner reflects correlations for women (N = ); bottom left corner reflects correlations for men (N = 119). \* p<0.05; \*\* p<0.01 level

## Appendix A Demographics

### **Instructions:**

*Please respond to each of the following items to the best of your ability. There are no “right” or “wrong” answers to the questions – we are only interested in your own personal thoughts and opinions, which will be completely anonymous.*

- 1.) What is your age? (In Years) \_\_\_\_\_
  
- 2.) What is your gender?
  - a. Male
  - b. Female
  - c. Non-Binary / third gender
  - d. Transgender
  - e. Prefer not to say
  - f. Other not listed \_\_\_\_\_
  
- 3.) What is your ethnicity?
  - a. White (Caucasian/European or European American)
  - b. Mexican or Mexican American
  - c. Other Latin or Latin American
  - d. Black or African American
  - e. Native American/Alaskan Native
  - f. Caribbean Islander
  - g. Asian or Pacific Islander
  - h. Multi-Ethnic
  - i. Other \_\_\_\_\_
  
- 4.) What is the highest level of education you have completed? \_\_\_\_\_
  
- 5.) What is your annual household income?
  - a. Under 20,000
  - b. 20,000 – 29,999
  - c. 30,000 – 39,999
  - d. 40,000 – 49,999
  - e. 50,000 – 59,999
  - f. 60,000 – 75,000
  - g. Over 75,000
  
- 6.) Please select the number that best reflects you for the statement below:

“What is your political orientation?”  
(Liberal)1    2    3    4    5    6    7 (Conservative)

**Appendix B**  
**Zero-Sum Perspective**  
*From Ruthig et al. (2017)*

**Instructions:**

*Please read the following statements and rate how much you agree with each statement using the provided scale*

1.) Declines in discrimination against women are directly related to increased discrimination against men

1	2	3	4	5	6	7	8	9	10
Not at All									Very Much

N/A Discrimination against women has not been reduced.

2.) More good jobs for women mean fewer good jobs for men

1	2	3	4	5	6	7	8	9	10
Not at All									Very Much

N/A The availability of good jobs for women hasn't increased.

3.) The more power women gain, the less power men have

1	2	3	4	5	6	7	8	9	10
Not at All									Very Much

N/A Women haven't gained any power.

4.) Women's economic gains translate into men's economic losses

1	2	3	4	5	6	7	8	9	10
Not at All									Very Much

N/A Women haven't gained economically

5.) The more influence women have in politics, the less influence men have in politics

1	2	3	4	5	6	7	8	9	10
Not at All									Very Much

N/A Women's political influence hasn't increased.

6.) As women gain more social status, men lose social status

1	2	3	4	5	6	7	8	9	10
Not at All									Very Much

N/A Women haven't gained social status.

7.) More family-related decision making for women means less family-related decision making for men

1	2	3	4	5	6	7	8	9	10
Not at All									Very Much

N/A Women's family-related decision-making hasn't increased

**Appendix C**  
**Social Dominance Orientation**  
*From Pratto et al. (1994)*

**Instructions:**

*Please read the following statements and rate your attitude toward each statement using the provided scale.*

- 1.)** Some groups of people are simply inferior to other groups  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 2.)** In getting what you want, it is sometimes necessary to use force against other groups  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 3.)** It's OK if some groups have more of a chance in life than others  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 4.)** To get ahead in life, it is sometimes necessary to step on other groups  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 5.)** If certain groups stayed in their place, we would have fewer problems  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 6.)** It's probably a good thing that certain groups are at the top and other groups are at the bottom  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 7.)** Inferior groups should stay in their place  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 8.)** Sometimes other groups must be kept in their place  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 9.)** It would be good if groups could be equal  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 10.)** Group equality should be our ideal  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 11.)** All groups should be given an equal chance in life  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 12.)** We should do what we can to equalize conditions for different groups  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 13.)** Increased social equality  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 14.)** We would have fewer problems if we treated people more equally  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 15.)** We should strive to make incomes as equal as possible  
1      2      3      4      5      6      7  
Very negative      Very Positive
- 16.)** No one group should dominate in society  
1      2      3      4      5      6      7  
Very negative      Very Positive

**Appendix D**  
**Right-Wing Authoritarianism**  
*From Rattazzi et al. (2007)*

**Instructions:**

*Please read the following statements and rate how much you agree with each statement using the provided scale.*

- 1.) Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 2.) The majority of those who criticize proper authorities in government and religion only create useless doubts in people's mind  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 3.) The situation in our country is getting so serious, the strongest method would be justified if they eliminated the troublemakers and got us back to our truth path  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 4.) What our country really needs instead of more "civil rights" is a good stiff dose of law and order  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 5.) Obedience and respect for authority are the most important values children should learn  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 6.) The facts on crime, sexual immorality and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers, if we are going to save our moral standards and preserve law and order  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 7.) What our country needs most is disciplined citizens, following national leaders in unity  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 8.) Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 9.) A lot of our rules regarding sexual behavior are just customs which are not necessarily any better or holier than those which other people follow  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 10.) There is absolutely nothing wrong with nudist camps  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 11.) Homosexuals and feminists should be praised for being brave enough to defy "traditional family values"  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 12.) Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 13.) People should pay less attention to the Church and the Pope, and instead develop their own personal standards of what is moral and immoral  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree
- 14.) It is good that nowadays young people have greater freedom "to make their own rules" and to protest against things they don't like  

-3	-2	-1	0	1	2	3
Totally disagree						Totally agree

## Appendix E Hostile Sexism

*From Glick & Fiske (1996)*

### **Instructions:**

*Please indicate the degree to which you agree or disagree with each statement using the following scale: 0 = disagree strongly; 1 = disagree somewhat; 2 = disagree slightly; 3 = agree slightly; 4 = agree somewhat; 5 = agree strongly.*

**1.) Many women are actually seeking special favors, such as hiring policies that favor them over men, under the guise of asking for “equality.”**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**2.) Most women interpret innocent remarks or acts as being sexist**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**3.) Women are too easily offended**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**4.) Feminists are not seeking for women to have more power than men**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**5.) Most women fail to appreciate fully all that men do for them**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**6.) Women seek to gain power by getting control over men**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**7.) Women exaggerate problems they have at work**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**8.) Once a woman gets a man to commit to her, she usually tries to put him on a tight leash**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**9.) When women lose to men in a fair competition, they typically complain about being discriminated against**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**10.) There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly

**11.) Feminists are making entirely reasonable demands of men**

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly



## **Appendix F**

### ***Threat to Gender Status Quo Condition***

#### **Instructions:**

*Please read the excerpt below from The Guardian News Source. The advance button will appear after 45 seconds have elapsed.*

#### **Women May Win the War in the Battle of the Sexes**

At the beginning of the last century, inequalities between men and women were taken for granted. Men automatically occupied high-status skilled positions in the workforce and most jobs required women to resign once they were married. At the beginning of this century, many Americans probably considered gender inequality to be a thing of the past. Have things really changed that much?

According to a recent report, the answer is yes. Statistics compiled for the United Nations report titled The World's Women 2014 show that on many measures, women are catching up to their male counterparts. In the areas of employment, salary, education, politics, the courtroom, and at home, women continue to increase in status and power relative to men. Between 1960 and 2013, the gender gap in wages decreased by 18%, and women's political representation continues to increase. Many men and women now say that they would prefer a female boss to a male boss, and women are now entering and graduating college at higher rates than men. There is no question that women are gaining power and will continue to do so.

Because of the significant gains made by women over the years, it seems that they may ultimately win the war in the battle of the sexes.

#### ***Status Quo Affirmation of Gender Status Quo Condition***

#### **Instructions:**

*Please read the excerpt below from The Guardian News Source. The advance button will appear after 45 seconds have elapsed.*

#### **Women Still Losing the War in the Battle of the Sexes**

At the beginning of the last century, inequalities between men and women were taken for granted. Men automatically occupied high-status skilled positions in the workforce and most jobs required women to resign once they were married. At the beginning of this century, many Americans would consider inequality to be a thing of the past. Have things really changed that much?

According to a recent report, the answer is a resounding no. Statistics compiled for the United Nations report titled The World's Women 2014 show that on many measures, women's inequality remains as real as it was 100 years ago. In the areas of employment, salary, education, politics, the courtroom, and at home, women continue to lag behind men. Men still earn 22% more than women do for the same job and women hold only 14.3% of corporate leadership positions. Regardless of employment, age, number of children, and marital status, women still spend significantly more hours on housework than their male counterparts. There is no question that men are maintaining power and will continue to do so.

Despite the significant gains made by women over the years, it seems that they may be still losing the war in the battle of the sexes.

## Appendix G Education Condition

### **Instructions:**

*Please watch the following presentation. Following the presentation, you will be asked some comprehension questions, so be sure to watch carefully*

—Information will be presented in the form of a short PowerPoint Presentation—

- When there is gender equality, everyone wins!
- What is Gender Equality?
  - Gender Equality is the state in which access to rights or opportunities is unaffected by gender
  - How does gender equality benefit everyone? Let's explore the ways!
- Gender equality is good for everyone's health
  - Gender equality is linked to...
    - Higher fertility rates
    - Less violence against women
    - 50% fewer violent deaths
    - Lower child mortality rates
- Gender equality is good for everyone's well-being
  - Gender equality is linked to...
    - Greater rates of happiness and lower rates of depression in both men & women
      - Regardless of income or social economic status!
    - Lower divorce rates
    - Lower rates of male suicide
    - Better overall well-being in both men & women
- Gender equality is linked to...
  - Greater economic growth
  - A stronger workforce
- With gender equality, we all win!
  - Higher fertility rates
  - Less violence against women
  - 50% fewer violent deaths
  - Lower child mortality, divorce, depression, & male suicide rates
  - Greater rates of happiness, economic growth, and better overall well-being
  - A stronger workforce

### **Quiz:**

### **Instructions:**

*Please indicate whether each of the following statements is true or false.*

1. Gender equality only benefits women
  - True or False
    - False – Gender equality is beneficial to everyone, regardless of gender. Gender equality also has benefits on both individual and societal levels!
2. Gender equality is linked to lower child mortality rates
  - True or False

- True – When women are better educated and earning more income, they invest more back into their families contributing to children’s health and education and lowering child mortality.
3. Gender equality is linked to happiness for women but depression for men
    - True or False
      - False – Gender equality is linked to greater rates of happiness for men *and* women as well as less depression for both men *and* women. This holds true regardless of income or social economic status!
  4. Gender equality is linked with lower rates of male suicide
    - True or False
      - True - in more gender-equal societies, the rate of male suicide is markedly lower
  5. Gender equality is linked to a stronger economy
    - True or False
      - True – Gender equality stimulates the economy leading to greater economic growth and a stronger workforce!
  6. In the space below, describe the most important benefit of gender equality from the presentation that applies to your own life.

## **Appendix H Donation**

The Foundation for Gender Equality is an organization “dedicated to creating an urgent call to action on behalf of women and girls globally.” The Foundation believes that women and girls should live free from oppression, stigma, and artificial constraints. The Foundation is focused on five key areas, numbers one and two are both initial and long-term priorities:

1. Violence and abuse against women and girls, including domestic violence and sexual abuse
2. Inclusion and focus on men and boys as partners in achieving empowerment and equality
3. Economic inequality and lack of empowerment
4. Reliable access to quality healthcare and its impact on women, families, and societies
5. Equal access to educational opportunities as a cornerstone of advancement.

Through its ground-breaking programs, the Foundation will bring together agents of change, champions, experts, grass-roots organizations, and others for new dialogues focusing on shared solutions, hope and positive outcomes. By investing in women and girls, the Foundation will be instrumental in promoting massive societal change with great benefits for all.

- 1.) Would you be willing to donate any of the money you earned as a participant today to The Foundation for Gender Equality?
  - a. Yes
  - b. No

- 2.) Using the following sliding scale, please indicate how much of your study earnings you’d like to donate to The Foundation for Gender Equality today.

\$0.00 (0%) – \$0.90 (100%)

- 3.) ZS

1  
(Not at all likely)

2

3

4

5  
(Very likely)