

HAIGAZIAN UNIVERSITY

“Changing Hearts and Minds”: The effects of self-affirmation and mediated intergroup contact  
on transgender prejudice among Lebanese cisgender individuals

Isabel Abou Samra

Beirut - Lebanon

June 2021

HAIGAZIAN UNIVERSITY

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A Thesis submitted to the Faculty of Social and Behavioral Sciences in partial fulfillment of the  
requirements for the Master of Art in Psychology – Emphasis Clinical at Haigazian University.

Beirut - Lebanon

June 2021

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Changing Hearts and Minds: The effects of self-affirmation and mediated intergroup contact on transgender prejudice among Lebanese cisgender individuals

By

Isabel Abou Samra

is accepted by the Graduate Thesis Committee as satisfying the thesis requirements for the degree Master of Arts.

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June 2021

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## Abstract

Transgender people across the world experience widespread prejudice, discrimination and violence because of the way in which they express their gender identity (James et al., 2016; FRA, 2014, 2020; Wang et al., 2020). In Lebanon, transgender women report substantial discrimination and exclusion across multiple sectors of life such as education, employment, housing, and healthcare (HRW, 2019). Despite the severity of transgender prejudice and its harmful impact on transwomen's lives, no research thus far has examined interventions targeting this type of prejudice in Lebanon. The purpose of the present study was to assess the effectiveness of five interventions informed by "intergroup contact" (Allport, 1954) and "self-affirmation" (Steele, 1988) theories to reduce prejudice toward transgender women in Lebanon. The study employed an experimental 3 x 2 between-subjects factorial design with three self-affirmation manipulations (*values-affirmation vs. mastery recall affirmation vs. no affirmation*) and two mediated contact manipulations (*mediated contact vs. no contact*). The experiment was administered online via Qualtrics with a sample of 219 heterosexual cisgender Lebanese men and women. Results indicated that mediated intergroup contact had a significant main effect on behavioral tendencies and to a lesser extent, perceived threat. Values-affirmation had a significant main effect on behavioral tendencies. Mastery recall affirmation had a significant main effect on behavioral tendencies, and to a lesser extent outgroup feelings. There was no clear interaction effect between self-affirmation and mediated contact. The present study was the first to experimentally assess a number of interventions targeting transgender prejudice in Lebanon, if not the Middle East region. By assessing the efficacy of theory-based interventions to reduce prejudice against transgender women, it addresses some of the existing gaps in transgender prejudice research literature. Moreover, the findings may potentially help design better programs

to combat transgender prejudice across various societal domains, such as healthcare, employment, and education.

*Keywords:* Transgender, Prejudice, Self-Affirmation, Autobiographical mastery recall, Mediated intergroup contact, Lebanon

## CHAPTER I

### INTRODUCTION

“Changing Hearts and Minds”: The effects of self-affirmation and mediated intergroup contact on transgender prejudice among Lebanese cisgender individuals

#### **Background of the Study**

Transgender people – those whose gender identity differs from the sex they were assigned at birth - are among the most vulnerable and marginalized groups in societies throughout the world (United Nations Development Programme, 2017). A gender minority historically grouped under the larger ‘LGBTQ’ umbrella, people identifying as ‘transgender’ experience widespread prejudice because of the way in which they express their gender identity. The miniscule numerical representation of transgender people in the general population makes them less visible and, therefore, more vulnerable to misperception and bias (Hoffarth & Hodson, 2018). Statistics and reports concerning the transgender population are consistent with their shared suffering (James et al., 2016; FRA, 2014, 2020; Wang et al., 2020). The widespread of transgender prejudice across many societal sectors and settings, along with associated human suffering, provide compelling grounds—if not a moral mandate—for intervention.

While many parts of the world have begun to witness increasing visibility and acceptance of transgender identities, transgender prejudice continues to be a pressing issue worldwide (Flores, Brown, & Park, 2016). The prejudice that permeates transgender people’s lives underlies the discriminatory behavior and violence directed at them. To illustrate, transgender people report substantial systemic discrimination, exclusion and violence in family, community, and institutional settings (FRA, 2014, 2020; Grant et al., 2011; James et al., 2016; Wang et al., 2020).

Ample documentation of the pervasive violence against transgender persons across the world includes stark evidence of assault, kidnapping, extreme forms of violence (e.g., murder, rape, and torture), and institutional mistreatment (Trans Murder Monitoring, 2018). What's more, such violence may be trending up, as evidenced for instance by the worldwide increase in transgender murders per year (i.e., from 148 in 2008 to 369 in 2018; Trans Murder Monitoring, 2018). Such a trend of violence, involving transgender murder, prompted the Human Rights Campaign (HRC) to label it an "epidemic of violence" (2019).

### **The Present Study Context**

Despite having garnered a reputation of being more "liberal" and accepting of LGBTQ identities than its neighbors in the Middle East (Bedford, 2012), one finds numerous reports of human rights violations against LGBTQ people in Lebanon (e.g., Helem, 2017; Human Rights Watch, 2019). Transgender people in Lebanon are an oppressed population facing systemic discrimination and violence by families, communities, institutions, and even governmental entities (HRW, 2019). Public attitudes toward transgender people are quite severe, where people who transgress socially-constructed gender boundaries are thought to be immoral, perverted, and disgusting (Nasr & Zeidan, 2015). The prejudice that surrounds transgender people's lives in Lebanon fuels discrimination and violence against them. Members of this population report substantial systemic discrimination and exclusion across multiple sectors of life, for instance, when attempting to access important, life-sustaining needs such as employment, housing, and healthcare (HRW, 2019). Aside from discrimination, documentation exists of the extreme forms of violence enacted against transgender people in Lebanon, not only by members of the public but also by law enforcement officials (Helem, 2017; HRW, 2019).

In consequence to such harrowing experiences of prejudice, discrimination, and violence, the transgender community in Lebanon has suffered enormously. In terms of mental health and wellbeing alone, research has identified a number of deleterious effects. Transgender people in Lebanon are disproportionately affected by high rates of mental illness (Ibrahim, Haddad, & Richa, 2016). Moreover, the attempted suicide rate within the transgender population (46%; Kaplan et al., 2016) is nearly 14x times the one in the general population (3.3%; World Health Organization, 2019). This 14-fold elevation underscores both the suffering of the community and their desperate attempt to end it. Such human suffering and desperation are yet to be successfully tackled.

### **Rationale for the Study**

The research provides clear and ample evidence on the injustices and inequalities experienced by the transgender population in societies across the globe, including Lebanon. Limited research, however, has examined interventions targeting transgender prejudice. The vast majority of research has focused on L and G segments of the LGBTQ population (Hoffarth & Hodson, 2019). Existing interventions that focus on transgender prejudice exclusively are fraught with limitations. To illustrate, educational interventions that provide knowledge on transgenderism have been shown to increase transgender knowledge, but are less effective on their own in shifting attitudes and behaviors – outcomes that are necessary for prejudice reduction (Cramwinckel, Scheepers, & van der Toorn, 2018).

Recently, interventions that are based on Allport's (1954) intergroup contact theory and which promote direct (i.e., face-to-face) and indirect (e.g., through a mediated channel) intergroup contact between cisgender and transgender individuals have emerged as promising interventions for combatting transgender prejudice (Galinec & Korajlija, 2017; McDermott et al.,

2018; Tompkins et al., 2015; Walch et al., 2012). However, the majority of these studies have focused on Western, Educated, Industrialized, Rich, and Democratic (i.e., WEIRD) samples (Hoffarth & Hodson, 2019). No studies have been carried out in the Middle East region, including Lebanon, despite numerous reports of daily and major human rights violations against transgender individuals in the region (Human Rights Watch, 2012, 2019, 2020a, 2020b). This stark reality makes a swift response, including targeted interventions, justifiable.

World humanitarian organizations have increasingly recognized the importance of fighting prejudice. Twelve United Nations entities, including the World Health Organization (WHO), issued a joint statement calling on world governments to actively address the “violence and discrimination” directed at transgender persons and other sexual minorities (UNDP, 2015). The UNDP called for interventions that target transgender prejudice, which it deemed critical to “safeguard their health and well-being.” (p .32, 2017).

While world organizations and policy makers are calling for interventions, with an eye on outcome, researchers in the field are studying how to produce the desired change: The constituents and/or mechanisms of an effective intervention. A literature review concerning sexual orientation and gender identity prejudice (SOGIP) interventions concluded with a number of recommendations, including the use of theory-based, randomized control trial, and a combination of techniques to improve on existing interventions (Cramwinckel et al, 2018). A viable solution, it seems, is to turn to available theory and promising approaches to prejudice reduction.

Allport’s (1954) *intergroup contact theory* provides a theoretical basis for intervention with prejudice. It purports that positive interactions between members of different groups has the salutary effect of reducing prejudice when certain conditions are met (e.g., equal status, common

goals, cooperation, support from authorities). Intergroup contact interventions work by reducing negative emotions (e.g., intergroup anxiety) while at the same time fostering positive emotions (e.g., empathy, perspective-taking) in interacting members, which results in improved intergroup attitudes (Pettigrew & Tropp, 2008). Intergroup contact doesn't have to be face-to-face to be effective; it is effective even when done indirectly, such as through a mediated channel (e.g., television shows, movies, books; Park, 2012). Indeed, a meta-analysis of the mediated contact literature provides compelling evidence of its capacity to reduce prejudice toward different social groups (Banas, Bessarabova, & Massey, 2020). A number of studies have examined the application of mediated contact to transgender prejudice, generally finding positive results (e.g., Galinec & Korajlija, 2017; McDermott et al., 2018; Tompkins et al., 2015). Extending the literature on mediated contact to the stigmatized community of transwomen in Lebanon, Lebanese cisgender individuals who come into meaningful "mediated contact" with transwomen may, under certain conditions, become less prejudiced toward them.

*Self-affirmation theory* (Steele, 1998) has also emerged as particularly promising approach to prejudice reduction (Paluck & Green, 2009; Cohen & Sherman, 2014). It posits that individuals are motivated to maintain a global sense of self-integrity and that threats to one's sense of self may lead to defensive responding (Steele, 1998). In the context of intergroup relations, self-threats stemming from certain outgroups can lead to expressing prejudice toward them to in order protect self-integrity (Badea & Sherman, 2019; Sherman & Hartson, 2011). By the same token, people are less likely to respond in a prejudiced manner after they have affirmed positive aspects of their self-concept. Restoration of self-integrity can be achieved by affirming values central to the self (Cohen & Sherman, 2014; Steele, 1988) or by recalling mastery autobiographical memories where one overcame a difficult situation (Tavitian-Elmadjian et al.,

2020). Self-affirmation interventions may be especially relevant to the study of transgender prejudice. Although no research thus far has implemented self-affirmation theory to the context of transgender prejudice, it has been shown to reduce prejudice towards other social groups (Sherman et al., 2017; Cohen & Sherman, 2014), including gay men (Lehmiller, Law, & Tormala, 2010). Transgender people are often perceived to be threatening to cisgender individuals because they challenge the gender binary, and by extension traditional gender norms prescribed to men and women (i.e., masculinity and femininity; Broussard & Warner, 2018; Nagoshi et al., 2008). In the context of the present study, attitude change toward transwomen may be achieved by bolstering the self-esteem and re-affirming the identity of Lebanese cisgender individuals, inasmuch as they become less threatened by them.

The present study is theory-informed and tests the effectiveness of specific interventions with prejudice, including combined interventions. The inclusion of combined interventions is consistent with Cramwinckel et al.'s (2018) recommendation to combine techniques to build more effective interventions. Self-affirmation and mediated intergroup contact have been tested in isolation. However, an intervention combining both techniques has not yet been tested. Intergroup contact theory has been critiqued in terms of the conditions that need to be met for its to be effective in general (i.e., equal status; Kende et al., 2018), and specifically in the context of transgender contact (i.e., elicits disgust; Casey, 2016). Combining it with self-affirmation can underscore these limitations and prove effective even when all the conditions necessary for intergroup contact to work are not met.

### **Purpose of the Study**

The present study assessed the relative effectiveness of five interventions informed by “intergroup contact” (Allport, 1954) and “self-affirmation” (Steele, 1988) theories to reduce

transgender prejudice using an experimental between-subjects factorial design. Specifically, the present study examined whether 1- coming into contact with a Lebanese transgender woman through the media (mediated contact; Allport, 1954), 2- self-affirming by reflecting on a personally relevant value (values-affirmation; Badea, Binning, Sherman, & Verhac, 2018), and 3- self-affirming by recalling instances of overcoming adversity (mastery recall affirmation; Tavitian-Elmadjian et al., 2020) could effectively improve Lebanese cisgender individuals' outgroup feelings and behavioral intentions, and reduce their perceived threat toward transgender women. In addition to examining singular interventions, the present study looked at the interaction between mediated contact and self-affirmation in the form of two hybrid interventions. Specifically, it examined whether 4- engaging in values affirmation prior to mediated contact and 5- engaging in mastery recall affirmation prior to mediated contact would improve prejudice outcomes beyond the effects of any mediated contact on its own.

## CHAPTER II

### LITERATURE REVIEW

#### **Transgender Experiences of Prejudice, Discrimination and Violence In Lebanon**

To better understand the unique plight of the community of transwomen in Lebanon, statistics and reports pertaining to everyday experiences of prejudice, discrimination and violence must be examined.

Social attitudes toward transgender individuals and public opinion on transgender rights remain clearly divided by country. Although many parts of the world have begun to witness greater visibility and acceptance of transgender identities in recent years, others have not. To illustrate, a large-scale survey of 17,105 adults across 23 countries, most of which are developed, found generally supportive attitudes toward trans rights (Flores, Brown, & Park, 2016). Samples in regions such as Spain, Sweden, Argentina, Canada, Germany, and Greater Britain reported positive attitudes toward trans rights, all scoring above 67 on a 100-point scale. Other regions such as Russian, Hungary, South Korea, and Poland reported less tolerant attitudes, generally scoring below 55 on the same 100-point scale. Middle-Eastern countries, where attitudes toward the LGBTQ community are generally severe (El Feki, 2015), were not included in the survey.

In Lebanon, transgender people are an oppressed population facing systemic discrimination and violence by families, communities, institutions, and even governmental entities (HRW, 2019). In a country where gender is socially constructed around the gender binary and where men and women are prescribed distinct gender roles (Avis, 2017), transgender prejudice is rather prevalent. A Lebanese national survey ( $N = 1,200$ ) conducted in 2015 revealed that the vast majority of respondents (97.5%) believed there are “two sexes only”. The majority considered gender visibility, or the ability to identify one’s gender upon meeting them, to be

important (82.1%). Furthermore, the majority believed that dressing up like the opposite gender (87% for cross-dressing men and 80.5% for cross-dressing women) is perverted and disgusting. More than half (58.5%) considered sex-reassignment procedures to be immoral (Nasr & Zeidan, 2015).

The prejudice that surrounds transgender people's lives in Lebanon fuels discrimination and violence against them (Kaplan et al., 2015). Existing reports indicate that the oppression of transgender women in Lebanon typically begins at home. Indeed, the majority of transwomen in Lebanon report being subjected to severe forms of domestic violence, typically by a male relative, including being locked up for extended periods of time, being denied food and water, being burnt, beaten, stabbed and raped. Such experiences of family violence lead many transwomen to run away from home (Human Rights Watch, 2019). In educational settings, the majority of Lebanese transwomen are unable to complete their education due to the discrimination and bullying they endure in schools and universities, leading many to drop out. In terms of employment, transwomen have difficulty finding and maintaining a job, which in turn has pushed many into survival sex work. When they do find employment, they are subjected to "unreasonable working hours, low wages, lack of benefits, and sexual harassment" (HRW, 2019).

Transwomen also report being discriminated against in other areas of life. For instance, they are routinely denied housing by landlords if their gender identity does not match their identification card (HRW, 2019). Disturbingly, this population also experiencing stigma and discrimination in healthcare settings where they are often denied medical care, verbally harassed, and physically assaulted by healthcare providers (HRW, 2019). Moreover, they face obstacles when attempting to access basic services as they are unable to acquire official documents (e.g.,

identification card) that reflect their gender identity and expression. Changing their name and gender markers on official documents is only possible following gender-confirmation surgery, which is expensive and sometimes undesirable, and a court ruling, which is also lengthy and expensive in itself (HRW, 2019).

Aside from discrimination, documentation exists of the extreme forms of violence enacted against transwomen in Lebanon. Transwomen report being routinely threatened, harassed and assaulted in public spaces (Helem, 2017; HRW, 2019). This has pushed many to conceal their gender identity in order to survive. Transwomen suspected of gender non-conformity face routine violence by law enforcement officials and are at greater risk of arbitrary arrest and detainment, sometimes without a legal basis (Human Rights Watch, 2019; Helem, 2017). While Lebanon does not explicitly criminalize transgender identities, transgender persons are arrested on the pretense of breaking laws related to public morality and under a law criminalizing sex work (Helem, 2017; HRW, 2019). Moreover, transwomen who are perceived to be gay men are arrested on laws prohibiting “sexual intercourse contrary to the order of nature” (HRW, 2019). In fact, 77% LGBT-identifying individuals arrested in 2017 were transwomen (Helem, 2017). Most disturbingly, when detained, the majority of transwomen are placed in men’s holding cells, thus making them vulnerable to harassment and assault from male detainees (Helem, 2017; HRW, 2019).

### **Consequences of transgender prejudice, discrimination, and violence**

Transwomen’s harrowing experiences of prejudice, discrimination, and violence by families, communities, institutions, and even governmental entities contribute to disparities between them and the general population. In Lebanon, transwomen have few opportunities to pursue education and to find employment, thus contributing to the high levels of poverty and

homelessness in this population (Kaplan, 2015; Kaplan, 2016). Moreover, the anticipation of prejudice and discrimination in healthcare settings leads many transwomen to avoid seeking out medical care when in need (HRW, 2019).

Transgender prejudice also has deleterious effects on the mental health of transwomen in Lebanon. The few existing studies on transgender mental health show transgender persons to be disproportionately affected by high rates of mental illness such as depression and anxiety (Ibrahim, Haddad, & Richa, 2016). Moreover, the attempted suicide rate within the transgender population (46%; Kaplan et al., 2016) in Lebanon is nearly 14x times the one in the general population (3.3%; WHO, 2019).

### **Interventions Targeting Transgender Prejudice**

Considering the severity of transgender prejudice in Lebanon and its harmful impact on transwomen's lives, it is crucial to find ways to diminish it. Existing research has largely focused on measuring the correlates and predictors of transgender prejudice. Indeed, many factors have been linked to prejudice toward transgender individuals. These include demographic factors such as gender (Costa & Davies, 2012; Greenburg & Gaia, 2019; Tee & Hegarty, 2006; Nagoshi et al., 2008; Norton & Herek, 2013; Rye, Merritt, & Straatsma, 2019), sexual orientation (Warriner, Nagoshi, & Nagoshi, 2013), and educational level (Norton & Herek, 2013; Tee & Hegarty, 2006). Beyond demographics, personality and individual factors such as right-wing authoritarianism (Konopka, Prusik, & Szulawski, 2019; Nagoshi et al., 2008; Norton & Herek, 2013; Tee & Hegarty, 2006; Warriner et al., 2013), political conservatism (Norton & Herek, 2013), social dominance orientation (Konopka, Prusik, & Szulawski, 2019), and religiosity (Campbell et al., 2019; Elischberger et al., 2018; Solomon & Kurtz-Costes, 2018) have also been associated with transgender prejudice. Other predictors of transgender prejudice include negative

attitudes toward LGB people (Costa & Davies, 2012; Gerhardtstein & Anderson, 2010; Nagoshi et al., 2008; Norton & Herek, 2013; Tee & Hegarty, 2006), having a friend or family member who is transgender (Tadlock et al., 2017) and contact with LGB people (Flores, 2015; Tadlock et al., 2017).

Experimental research into interventions specifically targeting transgender prejudice is limited. Some studies have attempted to reduce this type of prejudice by providing people with information about transgenderism and by raising awareness regarding transgender prejudice (e.g., Case & Stewart, 2013; Tompkins et al., 2015). In one study, providing participants with a list of factual information intended to dispel popular misconceptions about ‘transsexuals’ effectively reduced beliefs in transgender myths and negative attitudes toward transgender individuals (Case & Stewart, 2013). However, this approach to prejudice-reduction (i.e., knowledge transfer) is not always effective. Although providing information can effectively increase transgender knowledge, this method has proven to be less effective on its own in shifting attitudes and behaviors – outcomes that are necessary for prejudice reduction (Cramwinckel et al., 2018). Research shows that interventions effective at reducing SOGIP are those that increase empathy (Felten, Emmen, & Keuzenkamp, 2015) and perspective-taking (Tompkins et al., 2015). This may help explain why knowledge transfer on its own is not always effective at reducing prejudice outcomes. Moreover, interventions based on knowledge transfer are not grounded in theory and as such the mechanisms through which they exert their effects are not clear (Cramwinckel et al., 2018). To illustrate, one study found that participants who read a formal definition of the term “transsexualism” did not show a change in attitudes toward ‘transsexualism’ (Galinec & Korajlija, 2017). In fact, there is some evidence to suggest that certain types of transgender education may backfire and contribute to prejudice against

transgender people. For instance, Tompkins et al. (2015) found that providing people with information about Gender Identity Disorder (GID) in the form of an educational video slightly increased transgender prejudice. The authors attributed these findings to the pathologization of gender variation when adopting a ‘disease-centered approach’ (i.e., Gender Identity Disorder) to transgenderism, which in turn reinforces the belief that transgender people are mentally ill (Tompkins et al., 2015). This raises some concern with the adoption of a purely educative approach to prejudice reduction.

In a literature review concerning sexual orientation and gender identity prejudice (SOGIP) interventions, Cramwinckel et al. (2018) concluded with a number of recommendations for designing and implementing effective interventions targeting SOGIP. One of the recommendations included the use of theory-based interventions, randomized control trial, and a combination of techniques to improve on existing interventions. A viable solution, it seems, is to extend the literature on theory-based intervention to the community of transgender women in Lebanon. To this end, one turns to an in-depth review of available theory in an effort to examine its applicability to trans-sensitive interventions.

## **Intergroup Contact**

### ***Theory of Intergroup Contact***

Interventions with prejudice reduction have been typically informed by theory. A most prominent one is Allport’s (1954) “intergroup contact theory”, which posits that bringing members of different social groups into meaningful “contact” can reduce outgroup prejudice and improve intergroup relations. Allport argued that such contact may be optimized when certain conditions are met. Specifically, members of the contact situation should have an equal, non-hierarchical relationship (equal status), work together in a non-competitive environment

(cooperation), rely on each other to achieve their shared goals (common goals), and their contact should be sanctioned by social or institutional authorities (institutional support). The potential for intimate intergroup contact in the form of cross-group friendships was later identified as a particularly important aspect of contact (Davies et al., 2011).

Since its formulation, the intergroup contact theory has amassed substantial empirical support (Brown & Hewstone, 2005; Lemmer & Wagner, 2015; Pettigrew & Tropp, 2006). A meta-analysis of 515 studies from 38 countries, for instance, established that prejudice and contact were negatively associated ( $r = -.21$ ; Pettigrew & Tropp, 2006). Furthermore, the same meta-analysis found that Allport's optimal conditions facilitate the effects of intergroup contact, but are not essential for prejudice reduction (Pettigrew & Tropp, 2006). Empirical support for the theory seems universal, showing applicability across cultures, inter-group situations, and different social groups (Pettigrew & Tropp, 2006, 2011). Research has also demonstrated that intergroup contact is effective even for highly prejudiced individuals and works through reducing intergroup anxiety and threat, while increasing empathy and trust (Hodson, 2011). A most important finding, given its implication for intervention, is that contact effects generalize beyond the immediate contact situation to the out-group as a whole (Pettigrew & Tropp, 2006, 2011).

Numerous studies have examined the mechanisms through which intergroup contact achieves its effects. Affective processes have emerged as particularly important in this regard. Specifically, contact works by inducing positive intergroup emotions such as empathy, perspective-taking, and trust towards the outgroup, while simultaneously reducing negative intergroup emotions such as anxiety and threat over interacting with outgroup members (e.g., Brown & Hewstone, 2005; Pettigrew & Tropp, 2008; Swart, Hewstone, Christ, & Voci, 2011)

Cognitive processes such as increased outgroup knowledge are less influential in this regard (Brown & Hewstone, 2005; Miller, Smith, & Mackie, 2004; Pettigrew & Tropp, 2008).

### ***Intergroup Contact in the context of SOGIP***

Numerous studies have examined the application of intergroup contact theory to the LGBT community. A large and growing literature suggests that greater contact with sexual minorities is associated with improved attitudes and greater support for gay rights (for a meta-analysis, see Smith, Axelton, & Saucier, 2009). In fact, in the meta-analysis by Pettigrew and Tropp (2006), the effects of contact were strongest for sexual prejudice. Experimental evidence also supports the utility of contact interventions in reducing sexual prejudice. To illustrate, meta-analytic findings show intergroup contact strategies to be one of the most effective interventions for reducing prejudice toward gays and lesbians (e.g., Bartos, Berger, & Hegarty, 2014).

The current literature on the impact of interpersonal contact on transgender prejudice is mixed, but generally shows a positive association between personally knowing someone who is transgender (e.g., friend or family) and prejudice toward this population. To illustrate, a survey examining public attitudes toward transgender rights across 23 counties found that roughly one-fourth (26%) of respondents reported knowing someone who is transgender (Flores, Brown, & Park, 2016). In every country surveyed, knowing a transgender person was associated with greater support for transgender rights. Moreover, having transgender friends or family members was the strongest predictor of support for trans rights.

There is limited work that examines the effects of direct contact interventions on transgender prejudice. However, existing research shows promising results. Walch et al. (2012) tested the effects of two classroom-based pedagogic interventions with undergraduate college students as a means of reducing transgender prejudice. In doing so, they randomly assigned

students to one of two groups in a crossover design: 1- a transgender speaker panel presentation followed two days later by a traditional lecture presentation on transgender issues or, 2- a traditional lecture presentation on transgender issues followed two days later by a transgender speaker panel presentation. The panel presentation consisted of four transgender individuals who shared their experiences as transgender people and these experiences' emotional impact. The lecture presentation consisted of a non-transgender guest speaker who discussed educational topics related to transgenderism (e.g., terminology, prevalence, issues facing transgender people). Both interventions were followed by an opportunity for students to ask questions. Whereas the lecture presentation followed a formal structure with minimal interaction between the guest speaker and students, the panel presentation followed an informal structure and encouraged intimate interaction between speakers and students. Students' 'transphobia' was measured at four time points: at baseline, immediately following the panel presentation, immediately following the lecture presentation, and three weeks post-intervention. The results showed significant reductions in levels of 'transphobia' across time for both conditions. Participants assigned to the speaker panel first condition showed greater immediate reductions in 'transphobia' than did those who were assigned to lecture first condition. Further reductions in prejudice were found with the addition of the speaker panel to the lecture presentation, but not vice versa (addition of the lecture following the panel presentation). Moreover, contact effects for both groups persisted up to three months after the intervention. These findings are encouraging as they suggest that direct contact interventions, especially those structured in a way that meets Allport's optimal conditions, may have long-lasting effects on transgender prejudice.

The notion that establishing direct contact might help reduce transgender prejudice has some support in research and theory. However, certain barriers can make direct contact interventions with this population difficult, if not impossible, to achieve.

### ***Limitations of Intergroup Contact Theory***

Researchers have identified several limitations of intergroup contact theory despite the robustness of the evidence supporting it. In segregated contexts and intergroup conflict situation, opportunities for face-to-face contact are often scarce. This renders the possibility of creating positive intergroup encounters difficult, if not impossible, to achieve (McKeown & Dixon, 2017). Moreover, direct contact with unfamiliar outgroup members often induces feelings of threat and anxiety, which may lead to avoidance of contact situations and exacerbate outgroup attitudes during intergroup encounters (Shelton, Dovidio, Hebl, & Richeson, 2009). In fact, research shows that negative contact can worsen intergroup attitudes and relations (Barlow et al., 2012; Pettigrew, 2008; Aberson, 2015). What's more, Kende et al. (2018) show that the effects of intergroup contact vary across cultural contexts. Intergroup contact has weaker effects on prejudice in cultures that value hierarchy (e.g., China) when compared to cultures that value equality (e.g., Western Europe). Specifically, intergroup-relations in hierarchal cultures are structured in a way that do not meet Allport's (1954) 'equal status' condition between majority and minority groups (Kende et al., 2018). These limitations do not discount the far-reaching effects of intergroup contact theory, but rather allow one to adopt a more critical perspective on its application to certain contexts and with certain groups.

### ***Potential Barriers to Establishing Direct Transgender Contact***

A number of factors can undermine the likelihood of establishing direct contact with members of the transgender population. One is low demographic representation. Inasmuch as

transgender people constitute less than 1% of the population (compared to the 2-5% for their homosexual and bisexual counterparts), the probability of making direct contact with them is statistically very small (Hoffarth & Hodson, 2018). This problem is compounded by the group's general unwillingness to disclose transgender identity (Hoffarth & Hodson, 2018). Such practices, and obvious barriers to contact, may be attributed to elevated risks associated with transgender identity disclosure (e.g. Trans Murder Monitoring, 2018). Interventions that encourage face-to-face contact can potentially be harmful to transgender individuals, seeing as cisgender individuals may respond with anger, hostility, and violence. This bears particular relevance for interventions carried out in countries that criminalize LGBT identities (Hoffarth & Hodson, 2019). In Lebanon, although being transgender is not illegal per se, transgender individuals are routinely arrested under laws policing morality and those prohibiting prostitution and "sexual intercourse contrary to the order of nature" (Helem, 2017; HRW, 2019).

Another challenge pertains to quality of contact. This is a concern, inasmuch as some factors can weaken or even subvert any attempt at contact and, therefore, reduce or reverse its effectiveness. To illustrate, certain individuals (i.e., highly conservative) experience a sense of threat in response to attempted face-to-face contact with transgender individuals, which in turn elicits feelings of disgust (Casey, 2016). These emotional reactions may potentially undermine contact interventions. In this vein, West, Shelton, and Trail (2009) argue that even the anticipation of contact with "unfamiliar outgroup members" might provoke an experience of threat. In effect, a number of contact-based experimental studies have documented some negative affect (e.g., threat and anxiety) in both ingroup and outgroup members (West, Shelton, & Trail, 2009). Such negative contact experiences cannot be expected to help with prejudice; if anything, they can make it worse (Barlow et al., 2012). In fact, studies show that negative contact

experiences have negative effects on intergroup attitudes and relations (e.g., Aberson, 2015; Barlow et al., 2012; Pettigrew & Tropp, 2008). Given these challenges, a number of scholars have opted for an “indirect contact” approach that doesn’t involve face-to-face interactions, thus averting the reactionary effects and difficulties associated with direct contact (Dovidio, Eller, & Hewstone, 2011).

### ***Mediated Intergroup Contact as an Alternative to Direct Contact***

One alternative to direct contact is mediated intergroup contact, where interaction with members of the out-group (real or fictional) takes place through a medium, such as stories, books, newspapers, radio program, television shows and movies (Park, 2012). Such mediated contact comes with a primary advantage, psychological distance, while yielding positive effects comparable to the ones seen in direct face-to-face contact (Banas, Bessarabova, & Massey, 2020). Mediated contact is less likely to induce feelings of perceived threat or anxiety when compared to direct contact (Pettigrew & Tropp, 2011) and has even been shown to reduce anxiety for future encounters (Ioannou, 2017). Thus, it may be ideal in that it lowers the threat of direct contact but remains nevertheless effective. Another advantage of mediated contact is its accessibility. Mediated contact is an accessible means of prejudice reduction that has the potential to reach a large audience, especially when opportunities for direct contact are rare such (e.g., segregated contexts or conflict situations). Finally, the valence of contact can be easily tailored to meet specific conditions. For instance, outgroups members and ingroup-outgroup interactions can be depicted as positive (Joyce & Harwood, 2012; Park, 2012). Allport (1954) himself acknowledged the important role mass media can play in changing intergroup attitudes, describing it as an “effective first step” (p. 453).

The positive effects of mediated intergroup contact (parasocial and vicarious) are well-supported empirically in both experimental (e.g., Schiappa, Greg, & Hewes, 2005; Joyce & Harwood, 2014; Mazziotta, Mummendey, & Wright, 2011; Paluck, 2009) and correlational studies (e.g., Schiappa, Greg, & Hewes, 2006; Hoffarth & Hodson, 2018; Sink & Mastro, 2017; Ortiz & Harwood, 2007). A recent meta-analysis of 63 studies from 21,875 participants established that mediated intergroup contact is related to prejudice reduction, with an effect size comparable to that of direct contact ( $r=.23$ ; Banas, Bessarabova, & Massey, 2020). Like direct contact, mediated contact effects generalize beyond the immediate contact situation to the outgroup as a whole (McIntyre, Paolini, & Hewstone, 2016). Most important, mediated contact is particularly effective among those who have very little contact with members of certain groups in everyday life (Joyce & Harwood, 2014; Mazziotta et al., 2011; Schiappa et al., 2006).

### ***Moderators And Mediators Of The Effects Of Mediated Contact***

Much like Allport's contact hypothesis, there are optimal conditions for mediated contact that influence the effectiveness of prejudice reduction. Generally, two factors have been consistently identified as moderating the impact of mediated contact on intergroup attitudes. One factor is outgroup typicality, which is the extent to which the portrayed outgroup member is perceived to be typical of their group. Indeed, research indicates that exposing people to outgroup members they perceive to be atypical of their group is less effective at improving outgroup attitudes (Joyce & Harwood, 2014; Mazziotta, Mummendey, & Wright, 2011). Another factor moderating the effects of contact on intergroup attitudes is contact valence – whether contact is perceived as positive or negative. In order for mediated contact to be effective, ingroup members must be exposed to positive portrayals of outgroup members and in the case of mediated vicarious contact, positive ingroup-outgroup interactions. Indeed, numerous studies

have shown that exposure to negative portrayals of outgroup members can exacerbate outgroup stereotypes and prejudicial attitudes (Atwell & Mastro, 2015; Solomon & Kurtz-Costes, 2018).

The mechanisms whereby mediated contact seems to operate have received little attention in the literature. Like direct contact, an examination of the available studies shows affective processes at the heart of change (e.g., Pagotto & Voci, 2013). Mediated contact is said to exert its effects via two basic mechanisms: (1) induction of positive emotions towards the outgroup and, (2) reduction of negative intergroup emotions (Ortiz & Harwood, 2007; Shim, Zhang, & Harwood, 2012; Pagotto & Voci, 2013). This dual-mechanism conceptualization is supported by a recent meta-analysis showing mediated contact to be associated with a decrease in negative intergroup emotions, such as anxiety, as well as an increase in positive emotions likely to bring people closer, such as empathy and perspective taking (Banas, Bessarabova, & Masset, 2020).

### ***Mediated Contact in the context of Transgender Prejudice***

To date, only a handful of studies have experimentally examined the impact of mediated contact on transgender prejudice. They include comparative studies involving direct contact and other interventions. One example is an experiment by Rani and Samuel (2018), comparing contact via video (i.e., mediated) to contact via a speaker panel of people (i.e., direct). Procedurally, participants were randomly assigned to attend either a 30-minute video featuring a man sharing his experiences as a transgender person, including instances of discrimination, or a one-hour panel of three transwomen discussing their experiences growing up and how these experiences impacted them emotionally (first in the form of a panel presentation and then by answering questions from the audience). The panel presentation was structured in a way that meets some of Allport's (1954) optimal conditions for contact. The speakers were introduced favorably by the instructors (institutional support) and were of same the age as the students

(equal status). Moreover, the presentation followed an informal structure and encouraged intimate interaction between speakers and students by allowing students to ask questions of an intimate nature. The study's basic findings were that both forms of intervention, direct and indirect, reduced transgender prejudice; however, the intervention used for direct contact produced the greater impact. At the one-month follow-up, mediated contact showed no effects while direct contact retained its gains against transgender prejudice. These findings, however, need to be qualified in the context of the study's methodological limitations and issues (e.g., unequal length of exposure) that might have undermined its comparative power. Still, one notes the effectiveness of the used methods in reducing transgender prejudice.

Another study with comparative aims was performed by Case and Stewart (2013). It included three brief interventions with transgender prejudice, targeting discriminatory behaviors, negative attitudes, and beliefs in transgender myths. Participants were assigned to one of three conditions, representing different contact methods: 1- an emotional coming-out letter from a young transman to his parents; 2- a list of factual information intended to dispel popular misconceptions about trans persons; and 3- a five-minute media clip featuring a trans student as he 'comes out' to his parents. All three methods effectively and equally reduced negative attitudes and beliefs in transgender myths. However, all failed to show effectiveness with discriminatory behavior, thus raising the possibility that the behavioral component may be more resistant to change. This finding may be helpful in that it enables more nuanced and focused research, enriching the understanding of prejudice and what constitutes it as well as helping in determining what constituents to target and with which methods.

Galinec and Korajlija (2017) conducted a comparative study involving three short interventions and assessed their impact in the affective (i.e., attitudes), cognitive (i.e., support for

trans rights; trans knowledge), and behavioral components (i.e., perceived social distance) of transgender prejudice. Specifically, participants were randomly assigned to one of three conditions: 1- a (2:41 min) video clip of a transwoman giving an emotional account of her transitioning experience, with before-and-after photos; 2- a vignette describing the experience of a transwoman and how she coped with related difficulties; and 3- a formal definition of the term “transsexualism”. The media condition led to greater improvements in the affective (i.e., attitudes) and cognitive (i.e., transgender knowledge; support for trans rights) components of prejudice when compared to the vignette and formal definition conditions. The behavioral component, operationalized in the study as “willingness to accept a transgender people as a co-worker, friend or partner” (p.4), appeared less amenable to change across conditions.

Tompkins et al. (2015) assessed two different forms of “knowing” about trans persons on prejudice against them. To that end, they tested a “humanizing” contact intervention, in terms of effectiveness with transgender prejudice, against an “educative” intervention. Specifically, participants were randomly assigned to one of two experimental conditions. The “education-only” condition consisted of a PowerPoint presentation on Gender Identity Disorder (GID) followed by a 15-minute videotaped interview with a GID expert. The other condition included a 15-minute documentary (featuring a transgender child and her family as she transitions from male to female), followed by a “perspective-taking” task: To put oneself in the child’s shoes by writing a coming-out letter to one’s own parents. This exercise, dubbed “humanizing”, was supposed to increase participant empathy. The study’s findings proved the superiority of the “humanizing approach”, in that participants in the “perspective-taking” condition showed greater reductions in transgender prejudice and a greater desire for transgender contact. Conversely, participants in the “education-only” condition showed an increase in transgender prejudice.

In light of the above study, it appears that not all forms of knowing are beneficial, let alone effective. Knowing isn't uniform: Role-playing another person conceivably moves one into an experiential (and more immediate) form of knowing (i.e., contact), in contrast with didactic knowledge. One might even hypothesize that, knowing about a trans person (i.e., educative knowledge) and experiencing them (i.e., empathic knowledge) aren't equal, or equally effective with prejudice.

Another study that sheds some light on what makes contact more successful is a recent experiment by Li (2019), focused on perspective-taking (narrative perspective). It tested whether the success of a vicarious contact is literally a matter of perspective. Specifically, when contact with an out-group is attempted via a featured presentation (e.g., a short film), are its effects determined by whose narrative is presented? In experimental terms, does narrating a story from a specific perspective (i.e., in-group vs. out-group) moderate the effects of vicarious contact? To answer this question, cisgender participants viewed an 8-minute video clip depicting "positive" intergroup interactions between a transwoman and her son. The video's narrative, however, was manipulated so that half of the participants were exposed to the transgender character's perspective while the other half got the cisgender family character's perspective. The study's findings were that, participants exposed to the out-group member's perspective (i.e., transgender character) showed more positive attitudes toward the featured transgender character and the transgender outgroup than those exposed to the same storyline narrated from an in-group member's perspective (i.e., cisgender family character). Therefore, the "narrative perspective" (Cisgender vs. Transgender) associated with a transgender character influences viewer's attitude towards the character and the transgender group in general. One implication of the Li study

(2019) is that mediated exposure to an out-group (e.g., via presentations) is best provided through the group's lens and, perhaps, in the authentic voice of its members.

The above studies, overall, support the notion that transgender prejudice can be tackled with some qualified contact interventions. There are studies, however, where findings weren't equally supportive across interventions (e.g., Orellana, Totterdell, & Iyer, 2020), or showed a counter-effect under certain conditions (e.g., negative portrayals of transwomen; Solomon & Kurtz-Costes, 2018).

In an experimental study of mediated contact, Orellana, Totterdell, and Iyer (2020) compared various levels of contact on “transnegativity”—a construct denoting transgender prejudice. To this end, two experimental conditions and one control group were created. Participants in the first experimental condition watched a 23-minute mini-series depicting two transwomen interacting with cisgender people in various contexts. In the second experimental condition, participants read two short stories authored by transwomen about their everyday experiences with cisgender friends and romantic partners. Participants in the control condition read an unrelated scientific article (i.e., Mars exploration). The experiment's outcome was that participants who read the short stories, but not those who watched the mini-series, had lower transnegativity scores (compared to the control). Therefore, it appears that not all forms of exposure are successful in reducing transgender prejudice.

In another experiment involving mediated contact, participants were randomly assigned to one of three conditions—negative, positive, or control (Solomon & Kurtz-Costes, 2018). Exposure to the out-group (i.e., transwomen) was done in the form of short clips from television shows or film depicting transgender-cisgender interactions. The main findings were that

exposure to positive interactions had no effects on attitudes toward transgender persons, while exposure to negative portrayals slightly increased transgender prejudice.

It emerges that contact with transgender people can, under certain conditions, reduce prejudice against the group and possibly improve intergroup relations. Indeed, the successful interventions reviewed appeared to have been focused, informative, narrative-authentic, and empathic. Focused material characterized some of the more successful interventions. In contrast, the more general media depiction of intergroup interactions proved useless in the Solomon and Kurtz-Costes's (2018) study; the mini-series, ineffective in Orellana, Totterdell, and Iyer's (2020) experiment. Further, interventions that were more informative about the lived experience of transgender persons (e.g., pertinent issues shared in personal discussion or coming-out stories) had better results, compared with less informative interventions; in this vein, affective engagement appears to be critical, as shown in the study by Galinec and Korajlija (2017). Empathy and perspective-taking also seem to facilitate change, as shown in both Li's (2019) and Tompkins et al.'s (2015) studies. Finally, the more authentic the narrative, the better. That is, a narrative is best given from a transgender perspective, regardless of content, as may be gleaned from Li's (2019) study. Arguably, such a narrative-authentic approach engages the recipient in the immediacy of experience, allowing for empathy to develop. While the above characteristics of successful interventions are still within the speculative sphere, they provide nevertheless a number of points to consider when planning a mediated contact intervention.

In the present study, it is expected that Lebanese, heterosexual cisgender individuals who come into positive mediated contact with a transwoman will become less prejudiced toward transwomen in general, but only if the contact situation meets certain conditions. The selection of the 'contact video' will be informed by the research on optimal conditions for mediated contact

in general (i.e., contact valence must be positive; outgroup member must be typical of their group) and the research on mediated transgender contact in specific (e.g., contact must be able to elicit empathy and perspective-taking).

Despite the robustness of the findings on mediated contact, certain limitations may limit the effectiveness of the present study's contact intervention. Recent research shows that intergroup contact with transgender individuals may elicit feelings of disgust in prejudice-prone individuals, such as those high on social dominance orientation and right-wing authoritarianism, which, in turn, limits its effectiveness (e.g., Casey, 2016; Miller et al., 2017). In the present study, an intervention which exposes cisgender men and women to a transgender woman through the media may not be enough to effect desired change in prejudice outcome. In this case, it may be beneficial to supplement mediated contact with an intervention that reduces the possibility of cisgender individuals feeling psychologically threatened, and thus disgusted with, transgender women. One such solution might be found in Steele's (1988) theory of self-affirmation.

## **Self-Affirmation**

### ***The Theory of Self-Affirmation***

Steele's (1988) self-affirmation theory is another prominent theory that has been applied to the study of prejudice. According to self-affirmation theory, individuals are motivated to maintain a global sense of self-integrity (Sherman & Cohen, 2006; Steele, 1988). In other words, people want to see themselves as "adaptively and morally adequate" (Steele, 1988, p. 262). Such image of oneself (i.e., self-integrity) encompasses many attributes, including competence, free choice, goodness, coherence, stability, being whole, and in control of significant life outcomes (p. 262). Self-affirmation theory views the self as a sphere composed of different domains. These domains include various aspects of the self, such as one's roles (e.g., parent, friend, worker),

values (e.g., moral, respectful, humorous), group identities (e.g., race, culture, gender) and belief systems (e.g., religion, political beliefs; Sherman & Cohen, 2006; Steele, 1988). A perceived threat in any personally relevant domain may get to the self and threaten its integrity, prompting the person to reclaim it (i.e., self-affirmation).

Daily life is fraught with occurrences that can threaten one's sense of self. For instance, morbid health information suggesting that one's behaviors has caused the illness. Based on self-affirmation theory, individuals respond to such threats in ways that minimize the threat and reaffirm self-integrity (Sherman & Cohen, 2006; Steele, 1988). To this end, he or she might engage in denial, avoidance behavior, or reappraisal of the perceived threat as to reduce its impact (Sherman & Hartson, 2011). In this context, "defensive responding" is one way of reaffirming self-integrity (Steele, 1988). Self-affirmation theory assumes a flexible self-system, in that individuals facing a threat in one domain can maintain an overall sense of self-integrity by affirming another domain that is unrelated to the threat itself (Sherman & Cohen, 2014; Sherman & Hartson, 2011). Thus, threats to specific self domains can be tolerated as long one maintains an overall sense of integrity (Steele, 1998).

Restoration of this global sense of being adequate (i.e., self-integrity) typically relies on self-affirmations, processes whereby the threatened person asserts (or affirms) central roles, beliefs, and values. When successful, self-affirmations reduce the likelihood of "defensive responding", the other way of feeling adequate again. Thus, self-affirmation and defensive responding may be thought of as two alternate, yet closely interconnected, ways to reestablish self-integrity. The close connection between the two is supported by numerous studies (e.g., Adams, Tormala, & O'Brien, 2006; Badea, Binning, Sherman, & Verhaic, 2018; Fein & Spencer, 1997) showing self-affirmation to be effective in reducing defensive responding.

The most commonly used experimental manipulation of self-affirmation is the values-affirmation task, where participants are given a list of values and instructed to first rank them in terms of personal importance, and then write about why their top-ranked value is important to them (McQueen & Klein, 2006). Self-affirmations are said to operate through certain mechanisms. One proposed mechanism of action is that self-affirmations, such as capitalization on central values and attributes, shores up/protects self-integrity by increasing the inner resources available to the self (Sherman & Hartson, 2011). Self-affirmations can also open up one's perspective and shift focus from the perceived threat to a broader view where things, including threats, are seen in a more balanced and proportionate way inasmuch as they become more contextualized. Another virtue of a broader perspective resides in its power to distance the threat from the self, thus reducing its impact (Sherman & Hartson, 2011). In brief, by increasing one's inner resources and/or broadening perspective, self-affirmations are theorized to help one cope with threat.

In principle, self-affirmation can take place in any domain of the self. However, it has been argued that targeting a domain that is unrelated to the threatened one can yield the best outcome (e.g., Steele, 1988). The rationale is that targeting the threatened domain might put one on the defensive (increase defensiveness), making self-affirmation more difficult to achieve. Given the general function of self-affirmation, an alternate route to reaffirm a threatened self is to target a non-threatened domain, preferably one that is unrelated to the perceived threat. This proposed strategy appears to circumvent defensive biases and is consistent with research evidence showing same-domain affirmations to increase defensiveness (e.g., Lehmiller, Law, & Tormala, 2010; Rivera 2006).

*Self-Affirmation and Prejudice-Reduction*

The benefits of self-affirmation are well documented in the literature. Self-affirmation has been shown to reduce defensive responding (e.g., Adams et al., 2006) as well as physiological and psychological stress (e.g., Creswell et al., 2005) in the face of a perceived threat. There is also evidence of more openness and less bias in the areas of politics and health. Specifically, self-affirmation in a different domain (e.g., central personal value) enabled participants to evaluate information about politics (e.g., Binning, Sherman, Cohen, & Heitland, 2010) and health risks (e.g., Harrison & Epston, 2009, 2010) in a more balanced and open way. When self-affirmed, people are more likely to compromise on socio-political issues and assume responsibility for their actions and those of the in-group.

Of special pertinence to the current study, self-affirmation has been shown to reduce prejudicial attitudes toward different stereotyped groups (see Badea & Sherman, 2019; Cohen & Sherman, 2014; Sherman, Brookfield, & Ortosky, 2017). Indeed, the potent role of self-affirmation in shifting intergroup attitudes is hard to miss. After all, it has the potential to buffer against perceived threats and, therefore, eliminate the need for defensive responding (Steele, 1988). This potential is especially relevant within a theoretical framework that conceptualizes prejudice as defensive posturing to protect self-integrity from outgroups perceived to be threatening to the ingroup (see Badea & Sherman, 2019; Sherman, Brookfield, & Ortosky, 2017). These assertions are supported by a meta-analytic study by Riek, Mania and Gaertner (2006) showing that perceptions of outgroup threats can indeed trigger negative outgroup attitudes.

Threats perceived to be coming from an outgroup may be categorized as either “symbolic” or “realistic” (Stephan & Renfro, 2002). Intergroup differences in the sphere of

values, religion, ideologies, morals, and belief systems are likely to generate symbolic threats, whereas those involving power, security, and the general welfare of the ingroup might trigger realistic threats. Both types can pose a threat to self-integrity and, therefore, are pertinent to any study examining perceived threat in the context of intergroup difference. It must be noted, however, that difference in and of itself doesn't automatically translate into a threat unless it pulls at core constituents of the self (e.g., central values and identity). In this context, exposure to people who hold different beliefs and worldviews is threatening to the extent it undermines one's self-integrity. This is one reason why some people, but not others, are disturbed by certain differences and not by all.

A number of studies show people to behave differently toward members of an outgroup depending on the level of perceived threat they pose. In a study by Kossowska, Szwed, Czernatowicz-Kukuczka, Sekerdej, and Wyczesany (2017), participants identifying as 'Orthodox Christians' were first exposed to atheistic worldviews through slogans (value-threat manipulation) and then randomly assigned to one of two condition. Participants in the experimental condition were given the opportunity to express prejudice toward atheists (by filling out a measure of negative attitudes toward atheists), while those in the control condition were not (by filling an unrelated measure of personality). Participants' threat response was examined through a measurement of cardiovascular reactivity (i.e., Heart Rate) at three separate time points: at baseline, after the threat manipulation, and after treatment conditions. The results revealed an elevated heartrate after the threat manipulation for participants who hold high, but not low, orthodox beliefs. Moreover, for participants high on Orthodox values, the expression of prejudice toward atheists effectively reduced heartrate when compared to the control condition.

These findings lend credence to the assertion that expressing prejudice may be an effective way to reduce outgroups threat, to the extent that they threaten a central aspect of the self.

Such observation gives rise to the question whether bolstering a person's sense of self-integrity, for instance through self-affirmations, can reduce the likelihood of prejudicial responding. Indeed, self-affirmation theory predicts that prejudicial responses stemming from threats to the self can be attenuated when people are provided an opportunity to affirm (Sherman & Cohen, 2006; Sherman & Hartson, 2011).

A study by Badea, Binning, Sherman and Verhaic (2018) following the terrorist attacks in Paris assessed French citizen's perceived threat, prejudice and support for discriminatory policy toward Muslim immigrants across three different condition (Badea, Binning, Sherman & Verhaic, 2018). Participants were randomly assigned to one of three values affirmation conditions, where they reflected on the importance of a personally relevant value to them at a personal level (self-affirmation condition), to them as French citizens (group-affirmation condition), or to someone else (control condition). The results showed that the self-affirmation condition effectively reduced perceived outgroup threats and support for discriminatory policies when compared to the group-affirmation and control conditions. None of the three conditions, however, had an effect on prejudicial attitudes. The effect of self-affirmation on prejudice was mediated by the perception of threat. That is, self-affirmation exerted its effects on prejudice by effectively reducing both realistic and symbolic threats associated with Muslim immigrants. These findings are significant as they indicate that self-affirmation has the potential to neutralize perceived threats associated with an outgroup and, therefore, eliminate the need for prejudicial responding.

*Self-Affirmation in the context of SOGIP*

The majority of the research on self-affirmation have examined its application to prejudice toward racial and ethnic minorities. Few studies, however, have examined and applied self-affirmation to the study of other types of prejudice, such as sexual orientation and gender identity prejudice (SOGIP).

While the threats associated with transgender prejudice have not yet been examined, there is reason to believe that prejudice toward transgender people is related to the symbolic threats they pose to cisgender people. Transgender persons are perceived to be psychological threatening, especially to men, inasmuch as they challenge the gender binary classification by not fitting societal expectations for men and women (Broussard & Warner, 2018; Nagoshi et al., 2008). Indeed, gender traditionalism is associated with greater prejudice toward transgender persons (Brassel & Anderson, 2020). While no data exists on threats associated with the transgender population in Lebanon, there exists those on sexual minorities. In a national sample of Lebanese individuals, the overwhelming majority (over 80%) perceived homosexuality to be immoral and sinful, with 85% perceiving it to be a threat to the family and 66.3% a threat to society (Nasr & Zeidan, 2015). Given that Lebanese people hold similar attitudes toward gender and sexual minorities (Nasr & Zeidan, 2015), these same threats may be extended to the transgender community in Lebanon.

No study as of yet has applied self-affirmation to the study of transgender prejudice. Even so, there are two studies that have examined its applicability to sexual prejudice against gay men. Lehmiller, Law, and Tormala (2010) assessed the efficacy of self-affirmation as a means of reducing negative attitudes toward gay men. In the first study, heterosexual participants were randomly assigned to either a standard values affirmation intervention (adapted from Cohen et

al., 2000) or a no-affirmation control condition. The results showed no difference in attitudes toward gay men across both the values affirmation and control conditions. Upon further analysis, it was revealed that over half the participants chose to affirm their relationships with family and friends, a value that is consistent with expressing prejudice toward gay men. In fact, these participants had slightly higher levels of prejudice when compared to the non-affirmed group, although this difference was not statistically significant. Likewise, participants who affirmed another value that is unrelated to prejudice toward gay men (e.g., humor) reported lower levels of prejudice when compared to the non-affirmed group, but again, this difference was not statistically significant.

In light of these findings, Lehmiller et al. (2010) carried out a second study where participants were not given the choice of which value to affirm. Heterosexual participants were randomly assigned to one of three conditions: 1- affirm to family/friends (domain-relevant), 2- affirm to humor (domain-irrelevant), or 3- a no affirmation control. The results revealed that participants who affirmed their relationships with family/friends were significantly more prejudiced against gay men than those who affirmed to sense of humor. When compared to the non-affirmed control, however, affirming to family/friends did not actually increase prejudice; rather, affirming sense of humor effectively reduced prejudice, while affirming to family/friends served to maintain levels of prejudice.

In a set of experiments, Rivera (2006) tested the effects of affirming or threatening the attribute of 'masculinity' on heterosexual men's prejudice toward gay men. In the first experiment, heterosexual male participants first completed a scale purporting to measure their levels of masculinity, and were then randomly assigned to either receive favorable bogus feedback (affirmation condition) or to not receive any feedback (control condition) on their

masculinity. Participants whose personal masculinity was affirmed (masculinity affirmation) expressed greater prejudice toward gay men relative to non-affirmed participants (control condition). Rivera (2006) extended these findings in a second study where he compared the effects of affirming versus threatening participants' personal masculinity on attitudes toward gay men. To that end, participants were randomly assigned to either receive a high masculinity score (affirmation condition), low masculinity score (threat condition) or no feedback (control condition) via the same bogus feedback test. Unsurprisingly, the results showed that affirming and threatening participants' masculinity had the same effect – both conditions equally increased prejudice against gay men when compared to the no-feedback control condition.

The studies by Lehmiller et al. (2011) and Rivera (2006) support the notion that affirming a central identity attribute or value that falls within the same domain of the threat can backfire and widen the gap between two groups (Steele, 1988). Specifically, self-affirmations of central values and attributes such as family values and masculinity proved detrimental, in that they maintained (e.g., Lehmiller et al., 2010) and even increased prejudice (e.g., Rivera, 2007). One plausible explanation is that affirmations targeting the threatened domain (e.g., sexual prejudice), or same-domain affirmations, are inherently risky in that instead of placing the threat in a larger context, they focus the individual on the threatened domain, thus making salient certain group distinctions.

Given the general function of self-affirmation, an alternate route to reaffirm a threatened self is to target a non-threatened domain, preferably one that is unrelated to the perceived threat (e.g., humor; Lehmiller et al., 2010). Thus, an intervention promoting values or attributes associated with the threat is more likely to elicit a reactive response than one that affirms human values that aren't necessarily associated with transgenderism in the minds of participants (e.g.,

kindness, compassion, creativity). Taken together, the above findings pave the way for a plausible intervention, one which uses affirmation strategically to reduce prejudice: Respond to perceived threat with different-domain (rather than same-domain) affirmations to avert defensive reactivity. This principle may be critical for success inasmuch as the type of affirmation appears to moderate the effectiveness of the intervention (i.e., self-affirmation).

### *Values-Affirmation in the Context of Lebanon*

The bulk of the research on values affirmation has been carried out in Western contexts (Tavitian-Elmadjian & Bender, 2020). In contrast, very little research has been conducted in non-Western contexts, with the exceptions of China (Gu et al., 2016; Hoshino-Brown et al., 2005) and Nigeria (Schneider & Weber, 2020). Such a skewness in cultural representation poses a challenge to “standard” values affirmation interventions investigated in Western contexts, in that they may not be applicable to non-Western contexts. After all, different cultures differ with regard to values they consider to be important, and dominant values in one culture may be marginal or even irrelevant in another. Consequently, an affirmation intervention that has been successfully applied in a Western cultural context may prove ineffective in a non-Western culture (Tavitian-Elmadjian & Bender, 2020).

Given that self-affirmation theory is based on the need to maintain a positive self-image by affirming personally relevant values (Steele, 1988), it is important to take into consideration the dominant values that correspond to the specific culture of interest. Specifically, values affirmation interventions need to be tailored to the specific cultural context in which the study is carried, once the dominant values of that culture have been identified.

Schneider and Weber (2020) investigated the effects of a culturally-adapted values affirmation intervention on behavioral tendencies toward ex-prisoners in two different cultural

contexts: Nigeria and the United States. In both settings, participants were randomly assigned to one of two conditions: Either reflect on a personally relevant value (i.e., values affirmation condition) or recall and describe “different aspects of the grocery store they most often frequent” (i.e., control condition). The values affirmation intervention used with the American sample was a standard one adapted from previous studies with Western/US samples. For the Nigerian context, the authors adapted the intervention to reflect values that would be meaningful for Nigerians, by piloting an online survey of a population sample. The results showed that in both cultural contexts, values affirmation effectively reduced discriminatory behavioral tendencies and increased social support for ex-prisoners when compared to the control condition. For instance, affirmed participants were more willing to participate in a tutoring program geared toward ex-prisoners or to offer them monetary assistance. Moreover, they were less likely to discriminate against a job candidate on the basis of their criminal history or to feel uncomfortable having an ex-prisoner for a neighbor.

Considering the relevance of cultural context, one central question in conducting the present study is whether a standard values affirmation intervention (e.g., Cohen et al, 2000) could be effective in the cultural context of Lebanon. The country is far from uniform when it comes to values, in part because of its sectarian composition and strife; and its population cannot be compared to Western ones, neither in terms of composition nor societal values (Tavitian-Elmadjian & Bender, 2020). Stated differently, Lebanon’s ethnic and religious diversity makes it difficult to identify dominant central values that are shared by all Lebanese.

One possible solution to the Lebanese context problem is to conduct a meticulous study, similar to the one carried by Scheider and Weber (2020), to identify dominant societal values in Lebanon, if present. Such enterprise, however, would fall beyond the scope of the present study.

Another solution may be to use an alternate self-affirmation method, one that does not require one to affirm specific values. To circumvent the cultural context problem, two self-affirmation interventions are proposed: One that uses standard values affirmation, and another that employs an alternate non-specific method (i.e., mastery recall affirmation).

### ***Self-Affirmation through Mastery Recall***

One alternative that has recently emerged as a useful method of self-affirmation when confronted with an identity threat is autobiographical mastery recall. It consists of recalling personal memories of a difficult experience and ways used to overcome it (Tavitian-Elmadjian et al., 2020). Recalling past mastery events may have affirmative effects, by reviving a sense of competence and self-efficacy. According to Tavitian-Elmadjian et al. (2020), mastery recall can: (1) evoke a sense of confidence inasmuch as it reminds the person of his or her past triumphs; (2) provide guidance on how to get out of the current predicament, given past successful tools and solutions. To illustrate, before a school test a student brings to memory past exams that he completed successfully and problem-solving strategies or methods he used to succeed, thus replacing threat and anxiety with reassurance (Tavitian-Elmadjian et al., 2020). Such assertion is consistent with self-affirmation theory (Steele, 1988), whereby people are driven to maintain self-worth and integrity in the face of threats to the self.

Tavitian-Elmadjian et al. (2020) investigated mastery recall as a method of self-affirmation under national identity threat in an American sample (Study 2). To that end, American participants recruited through the crowdsourcing website MTurk were randomly assigned to one of three levels of threat relevance (identity-relevant, identity-irrelevant, vs. neutral condition) and one of two levels of recall instruction (mastery recall vs. routine recall). To manipulate threat relevance, participants were randomly assigned to read one of three

vignettes: (1) a vignette referring to all Americans as “fat” following the “American fat” stereotype (identity-relevant threat), (2) a vignette referring to Austrians as “fat” (identity-irrelevant threat) and a vignette describing a chair (neutral condition). To determine the extent to which mastery recall effected self-affirmation, two conditions were created: Participants assigned to mastery recall condition reported on a difficult situation and how they overcame it, whereas those in the routine recall condition reported their morning routine. The results showed that when exposed to an identity-relevant threat, participants who recalled mastery memories reported greater collective self-esteem than those who recalled routine memories. As expected, participants in both the threat-irrelevant condition and neutral-condition did not differ in collective self-esteem when recalling mastery memories and routine memories.

Mastery recall as a means of self-affirmation has also been investigated in a sample of Lebanese (study 1) and Lebanese Armenians (study 2) exposed to a national identity threat (Tavitian et al., 2019). However, this method of self-affirmation was not effective in establishing collective self-esteem in either sample. The authors attributed the ineffectiveness of the mastery-recall affirmation to the following. In the Lebanese sample, national identity proved to be an irrelevant source of self-esteem and, therefore, threat to national identity didn’t impact their self-esteem; and, in the Lebanese Armenian sample, participants were constantly engaging in self-affirmation based on collective identity (Tavitian et al., 2019).

Given the shortcomings inherent to the standard values affirmation intervention, and seeing as mastery recall may successfully reduce social identity threats when perceived to be identity-relevant (Tavitian-Elmadjian et al., 2020), it is worth examining whether mastery recall as a method of self-affirmation could also be instrumental in the face of threats stemming from encounter with outgroups (i.e., symbolic threats coming from transwomen).

No study as of yet has examined the applicability of self-affirmation in the realm of transgender prejudice. In the context of the present study, cisgender individuals can use self-affirmations to constructively cope with the threat stemming from transwomen by either 1- reflecting on values they consider to be personally important (values affirmation) or 2- recalling past instances of overcoming adversity (mastery recall affirmation). Self-affirmations might enable cisgender individuals to better contain a perceived threat by contextualizing it in a broader and, therefore, more robust view of oneself; alternatively, by focusing on their perceived strengths (e.g., central attributes) self-affirming cisgender individuals increase their inner resources to ward off threat and maintain self-integrity. These venues can weaken the threat, either in magnitude (by scaling it down) or impact (by building up strength). One practical implication is that a weakened threat, coupled with a stronger self, increase the odds of problem resolution.

### **Rationale for a Combined Intervention**

In a literature review concerning sexual orientation and gender identity prejudice (SOGIP) interventions, Cramwinckel et al. (2018) concluded with a number of recommendations for designing and implementing effective interventions targeting SOGIP. These include the use of theory-based, randomized control trial, and a combination of techniques to improve on existing interventions. The authors also recommend that effective interventions not only reduce prejudicial attitudes, but also increase positive behaviors toward stigmatized groups (Cramwinckel et al., 2018). The present study builds on these recommendations by testing a combined intervention using self-affirmation and mediated contact, in addition to examining the effects of each on its own.

Intergroup emotions, and specifically disgust, are crucial to consider when designing interventions targeting SOGIP. Research has consistently demonstrated that social groups elicit qualitatively distinct emotional reactions depending on the perceived threat they pose to the in-group (Cottrell & Neuberg, 2005; Mackie, Smith, & Ray, 2008). The LGBT community, a group that is perceived as violating societal norms and values, generally elicits disgust (Cottrell & Neuberg, 2005). Higher levels of disgust have been linked to prejudice toward transgender individuals (e.g., Casey, 2016). Moreover, disgust has been shown to decrease support for transgender policy issues (Casey, 2016).

This has some implication for intergroup contact. Casey (2016) argues that disgust reactions may limit the efficacy of intergroup contact for some individuals (i.e., highly prejudiced individuals), which may explain why contact is effective for some, but not for others. Coming into contact with a member of an outgroup that is perceived to be ‘disgusting’ can counteract the positive effects of contact, and in certain instance may increase, rather than decrease, prejudicial attitudes. Indeed, social researchers have recently implicated disgust in the avoidance of contact with transgender individuals and reduced support for transgender rights (e.g., Casey, 2016; Miller et al., 2017). When considering such findings, there are reasons to believe that interventions promoting contact between cisgender and transgender individuals may backfire, either by hampering the effects of contact or by inadvertently increasing transgender prejudice.

Although mediated contact is typically less threatening than direct, face-to-face contact (Park, 2012) and therefore less likely to elicit disgust, it may still have unintended/paradoxical effects. In the Lebanese context where transgender attitudes are severe and a majority describe feeling disgusted with “men who dress up as women” (i.e., transwomen; Nasr & Zeidan, 2015),

even mediated contact may still trigger feelings of threat and disgust. One solution might be found in self-affirmation, whereby the unintended effects of contact may be undone (or the outcomes of contact improved) by using a self-affirmation task in combination with mediated contact. That is, self-affirmation may be a useful tool for reducing defensiveness and feelings of threat and disgust by cisgender individuals exposed to a mediated portrayal of a transgender woman. This may be achieved by broadening cisgender individuals' perspective beyond the domain of the threat, and thus, rendering them less likely to feel disgust upon exposure.

Another justification for a combined intervention pertains to the different domains of prejudice, which closely follows one of Cramwinckel et al.'s (2018) recommendations for designing an effective intervention. In the context of transgender prejudice, contact interventions have been shown to reduce negative attitudes but have sometimes failed to evidence change in the behavioral domain of prejudice (e.g., Galinec & Korajlija, 2017; Flores et al., 2017). Self-affirmation interventions seem to have the opposite effect; they have been shown to change the behavioral domain of prejudice but have sometimes failed to bring about attitudinal change. Combining both interventions might have the salutary effects of targeting both domains of prejudice. Thus, a combined intervention with self-affirmation and mediated contact may improve study outcomes, first, by protecting against unintended effects of contact, and second, by targeting both attitudinal and behavioral domains of prejudice.

### **Present Study and Hypotheses**

The overall purpose of the present study was to assess the relative effectiveness of theory-based interventions in reducing prejudice toward transgender women. Specifically, the present study examined whether coming into contact with a Lebanese transgender woman through the media (mediated contact), self-affirming by reflecting on a personally relevant value

(values-affirmation), and self-affirming by recalling instances of overcoming adversity (mastery recall affirmation) could effectively improve Lebanese cisgender individuals' feelings and behavioral tendencies, and reduce their perceived toward transgender women. The present study also examined the interaction between mediated contact and self-affirmation in the form of hybrid interventions combining the levels of each factor. Specifically, it examined whether engaging people in self-affirmation (values-affirmation and mastery recall) prior to mediated contact improved prejudice outcomes beyond singular interventions. Drawing upon previous findings, several hypotheses were tested.

### ***Main Effects for Mediated Contact***

The present study aimed to evaluate mediated contact with a Lebanese transgender woman as an intervention strategy to reduce Lebanese cisgender individuals' prejudice toward this population. There is growing empirical support for the efficacy of mediated contact in reducing prejudice toward transgender individuals (e.g., Case & Stewart, 2013; Galinec & Korajlija, 2017; Rani & Samuel, 2018; Tompkins et al., 2015), especially when certain conditions (e.g., outgroup typicality, positive contact valence; potential to elicit empathy) are met (Atwell & Mastro, 2015; Felten et al., 2015; Joyce & Harwood, 2014; Mazziotta & Mummendey, & Wright, 2011; Solomon & Kurtz-Costes, 2018). Drawing upon these findings, it was hypothesized that participants in the mediated contact condition will score significantly higher on measures of (H1a) outgroup feelings and (H1b) positive behavioral intentions, and lower on a measure of (H1c) perceived threat toward transwomen compared to participants in the no-contact condition.

### *Main Effects for Self-Affirmation*

Beyond evaluating the potential for mediated contact in reducing Lebanese cisgender individuals' transgender prejudice toward transgender women, the present study examined two methods of self-affirmation: values-affirmation and mastery recall affirmation. Interventions that are based on values-affirmation have been shown to improve attitudes and/or behaviors toward different social groups (Badea & Sherman, 2019; Sherman & Hartson, 2011). However, two problems may arise when adopting a standard values-affirmation protocol (e.g., Badea, Binning, Sherman, & Verhac, 2018; Cohen, 2000). Standard values-affirmation protocols that rely on values that are dominant in Western contexts may not be applicable to the Lebanese context. Indeed, affirming to values one does not consider to be personally relevant may fail to affirm the self, and thus fail to exert an effect (Cohen & Sherman, 2014; Steele, 1988). One value that Lebanese individuals are most likely to affirm in the aforementioned protocols are their relationships with family, given the important role these relationships tend to play in Lebanon (Moaddel, 2008). However, this may be equally problematic, inasmuch as self-affirmation is most effective when the value affirmed is in a different domain than the threat (Cohen & Sherman, 2015; Steele, 1988). To be sure, Lehmiller et al. (2010) demonstrated that the type of value affirmed moderates the effects of self-affirmation on prejudice toward gay men; while affirming to the domain-irrelevant value of humor reduced prejudice, affirming family values maintained prejudice. In the present study, affirming to values that are not considered to be important to oneself and to values that are seen as being at odds with showing tolerance toward transgender individuals may both fail to exert effects on Lebanese cisgender men's prejudice. Given these limitations, the present study employed the protocol by Badea, Binning, Sherman and Verhac (2018) while eliminating the domain-relevant value of 'family', which may be seen

as being at odds with displaying tolerance toward transgender women. While this effectively attended to the problem of domain-relevant affirmations, there remained the issue of cultural values which may render the values-affirmation intervention ineffective. In light of these considerations, and bearing in mind the potential for a null finding based on value relevance, it was hypothesized that participants in the values-affirmation condition will score significantly higher on measures of (H2a) outgroup feelings and (H2b) positive behavioral tendencies, and lower on a measure of (H2c) perceived threat toward transwomen compared to participants in the no-affirmation condition.

No study has been done to examine whether mastery recall as a means of self-affirmation can reduce prejudice toward certain outgroups. However, there are reasons to expect self-affirmation through mastery recall to reduce prejudice. In line with self-affirmation theory, recalling past mastery events has been shown to have affirmative effects by reviving a sense of competence and self-efficacy (Tavitian-Elmadjian et al., 2020). Moreover, mastery recall is a non-specific method of self-affirmation that restores one's sense of self-efficacy without having to affirm specific values. In fact, mastery recall affirmation may be more effective than a standard values-affirmation intervention, as it circumvents the aforementioned problems inherent to the standard values-affirmation intervention. For these reasons, it was hypothesized that participants in the mastery recall affirmation condition will score significantly higher on measures of (H3a) outgroup attitudes and (H3b) positive behavioral tendencies, and lower on a measure of (H3c) perceived threat toward transwomen compared to participants in the no-affirmation condition. It was also expected that participants in the mastery recall affirmation condition will score significantly higher on measures of (H4a) outgroup feelings and (H4b) and

behavioral tendencies, and lower on a measure of (H4c) perceived threat toward transwomen compared to participants in the values-affirmation condition.

### *Interaction Effects*

In addition to examining singular interventions, the present study examined the interaction between self-affirmation and mediated contact. Specifically, it assessed whether combining one of two types self-affirmation with mediated contact would improve prejudice outcomes beyond the effects of mediated contact on its own. The inclusion of a hybrid intervention is consistent with Cramwinckel et al.'s (2018) recommendation to combine techniques to build more effective interventions. No study thus far has combined self-affirmation and mediated contact into a hybrid intervention. There is research to suggest that coming into contact with transgender individuals elicits disgust in certain individuals (e.g., Casey, 2016). This in itself may render a contact intervention ineffective or may backfire by increasing prejudice. The addition of a self-affirmation task prior to contact may be a useful tool for reducing defensiveness and increasing openness to threatening information. Self-affirmation may broaden Lebanese cisgender individuals' perspective beyond the perceived threat posed by transwomen, thus rendering them less likely to feel disgusted and/or threatened upon establishing mediated contact. In this case, self-affirmation prior to mediated contact would enhance the effects of contact. Bearing in mind the possibility of a lack of interaction between values-affirmation and mediated contact due to cultural relevance of the values affirmed, it was expected that there will be a positive interaction effect between values-affirmation and mediated contact, whereby participants assigned to values-affirmation plus mediated contact will score significantly higher on measures of (H5a) outgroup feelings and (H5b) positive behavioral tendencies, and lower on a measure of (H5c) perceived threat toward transwomen compared to

participants assigned to no-affirmation plus mediated contact. It was also expected that there will be a positive interaction between mastery-recall affirmation and mediated contact, whereby participants assigned to mastery-affirmation plus mediated contact will score significantly higher on measures of (H6a) outgroup feelings and (H6b) positive behavioral tendencies, and lower on a measure of (H6c) perceived threat toward transwomen compared to participants assigned to no-affirmation plus mediated contact.

## CHAPTER III

## METHOD

**Overview and Design**

The present study employed a post-test only experimental 3 x 2 between-subjects factorial design, with self-affirmation (*values affirmation vs. mastery recall affirmation vs. no affirmation*) and mediated intergroup contact (*contact vs. no contact*) as independent variables. Participants were randomly assigned to one of the six cells of the 3 x 2 condition matrix resulting from three self-affirmation conditions and two mediated contact conditions, to form six discrete groups (see Figure 1). Subsequently, participants were asked to complete one of three tasks: 1- reflect on a personally relevant value (values affirmation; Badea et al., 2018); 2- recall a difficult situation and how they overcame it (mastery recall affirmation; Tavitian-Elmadjian et al., 2020); or 3- list what they ate and drank in the past 48 hours (no-affirmation; Cohen et al., 2000). This assignment to various tasks achieved the experimental manipulation of the self-affirmation variable. Manipulation of the mediated intergroup contact condition was performed by asking participants to either: 1- view a video featuring a Lebanese transwomen sharing her story and the discrimination she has endured due to her transgender status (mediated contact); or 2- view an unrelated video about being left-handed (no contact).

The experimental manipulation in the present study followed a specific order with regard to the independent variables. Specifically, self-affirmation manipulation was performed first; mediated intergroup contact, second. The rationale behind this orderly manipulation derives from previous research on values-affirmation (McQueen & Klein, 2006) and mastery recall affirmation (Tavitian-Elmadjian et al., 2020), showing both to function as “preventative” mechanisms whereby self-worth is shored up against perceived self-threat. Inasmuch as contact

with transwomen in the present study may potentially threaten some participants, particularly men (Broussard & Warner, 2018), it stands to reason to conduct self-affirmation manipulation before any type of contact.

In line with previous research advocating a focus on behavioral outcomes in addition to measures of prejudicial attitudes (Cramwinckel et al., 2018), dependent variables were self-reported feelings toward transgender women as a social group, self-reported behavioral tendencies, and perceived threat toward transgender women. The variables right-wing authoritarianism (conventionalism), social dominance orientation, religiosity, gender, LGB friend, and LGB family were also assessed as possible covariates, given that they have consistently emerged as correlates of transgender prejudice (Campbell et al., 2019; Costa & Davies, 2012; Elischberger et al., 2018; Konopka, Prusik, & Szulawski, 2019; Tee & Hegarty, 2006; Nagoshi et al., 2008; Norton & Herek, 2013; Rye, Merritt, & Straatsma, 2019; Warriner et al., 2013). Total study duration and duration taken to complete the contact condition were also assessed as potential covariates (see section on Manipulation Checks).

### **Participants**

Convenience sampling from the general population was applied to recruit 219 participants online through advertisements on several networking and social media platforms. Eligibility to participate in the study was based on the following inclusion criteria: (a) having a Lebanese citizenship, (b) residing in Lebanon for the past two years (b) identifying as a heterosexual cisgender man or woman, and (c) being over the age of 18 years. Eligible participants who completed the study were given the chance to enter a draw where 20 participants won a voucher worth 50,000 LBP for a delivery order from Toters, an online food delivery application. A minimum required sample size of 171 participants was calculated using

G\*Power version 3.1 (Faul et al., 2009) with six experimental conditions, eight covariates, three outcome measures, an expected small effect size ( $F^2(V) = .0625$ ), and 95% power with an error rate of .05. To account for dropouts, participants refusing to allow their data to be used after completing the study, and participants with a high rate of missing data, oversampling was applied and 510 participants were recruited over the course of three weeks, where the final sample size for analysis after data cleaning was 219 participants (see Preliminary Analysis in Results).

The final sample was composed of 119 (54.3%) cisgender women and 100 (45.7%) cisgender men. Participants ranged in age from 18 to 55 years old ( $M = 27.65$ ,  $SD = 7.19$ ). The majority of the sample ( $n = 155$  [70.8%]) reported having an LGB friend, compared to 23.7% ( $n = 52$ ) who reported having an LGB family member. Around 8.2% ( $n = 18$ ) of the sample reported having a transgender friend or family member. Participants reported various levels of education, with the majority having a Bachelor's degree ( $n = 106$ ; 48.4%), followed by a Master's degree ( $n = 51$ ; 23.3%). The majority of participants completed the study in English ( $n = 211$ ), while only eight completed it in Arabic. Participants took on average 1832 seconds ( $SD = 939$ ) to complete the study. Moreover, they spent on average 353 seconds ( $SD = 124$ ) in either contact or no-contact conditions. Descriptive statistics of demographic information are reported in Table 1.

**Table 1***Descriptive Statistics of Demographic Variables in Overall Sample*

Demographics	Categories	<i>N</i>	%
Age	Range: 18-55 <i>M</i> = 27.65, <i>SD</i> = 7.19		
Gender Identification	Cisgender Man	100	45.7
	Cisgender Woman	119	54.3
Highest Level of Education	No schooling	0	0
	9 <sup>th</sup> , 10 <sup>th</sup> , or 11 <sup>th</sup> grade	1	0.5
	12 <sup>th</sup> grade, no diploma	1	0.5
	Highschool graduate, with diploma	15	6.8
	Some university, but less than 1 year	8	3.7
	One or more years of university, no degree	28	12.8
	Bachelor's degree	106	48.4
	Master's degree	51	23.3
LGB friend	Doctorate degree	9	4.1
	Yes	155	70.8
LGB family	No	64	29.2
	Yes	52	23.7
TG friend/family	No	167	76.3
	Yes	18	8.2
School in Lebanon	No	201	91.8
	Yes	206	94.1
University in Lebanon	No	13	5.9
	Yes	199	90.9
	No	14	6.4

**Ethical considerations**

The true purpose of the study was concealed by using a cover story to explain the study and its procedures to participants. Specifically, participants were told that they will be completing two unrelated studies. The “first study” was presented as a “media and memory” study investigating how media information is processed in relation to types of memory people have; the “second study”, as an “investigation of attitudes” toward different social groups. This concealment was necessary as it allowed the manipulation of both self-affirmation and mediated contact (“first study”) and the measurement of participants’ feelings and behavioral tendencies

toward transwomen (“second study”). Participants were informed that the study is completely anonymous and were given the option to withdraw at any point without penalty. Upon completing the study, participants were debriefed about the study’s true purpose and given the option to withdraw their consent for their data to be used.

The risks that may stem from deception (e.g., psychological discomfort) were mitigated by fully debriefing and dehoaxing participants after they completed the study. Specifically, participants were presented with a form delineating the true purpose of the study (e.g., finding ways to effectively improve attitudes and behaviors toward transgender women), the hypotheses being tested (e.g. whether “feeling good about oneself by affirming their values or recalling memories of overcoming difficult situations” and “being exposed to a transgender woman through the media” would reduce prejudice), the procedures used to deceive them (e.g., two cover stories “media and memory” and “attitudes toward social groups”) and the reasons it was necessary (University of Massachusetts, 2019). Most importantly, participants were given the option to withdraw their consent for their data to be used without incurring any penalty.

### **Procedure**

After receiving approval from Haigazian University’s Social and Behavioral Sciences Ethics committee, the experiment was constructed and administered online using Qualtrics. The study link was shared on different social media platforms inviting participants to confidentially complete two supposedly unrelated online studies. Upon accessing the study link, participants were given the choice to complete the study in English or Arabic. Participants were instructed to answer four screening questions to ensure they meet eligibility for the study (Appendix A). Specifically, they were asked if they are Lebanese citizens, if they have been residents of Lebanon for the past two years, if they identify as heterosexual cisgender men or women, and if

they are older than 18 years of age. Participants who did not meet eligibility criteria were directed to the end of the study. Eligible participants were presented with an informed consent form describing the purpose of the study, the procedures, their roles and rights, and the potential risks and benefits associated with participation (Appendices B and C). After providing informed consent, participants were informed that they would be starting with the first phase of the study about “media and memory”, and were randomly assigned to one of six conditions, as shown in Table 2: (1) mediated contact plus values-affirmation, (2) mediated contact plus mastery recall affirmation, (3) mediated contact plus no-affirmation (4) values affirmation (5) mastery recall affirmation or (6) no affirmation plus no contact.

**Table 2**

*Table of Experimental Design, Demonstrating the Two Factors and Each Factor's Levels*

		Self-affirmation		
		Value	Mastery recall	None
Mediated contact	Yes	Values + Contact ( <i>n</i> = 35)	Mastery recall + Contact ( <i>n</i> = 33)	No-affirmation + Contact ( <i>n</i> = 46)
	No	Value + No contact ( <i>n</i> = 37)	Mastery recall + No contact ( <i>n</i> = 37)	No affirmation + No contact ( <i>n</i> = 31)

Following completion of the “affirmation” manipulation, participants were asked to view “the subsequent video” with great attention so they can answer detailed questions about it later on. This task reinforced the cover story of the “first study” and actually achieved a critical experimental step: contact manipulation. Subsequently, participants were asked to select the correct description of the video out of several multiple-choice options. This concluded the first part of the experiment, whereupon participants were informed that they have completed the first study and will now begin a second study aimed at exploring attitudes toward different social groups in Lebanon.

To make the cover story of the “second study” more believable, participants were presented with a specific task: To blindly select one of five options that are “randomly coded” to represent various social groups (i.e., Syrian refugees, gay men, transgender women, people with a criminal history, and people with disabilities). They were told the selection will be randomly generated where, in truth, it was pre-set so that all participants got the same social group (i.e., transgender women), irrespective of their choice. This was done to get participants to answer questions about the study’s population of interest without putting them on the defensive. To be on the same page with regard to the meaning of ‘transgender women’, participants were presented with a definition of the term. The term ‘transgender’ was not defined at the screening phase as doing so may have threatened the study’s internal validity: first, by priming certain expectations or values, and second, by eliciting suspicion about the nature of the study.

To assess for outcome variables, a number of measures were used. Specifically, participants were instructed to complete a self-reported assessment of outgroup feelings (see Appendix D) a measure of behavioral tendencies (see Appendix E), and a measure of perceived threats (see Appendix F) toward transwomen. In line with previous research manipulating self-affirmation and mediated contact with sexual and gender minorities in the context of sexual prejudice (e.g., Lehmiller et al., 2010) measures assessing the covariates RWA (see Appendix G), SDO (see Appendix H), religiosity, gender, LGB friend, and LGB family were given after the outcome variables of interest to prevent these measures from influencing the experimental manipulations. Next, participants provided demographic information (Appendix I). Finally, participants were probed for suspicion about the nature of the study and fully debriefed about its purpose (Appendix J). Participants who complete the study were asked to generate their own unique ID using the first letter of their last name, the first letter of their first name, followed by

their month of birth expressed in digits and the last two digits of their birth date (e.g. Jad Sidani, born in November of 1984 would express his ID as: SJ1184). This ID was then used to draw 20 participants who would receive a gift voucher from an online food delivery application in Lebanon.

### **Measures**

Measures used in the present study were translated from English to Arabic using forward translation and committee approach. Non-stigmatizing language was used to describe minority groups. Construct validity of the items was assessed by engaging a number of participants in cognitive interviewing questions. Moreover, the internal consistency for all scales was calculated after completing data collection.

#### ***Dependent measures.***

**Outgroup Feelings.** Feelings toward transgender women as a social group were assessed using the widely-used Feelings Thermometer scale (from Gonzalez, 2008). Participants were asked to rate whether they have positive or negative feelings towards transgender women, ranging from 0 = *extremely negative/cold* to 100 = *extremely positive/warm* with 50 serving as a midpoint (*neutral*). Higher scores on the scale indicate more positive feelings toward transgender women.

**Behavioral tendencies.** A modified and shortened version of the Social Attraction Questionnaire by Winer et al. (1981) was used to measure behavioral tendencies toward transgender women. The scale originally measures willingness to engage in hypothetical behaviors toward people with depression, and was modified to measure behavioral tendencies toward transgender women. In the present study, participants were asked to indicate the extent to which they would engage in a seven behaviors on a 5-point Likert scale ranging from 1 (not at

all) to 5 (extremely). Higher scores indicate more positive behavioral tendencies toward transgender women. Sample items included “Would you sit next to a transgender woman on a 3-hour bus trip?”, “Would you invite a transgender woman to your home?”. The present study sample demonstrated high internal consistency,  $\alpha = .955$ .

**Perceived Threat.** Symbolic and realistic threats perceived to be stemming from transgender women were measured using four items modified from the scale by Cottrell and Neuberg (2005). To assess symbolic threat, participants indicated the extent to which transgender women represent a threat to their values (“Promote values that are incompatible with the values of people like me”) and morals (“Damage the moral image of people like me”). To assess realistic threat, participants indicated the extent to which transgender women represent a threat to their physical safety (“Endanger the physical safety of people like me”) and physical health (“Increase the risk of physical illness for people like me”). Items were rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*) and added up to form an overall Perceived Threat scale. Higher scores indicate greater threat perception. Internal consistency of this measure for the present study sample was satisfactory,  $\alpha = .795$ .

***Potential covariates.***

**Right-Wing Authoritarianism.** Two items assessing conventionalism from the 6-item Very Short Authoritarianism Scale (VCA; Bizumic & Duckitt, 2018) were used to measure participants degree of adherence to social norms and values. The full scale captures authoritarian submission, authoritarian aggression, and conventionalism, however, due to the current socio-political climate of Lebanon only the items assessing the subdimension conventionalism (i.e., traditionalism), will be used in the present study (see Chapter 4 on Pilot). The items assessing conventionalism were: “God’s law about abortion, pornography, and marriage must be strictly

followed before it's too late" and "There is nothing wrong with premarital sexual intercourse" (reverse scored). Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores represent a greater degree of conventionalism. The full scale shows good concurrently and discriminant validity, and has been found to positively correlate with measures of SDO, ethnocentrism, anti-immigrant and anti-foreigner attitudes, and restrictive citizenship criteria (Bizumic & Duckitt, 2018). The scale also shows satisfactory internal reliability, with Cronbach's alpha ranging from .71 to .78 across samples (Bizumic & Duckitt, 2018). For the present study sample, correlation between the two scale items was high,  $r = .854$ .

**Social Dominance Orientation.** The 8-item Social Dominance Orientation Short Scale (SDO<sub>7(s)</sub>; Ho et al., 2015) was used to measure the degree to which participants prefer group-based social hierarchies. The scale consisted of eight items, with scores on each items ranging from 1 (*strongly oppose*) to 7 (*strongly favor*). Higher scores indicated greater preference for group-based social hierarchies. Sample items included "Some groups of people are simply inferior to other group" and "No group should dominate in society" (reverse scored). The studies in which the scale was developed showed it to be positively correlated with measures of old-fashioned racism, support for immigrant persecution, political conventionalism, and opposition to racial policy, providing evidence of its construct validity (Ho et al., 2015). It was also shown to be internally reliable, with Cronbach's alpha ranging from .78 to .90 across six samples (Ho et al., 2015), with a similar internal consistency for the present study sample,  $\alpha = .856$ .

**Religiosity.** Participants' religious beliefs was assessed using two items used by Elischberger et al. (2018) in their own study where religiosity was assessed as a predictor of transgender prejudice. Participants were first asked to rate their religiosity on a scale from 0 (*not*

*religious at all*) to 4 (*extremely religious*). Next, participants were asked to indicate whether their religion disapproves of those who do not conform to traditional gender roles (*yes, no, don't know*). Scores on both items were added up to form an overall score of religiosity, ranging from 0 to 5.

**Gender.** Participants' gender was assessed by asking them to choose their gender identity from the following choices: cisgender man, cisgender woman, transgender man, transgender woman, non-binary, or Other. Given that identifying as cisgender is an eligibility criteria for the present study, those who do not identify as a cisgender man (coded 1) or a cisgender woman (coded 2) were re-directed to the end of the study.

**LGB friend/LGB family.** LGB contact has been found to be a strong predictor of attitudes toward transgender people and trans rights (Flores et al., 2015; Norton & Herek, 2013; Tadlock et al., 2017; Tee & Hegarty, 2006). In the present study, only LGB contact was accounted for as a covariate given that the transgender population is much smaller than the LGB population and most people who know a transgender individual also know a gay man or lesbian woman, while the opposite is not true (Flores et al., 2015; Tadlock et al., 2017). LGB contact was assessed using two questions. Participants were asked to indicate with a 'yes' or 'no' whether (1) they have a friend who is gay, lesbian or bisexual (i.e., LGB friend), and whether (2) they have a family member who is gay, lesbian or bisexual (i.e., LGB family).

### ***Demographic Information.***

Several types of demographic information were obtained from participants. Demographic factors used to assess eligibility criteria were measured at the beginning of the experiment and included participants' sexual orientation, nationality, and years lived in Lebanon. Specifically, participants were asked to select their sexual orientation from the options

heterosexual/straight, gay, bisexual/pansexual, or other. They were asked whether they were Lebanese citizens ('yes' or 'no') and whether they have been living in Lebanon for the past two years ('yes' or 'no'). Although the study only recruited heterosexual, cisgender men and women, the demographic questionnaire included the options "gay", "bisexual/pansexual", and "other" for sexual orientation as to not arouse participants' suspicions regarding the true purpose of the study. Eligibility criteria aside, other demographic information collected after completing the experiment included participants' exact age in years, the highest level of education achieved ('no schooling' to 'Doctorate's degree'), and whether they have a friend or family member who is transgender ('yes' or 'no'). Moreover, participants were asked to specify whether their formal education (i.e., high school and/or university) was in Lebanon or abroad ('yes', 'no' and 'if no, specify').

### **Experimental Manipulation**

In the present study, experimental manipulation occurred at three levels of self-affirmation (*values affirmation vs. mastery affirmation, vs. no-affirmation*) and two levels of mediated contact (*contact vs. no contact*).

#### ***Self-Affirmation Manipulation***

The values-affirmation manipulation used in the present study was based on the protocol by Badea et al. (2018). The original protocol contains nine values (honesty, respect, family listening, empathy, tolerance, love, loyalty, sharing) but was modified by excluding the 'family' value as to ensure the absence of domain-relevant affirmations. Participants assigned to the *values-affirmation* condition were asked to first rank the eight values in order of personal importance. Next, participants were asked to write reasons that their most important value is

important to them and to give one example of something that demonstrates the importance of this value in real life (see Appendix K).

In line with the manipulation that elicits mastery recall as an indirect tool for identity affirmation (Tavitian-Elmadjian et al., 2020), participants assigned to *mastery recall affirmation* were first instructed to recall a time in their life when they experienced a difficult situation. Next, participants were asked to write in as much details as possible how they overcame it, and how this past experience has guided them in their life (see Appendix L).

Finally, participants assigned to *no-affirmation* were instructed to list, in as much details as possible, everything they ate or drank in the past 48 hours (Cohen, Aronson, & Steele, 2000). These instructions are consistent with those provided in previous studies to perform tasks aimed at self-affirmation in a non-self-focused way (see Appendix M). The writing prompt for all three self-affirmation conditions was set at 3 to 5 minutes following the well-established protocol for self-affirmation in general. Research on self-affirmation finds this to be an adequate duration (McQueen, 2006), wherein anything beyond 5 minutes may cease to be a spontaneous activity for participants (see Appendices N and O).

### ***Mediated Contact Manipulation***

In line with studies employing mediated contact to reduce transgender prejudice (Galinec & Korajlija, 2017; Tompkins et al., 2015), participants assigned to *mediated contact* condition viewed a (5:21 min) video featuring a Lebanese transwoman sharing her experiences. The speaker shared her first name, identified herself as a Lebanese transwoman (thus making trans identity salient), and described various aspects related to living in Lebanon as a transwoman. She also described discrimination she herself experiences due to being transgender, ultimately calling for the acceptance of transgender people in Lebanon (see Appendix P).

In line with other experimental manipulations designed to stand as control for mediated contact, participants assigned to the *no-contact* condition viewed a neutral video that was matched in terms of length to minimize extraneous influences. Specifically, participants viewed an educational video (5:06 min) from TEDx regarding the prevalence, biological underpinnings, and evolutionary advantages of being left-handed (see Appendix Q).

### **Manipulation Checks**

Manipulation checks were not performed in the present study in order to avoid any undue influence such measures might have on the experimental manipulation. One reason was to not arouse participants' suspicion (Hauser, Ellsworth, & Gonzalez, 2018). Arguably, questions posed to check on the manipulation might make a participant suspicious about the true purpose of the experiment and put him or her on the defensive, possibly undermining the experimental validity of the study. Participant sensitization was another reason to avoid manipulation checks. To illustrate, filling out a self-report questionnaire intended to check on a manipulation that has just taken place could make it more salient. To prevent such sensitization, it was decided to forgo performing manipulation checks during the experiment.

Instead, the manipulation check took place after the study in a series of questions where participants were probed for suspicion (*"In your own words, what was the present study about?"*, *"Did you believe, at any time, that the study dealt with anything other than what the experimenter had described to you?"*, *"If yes, did this affect your behavior in any way?"*, *"Aside from the study invite, did you have any information about this study prior to participating?"*). Given that no participants guessed the true purpose of the study, no participants were excluded from the sample. In lieu of attention checks, participants who took too long to complete the study (e.g., more than two hours) were also excluded from the sample ( $n = 9$ ). This was done to guard

against threats to internal validity that may arise, for instance, via history threats where participants who complete the study in two sittings may be affected by external effects unrelated to the study. The experiment is designed in a way where self-affirmation and mediated contact conditions must be administered in close proximity to one another. Moreover, prejudice outcomes are expected to be filled immediately after the experimental manipulation. Excluding participants who took longer than two hours would help guard against this threat to the study's internal validity. To ensure that the contact video selected for the present study meets optimal conditions for mediated contact in general (e.g., outgroup typicality; positive valence) and in specific to the context of transgender prejudice (e.g., elicits empathy), a pilot study was conducted with seven Lebanese cisgender men and women. Total duration of the study and duration spent completing the mediated contact conditions were controlled for as covariates. Total study duration was controlled for to ensure that participants completed the study in one sitting, thus reducing threat to the study's internal validity. As there was no possible way to know who watched the contact and no-contact videos, duration of contact was also controlled for to assess whether prejudice outcomes differed based on time spent in the contact condition.

### **Data Analysis**

A two by three multivariate analysis of covariance – Factorial MANCOVA – was conducted to evaluate the main effects and interaction effects of self-affirmation and mediated contact on outgroup feelings, behavioral tendencies, and perceived threats toward transwomen. A factorial MANCOVA was selected over three separate factorial ANCOVA given that MANCOVAs offers several advantages when compared to ANCOVAs, including greater statistical power, lower error rate, and the possibility of assessing patterns between the multiple dependent variables (Christensen et al., 2015). The Statistical Package for the Social Sciences

(SPSS) version 25 (IBM, 2017) was used for data analysis. Self-affirmation and mediated contact were specified as independent factors, with outgroup feelings, behavioral tendencies, and perceived threat as outcome variables, and RWA, SDO, religiosity, gender, LGB friend, LGB family, total study duration, and duration of contact as covariates. Demographic variables were assessed using descriptive statistics, and Cronbach's alpha was used to test for the internal consistency of scales.

## CHAPTER IV

## PILOT

**Participants**

A pilot was conducted with a small number of participants ( $N = 7$ ) prior to performing the main study. This was done to help assess the feasibility of the proposed study, uncover potential pitfalls and expose procedural weaknesses, thus improving its quality, efficiency, and flow (Christensen et al., 2015). Participants for the pilot were recruited from an online social networking platform. Participants were three heterosexual cisgender men and four heterosexual cisgender women aged 22 to 27, with the majority having graduated with a Bachelor's degree. Five participants completed the study in English and two completed it in Arabic. All participants who took part in the pilot qualified for the main study incentive.

**Procedure**

The study protocol was evaluated through retrospective probing with four participants and through concurrent probing with three different participants. Participants in both were engaged in cognitive interviews where they were verbally questioned about their study responses. In retrospective probing, online interview (30-45 minutes) were scheduled with participants after they completed the full study. In concurrent probing (1 hour), participants were instructed to read and answer study questions/tasks out loud in the presence of the researcher and were probed after each questions/task.

Problem areas were identified and target questions formulated prior to conducting the pilot. Specifically, the pilot aimed to (1) check the success of manipulation of the independent variables; (2) assess whether the video selected for the experiment met optimal conditions for mediated conditions; (3) check whether the measures selected were appropriate and clear in

terms of conceptualization, particularly key terms such as ‘transgender’; (4) check on the likely success of deception by way of a cover story; and (5) assess the length of time required to run a participant.

The pilot first checked on the success of the manipulation of self-affirmation and mediated contact. For self-affirmation, participants were probed for how they felt and what they were thinking about while writing the affirmation essay. Participants were also asked how they are feeling about themselves at the present moment on a scale from 0 (*poorly*) to 6 (*extremely positive*). Given that intergroup contact works by shifting intergroup emotions, participants in the mediated contact condition were probed for their emotional reactions in general and toward the portrayed character in specific (e.g., disgust, contempt, admiration, sympathy, pity, etc.).

The video selected for the present study was assessed as to whether it meets established optimal conditions for mediated contact (outgroup typicality; positive valence). The first moderator, outgroup typicality, was assessed by asking participants to evaluate how typical of transgender women the character portrayed is using a 7-point Likert scale (1= *not at all stereotypical*; 7= *very stereotypical*). The second moderator, positive portrayal, was assessed by asking participants to rate the extent to which they felt the transgender woman portrayed was a positive portrayal of her social group using a 7-point Likert scale (1= *not at all*, 7= *very much*). Overall, participants indicated that the transgender woman was positively portrayed and moderately atypical of her group.

The measures used in the study were tested out in terms of item clarity and flow by engaging participants in cognitive interviewing questions. Specifically, the interview assessed whether participants were able to understand the instructions of the measures, their items, the terms used, and the flow of items. Certain issues were identified during the interviews for the

measure assessing attitudes toward transgender women (ATTW; Billard, 2018) and that assessing RWA (Very Short Authoritarian scale; Bizumic & Duckitt, 2018), as detailed below in changes made to study protocol. A critical part of the experiment, deception, was also checked for success, with the possibility of revisions to the cover story if need be. It emerged that the cover story was believable and although some participants theorized about its purpose, they were unable to discern that the studies were related or to guess it's true purpose. Finally, the pilot was used to estimate the time required to run a participant, from beginning to end, which was around 30 minutes.

### **Changes Implemented to the Experimental Protocol**

Following the pilot, three changes were made to the study design: (1) gender was added as a covariate and the study administered to cisgender men and women; (2) the scale measuring RWA was modified by removing items which may affect validity; and (3) the Attitudes Toward Transwomen scale (ATTW) was replaced by a Feelings Thermometer rating scale given the former's tapping into cognitive aspect of prejudice.

**Gender as Covariate.** While gender has been found to be a predictor of transprejudice in Western populations, this does not seem to be the case in Lebanon. To illustrate, gender did not emerge as a correlate of transgender attitudes in a representative sample of 1,200 Lebanese individuals (Nasr & Zeidan, 2015). That is, cisgender men and women did not differ significantly in their attitudes toward transgender individuals. Likewise, in another study, gender again not associated with prejudice toward gays and lesbians (Obeid, 2019). Instead, religiosity has consistently emerged as a correlate of attitudes toward transgender and gay individuals in Lebanon and as such is already accounted for as a covariate in the present study (Obeid, 2019; Nasr & Zeidan, 2015). Furthermore, LGB contact has been found to be associated with attitudes

toward sexual minorities and is also controlled for as a covariate in the present study (Obeid, 2019). Given these findings within the context of Lebanon, gender was added as a covariate and the study was administered to both self-identified cisgender men and women.

**Modified RWA scale.** The scale assessing for RWA (Bizumic & Duckitt, 2018) taps into three subdimensions: authoritarian aggression, authoritarian submission, and conventionalism. Authoritarian submission refers to degree of submissiveness to established authorities in society. Authoritarian aggression refers to aggressiveness directed against deviants, outgroups and other people perceived to be targets according to established authorities. Conventionalism is not related to the existing authority within a social context per se, but rather adherence to traditional and social norms and the belief that others should adhere to these norms. Research shows that the first two subdimensions – authoritarian aggression and submission – are sensitive to the social context in which they are studied (Stenner, 2005). While RWA was chosen to be a covariate in the current study because it has emerged as a consistent predictor of transprejudice, the pilot provided much insights into possible validity threats posed when this measure is used in Lebanon's current sociopolitical climate.

Through cognitive interviewing, it emerged that items on authoritarian submission (2 items) and aggression (2 items) are highly sensitive to and thus influenced by Lebanon's present social, political, and economic context and participants' political stance or belonging. Indeed, research shows that levels of authoritarianism fluctuate with the social conditions under which it is assessed, especially in the face of external threats/collective danger (Stenner, 2005). For instance, several studies have shown that economic threats can lead to greater expression of authoritarianism (e.g., Rickert, 1998; Sales, 1973; Sochos, 2019). Lebanon in its current state can be described as an insecure environment characterized by social, political and economic

instability. Given this, people are more likely to endorse the restoration of “social order”, tougher government, and stricter laws. Moreover, they are more likely endorse “cracking down on troublemakers” in an attempt to preserve law and order. One concern was that participants’ ratings might not reflect their actual dispositions or where they lie on the RWA continuum, but rather their response to increasing collective threat due to their country’s present social climate. In other words, the current circumstances are a strong determinant of how participants would respond to the RWA scale. For these reasons, items assessing submission and aggression were removed while keeping those assessing conventionalism (2 items).

**Attitudes Scale Substitution.** There were reasons to believe that the Attitudes Toward Transgender Women (Billard, 2018) scale adopted in the present study may not be the appropriate measure for assessing change in feelings following a brief intervention. Upon closer inspection of the items within the scale, it became clear said items reflect beliefs about transgender women (more accurately, long-held beliefs in gender binary, gender essentialism, and beliefs about changing one’s gender identity) rather than attitudes or feelings that are amenable to short-term change. By engaging participants in cognitive interviewing, it was confirmed that items were being assessed as beliefs rather than feelings. The present study does not aim to assess long-held beliefs but rather attitudes or feelings that are sensitive to the effects of a short-term intervention.

Due to these concerns, a Feelings Thermometer scale was utilized in the pilot along with the ATTW scale, where the former showed greater sensitivity to capturing feelings toward a social group. To illustrate, participants’ rating on the Feelings Thermometer scale was not consistently reflected on the ATTW scale which seemed to be more resistant to slight attitude change. Beliefs about social groups are typically deeply engrained since childhood and change

occurs after some period of time (Abram, 2010). Holding certain fundamental beliefs about a social group does not necessarily translate to negative feelings or attitudes toward them. As such, change in such beliefs is possible but will usually require time. For instance, one might disagree with non-heteronormative sexualities and find them “unnatural” but still be tolerant and/or accepting of sexual minorities as individuals (as reflected by neutral to positive feeling ratings on the Feelings Thermometer scale). It is possible that such beliefs may shift only after long and repeated interventions. For these reasons, and to accurately assess change in feelings following brief intervention, the ATTW scale was replaced by a Feelings Thermometer rating scale. The Feelings Thermometer scale has been used successfully to assess the effects of short-term interventions to reduce transprejudice, and has shown to be sensitive to change following such short interventions (Flores et al., 2018; Tadlock et al., 2017). No other major changes were implemented to the experimental protocol.

## CHAPTER V

## RESULTS

**Preliminary analysis*****Missing Value Analysis***

Data collected ( $N = 510$ ) was cleaned and checked for missing values prior to analysis.

Incomplete responses, defined as less than 100% study completion rate, ( $n = 186$ ) were removed.

Of the incomplete responses, 27.4% ( $n = 51$ ) dropped out at the Information Letter page, 27.4% ( $n = 51$ ) dropped out at self-affirmation essay, 9.7% ( $n = 18$ ) dropped out at the prompt to list values in order of importance, and 9.7% ( $n = 18$ ) dropped out at contact and no-contact videos.

Only 13 respondents dropped out during the screening process, none of which at the question for age and for gender identity (see Appendix R). Recorded responses from participants who did not meet eligibility criteria ( $n = 89$ ) also were deleted. Additionally, participants who took longer than two hours ( $n = 9$ ), those who did not give consent for their data to be used after debriefing ( $n = 5$ ), and those who skipped over one of two intervention conditions ( $n = 2$ ) were also removed from the data. The analyses were based on the data of the remaining 219 participants. Missing values were found on four items of the SDO scale for one participant. Missing values were substituted by mean values as an appropriate method for handling low levels of missing data (Parent, 2013).

***Scale Descriptive Statistics***

Pertaining to covariates, the mean of the RWA scale (conventionalism) was below the midpoint score of 3 ( $M = 2.58$ ,  $SD = 1.19$ ,  $p = .000$ ), and the mean of the SDO scale was well below the midpoint of 4 ( $M = 2.43$ ,  $SD = .93$ ,  $p = .000$ ). Likewise, the mean of the religiosity

scale was below the midpoint of 3 ( $M= 2.20$ ,  $SD= 1.257$ ,  $p= .000$ ). This indicates that the sample was composed of participants who are non-conventional or traditional, slightly to moderately religious, and have low preference for group-based hierarchies.

As regards the dependent variables, the mean of the behavioral tendencies scale was above the midpoint score of 3 ( $M= 3.56$ ,  $SD= .97$ ), while the mean of the perceived threat scale was well below the midpoint score of 3 ( $M= 1.99$ ,  $SD= .76$ ). Likewise, the mean Feelings Thermometer rating scale was above the midpoint score of 50 ( $M= 65.17$ ,  $SD= 21.86$ ). This indicates that study participants have positive feelings and behavioral tendencies toward transgender women, while at the same time perceive them not to be a psychologically threatening.

**Table 3**

*Scales Descriptives*

Variable	Test value	Sample		Sig.	Mean difference	95% CI	
		mean	df			Lower	Upper
RWA	3	2.58	218	.000	-.43	-.58	-2.66
SDO	4	2.43	218	.000	-.16	-1.69	-1.45
Religiosity	3	2.20	218	.000	-.80	-.97	-.64
Behavioral Tendencies	3	3.56	218	.000	.56	.44	.69
Outgroup Feelings	50	65.17	218	.000	15.17	12.26	18.08
Perceived Threat	3	1.99	218	.000	-1.01	-1.11	-.91

***Assumptions***

Prior to conducting the main analysis, the data was checked for violations of assumptions.

**Linearity between Dependent Variables.** Linearity between each pair of dependent variables for each group was assessed by plotting a scatterplot matrix. Visual inspection of the scatterplot showed a linear relationship between the dependent variables for each cell of the

design. However, we do find a slight non-linear relationship between outgroup feelings and behavioral intentions in the no-affirmation plus contact condition.

**Multicollinearity.** Pearson's correlation coefficient was used to determine whether the dependent variables were moderately correlated with each other across groups. An inspection of the correlations revealed no evidence of multicollinearity between dependent variables, as assessed by Pearson correlation ( $.275 < r < .809$ ).

**Linearity Between Covariates and Dependent Variables.** A grouped scatterplot of the dependent variables against the covariates was generated to test whether the covariates are linearly related to the dependent variables for each group. Visual inspection of the scatterplots for RWA showed that there was a linear relationship between RWA and the dependent variables for most intervention groups, with the exceptions of the relationship between RWA and: (1) behavioral intentions for the no-affirmation plus contact condition; (2) outgroup feelings for the no-affirmation plus contact condition; and (3) perceived threat for the no-affirmation plus no-contact condition. There was a linear relationship between SDO and the dependent variables for. There was a linear relationship between religiosity and the dependent variables for most intervention groups, with the exceptions of the relationship between religiosity and: (1) behavioral intentions for the values affirmation plus no contact condition; (2) outgroup feelings for values affirmation plus no contact condition; and (3) perceived threat for the mastery affirmation plus no contact condition. Non-linearity between RWA and religiosity with some dependent variables indicate that the covariates are likely a moderator rather than a covariate. However, it is beyond the scope of the present study to run a moderation analysis.

**Homogeneity of regression slopes.** Regression slopes were used to assess whether the relationships between the covariates and the dependent variables are the same in each group.

There was homogeneity of regression slopes as determined by a comparison between the two-way ANCOVA models with interaction terms for RWA,  $F(3, 205) = .898, p = .102$ ; SDO,  $F(3, 205) = .951, p = .793$ ; and religiosity  $F(3, 205) = .916, p = .256$ .

**Homoscedasticity.** A scatter plot of the studentized residuals (SRE) against the predicted values (PRE) was generated to check whether the variance of error is identical for all combinations of the values of the independent variables and covariates. Inspection of the scatterplot showed that there was homoscedasticity within groups.

**Univariate Outliers.** Univariate outliers were examined by generating standard scores (z-scores) for the dependent variables. Values exceeding the absolute value of  $\pm 2.58$  were considered outliers significant at the 95<sup>th</sup> confidence interval. Inspection of z-scores revealed a total of seven univariate outliers. Three outliers were found for outgroup feelings (1.4%), two for behavioral tendencies (0.9%), and three for perceived threat (1.4%). Given the absence of extreme outliers, no participant was removed from the data.

**Multivariate Outliers.** Multivariate outliers were examined by generating Mahalanobis' distance for the dependent variables. All scores were compared against a chi-square distribution with degrees of freedom equal to the number of dependent variables and an alpha level of .001. This yielded a critical value set at 16.27. The largest distances for the present sample was 15.65734, which is less than the critical value and as such no multivariate outliers were identified.

**Normality.** Normality of the data of all dependent variables across groups was checked through Shapiro-Wilk's test. All three dependent variables – behavioral intentions, outgroup feelings, and perceived threat – were not normally distributed ( $p < .05$ ). Since transformations

and non-parametric statistical tests are beyond the scope of this study, parametric tests were retained and no transformation applied.

**Homogeneity of Covariance.** Box's M test was used to check whether the variance of error was identical for all combinations of the values of the independent variables and covariates. Inspection of the test showed that there indeed was homogeneity of covariance matrices,  $p = .134$ ).

**Homogeneity of Variances.** Levene's test of equality of error was used to check whether the variances of the residuals are equal between each combination of groups of the two independent variables. Inspection of Levene's test revealed that there was homogeneity of variances for behavioral tendencies ( $p = .331$ ), outgroup feelings ( $p = .335$ ), and perceived threat ( $p = .729$ ).

Given that no major violations of assumptions occurred, a two-way MANCOVA with bootstrapping was conducted.

## Main Analysis

### *Covariates*

There was a significant multivariate effect for the covariates RWA,  $F(3, 203) = 8.566$ ,  $p = .000$ , partial  $\eta^2 = .112$ , SDO,  $F(3, 203) = 17.479$ ,  $p = .000$ , partial  $\eta^2 = .205$ , and LGB friend,  $F(3, 203) = 5.906$ ,  $p = .001$ , partial  $\eta^2 = .080$  on the combined dependent variables. There was not a significant multivariate effect for the covariates religion, gender, LGB family, study duration, and contact duration. As regards the main effects of each covariate on the three dependent variables, parameter estimates revealed multiple significant main effects of some but not all. RWA (conventionalism) had a significant main effect on behavioral tendencies ( $b = -.155$ ,  $p = .009$ ), outgroup threat ( $b = .231$ ,  $p = .000$ ), and outgroup feelings ( $b = -3.658$ ,  $p = .005$ ),

indicating that individual who are more conventional are less likely to have positive outgroup feelings and behavioral tendencies, and more likely to feel threatened by transgender women. Likewise, SDO had a significant main effect on behavioral tendencies ( $b = -.268, p = .000$ ), outgroup threat ( $b = .192, p = .001$ ), and outgroup feelings ( $b = -9.726, p = .000$ ), indicating individuals who are higher on SDO are less also likely to have positive outgroup feelings and behavioral tendencies, and more likely to feel threatened by transgender women. Gender had a significant main effect on behavioral tendencies ( $b = .270, p = .019$ ), indicating that cisgender women were more likely to have higher positive behavioral tendencies toward transgender women than cisgender men. Religiosity had a significant main effect on outgroup feelings ( $b = -2.602, p = .028$ ), and a marginal effect on behavioral tendencies ( $b = -.099, p = .068$ ), indicating that individuals who are more religious have less favorable outgroup feelings and to a lesser extent behavioral tendencies toward transgender women. Having an LGB friend had a significant main effect on behavioral tendencies ( $b = .519, p = .000$ ) and a marginal effect on outgroup feelings ( $b = 4.800, p = .086$ ), indicating that individual who have a lesbian, gay, or bisexual friend are more likely to have more positive behavioral tendencies and to a lesser extent more positive feelings toward transwomen. The main effects for LGB family, study duration, and contact duration were not significant on any of the dependent variables.

### ***Multivariate Analysis of Covariance***

A two-way multivariate analysis of covariance (MANCOVA) was conducted to examine the effect of mediated intergroup contact and self-affirmation on outgroup feelings, behavioral tendencies, and perceived threats toward transgender women, while controlling for the covariates RWA, SDO, religiosity, LGB friend, LGB family, gender, total study duration, and duration of contact. Means, adjusted means, standard deviations and standard errors are presented in Table 4.

**Table 4**

*Means, Adjusted Means, Standard Deviations and Standard Errors for the Dependent Variables Across Groups*

Dependent variable		Contact			No contact		
		Values	Mastery	None	Values	Mastery	None
Behavioral intentions	M	3.85	3.76	3.51	3.52	3.57	3.03
	(SD)	(.68)	(.78)	(1.09)	(1.05)	(1.06)	(.88)
	M <sub>adj</sub>	3.90	3.78	3.49	3.52	3.58	3.1
	(SE)	(.14)	(.14)	(.12)	(.13)	(.13)	(.15)
Outgroup feelings	M	71.31	67.00	64.37	62.08	68.30	57.42
	(SD)	(20.37)	(18.85)	(25.04)	(15.97)	(24.40)	(22.95)
	M <sub>adj</sub>	71.44	67.22	61.04	63.30	68.36	60.46
	(SE)	(3.01)	(3.07)	(2.58)	(2.89)	(2.88)	(3.16)
Perceived threat	M	1.81	1.83	1.97	2.15	1.98	2.22
	(SD)	(.71)	(.71)	(.78)	(.82)	(.74)	(.73)
	M <sub>adj</sub>	1.79	1.82	2.06	2.10	1.99	2.17
	(SE)	(.12)	(.12)	(.10)	(.11)	(.11)	(.12)

*Note.* Values = values-affirmation; Mastery = mastery-affirmation; None = no-affirmation.

### **Main Effect of Mediated Contact.**

**Hypothesis 1.** The purpose of Hypothesis 1 was to examine the main effect of mediated contact on prejudice outcomes. It was hypothesized that participants in the mediated contact condition will score significantly higher on measures of (H1a) outgroup feelings and (H1b) positive behavioral tendencies, and lower on a measure of (H1c) perceived threat toward transwomen compared to participants in the no-contact condition. The multivariate test for mediated contact on the combined dependent variables, while controlling for the covariates, was statistically significant  $F(3, 203) = 3.531, p = .016$ , Wilk's  $\Lambda = .950$ , partial  $\eta^2 = .050$ . Follow-up univariate analysis indicated that there was a statistically significant main effect for mediated contact on behavioral tendencies,  $F(1, 205) = 8.194, p = .005$ , partial  $\eta^2 = .038$ , and outgroup threat,  $F(1, 205) = 4.492, p = .035$ , partial  $\eta^2 = .021$ , but not on outgroup feelings,  $F(1, 205) = 1.073, p = .301$ , partial  $\eta^2 = .005$ . Data are adjusted marginal mean  $\pm$  standard error, unless

otherwise stated. Participants in the contact condition ( $3.72 \pm .08$ ) scored higher on behavioral tendencies compared to those in the no-contact condition ( $3.40 \pm .08$ ), a statistically significant mean difference of .32 (95% CI, .100 to .542),  $p = .005$ . Additionally, participants in the contact condition ( $1.89 \pm .06$ ) scored lower perceived threat compared to those in the no-contact condition ( $2.09 \pm .07$ ), a statistically significant mean difference of .21 (95%, CI= .014 to .389),  $p = .035$ . There were no significant group differences in feelings thermometer between participants in the contact ( $66.57 \pm 1.66$ ) and no-contact conditions ( $64.04 \pm 1.72$ ),  $p = .301$ . These findings offer partial support for Hypothesis 1 and suggest that mediated contact had a statistically significant main effect on behavioral tendencies (H1b) and perceived outgroup threats (H1c). Table 5 presents the main effect for mediated contact on the dependent variables.

**Table 5***Pairwise Comparisons for Mediated Contact*

Dependent variable	Contact condition	Contact condition	Mean difference	Std. error	Sig.	95% CI	
						Lower bound	Upper bound
Behavioral intentions	Contact	No contact	.321*	.112	.005	.100	.542
	No contact	Contact	-.321*	.112	.005	-.542	-.100
Outgroup feelings	Contact	No contact	2.526	2.439	.301	-2.282	7.335
	No contact	Contact	-2.526	2.439	.301	-7.335	2.282
Perceived threat	Contact	No contact	-.201*	.095	.035	-.389	-.014
	No contact	Contact	.201*	.095	.035	.014	.389

**Main Effect of Self-Affirmation.**

The purpose of hypotheses 2, 3, and 4 was to examine the main effects of two types of self-affirmation interventions (values and mastery) and to compare their effects. The multivariate test for self-affirmation on the combined dependent variables, while controlling for the covariates, was significant  $F(6, 406) = 2.404$ ,  $p = .027$ , Wilk's  $\Lambda = .933$ , partial  $\eta^2 = .034$ .

Follow up univariate analysis indicated that there was statistically significant main effect of self-

affirmation for behavioral tendencies,  $F(2, 205) = 5.944, p = .003$ , partial  $n^2 = .055$ , and outgroup feelings,  $F(2, 205) = 3.773, p = .025$ , partial  $n^2 = .036$ , but not for outgroup threat,  $F(2, 205) = 1.854, p = .159$ , partial  $n^2 = .018$ . As such, Bonferroni pairwise comparisons were run for differences between self-affirmation conditions. Table 6 presents the main effect for values-affirmation, mastery affirmation, and no-affirmation on the dependent variables. Data are adjusted marginal mean  $\pm$  standard error, unless otherwise stated.

**Hypothesis 2.** The purpose of Hypothesis 2 was to examine the main effect of values-affirmation on prejudice outcomes. It was hypothesized that participants in the values-affirmation condition will score significantly higher on measures of (H2a) outgroup feelings and (H2b) positive behavioral tendencies, and lower on a measure of (H2c) perceived threat toward transwomen compared to participants in the no-affirmation condition. Participants in the values-affirmation condition ( $3.71 \pm .10$ ) scored higher on behavioral tendencies compared to those in the no-affirmation condition ( $3.30 \pm .09$ ), a statistically significant mean difference of .41 (95% CI, .088 to .729),  $p = .007$ . There were no significant group differences in outgroup feelings between participants in the values-affirmation condition ( $67.37 \pm 2.07$ ) compared to those in the no-affirmation condition ( $60.75 \pm 2.01$ ),  $p = .068$ . Likewise, there were no significant group differences in perceived outgroup threats between participants in the values-affirmation ( $1.95 \pm .08$ ) and no-affirmation conditions ( $2.11 \pm .08$ ),  $p = .448$ . These findings offer partial support for Hypothesis 2 and suggest that values-affirmation had a statistically significant main effect on behavioral tendencies (H2b).

**Hypothesis 3.** The purpose of Hypothesis 3 was to examine the main effect of mastery recall affirmation on prejudice outcomes. It was hypothesized that participants in the mastery recall affirmation condition will score significantly higher on measures of (H3a) outgroup

feelings and (H3b) positive behavioral tendencies, and lower on a measure of (H3c) perceived threat toward transwomen compared to participants in the no-affirmation condition. Participants in the mastery-affirmation condition ( $3.68 \pm .10$ ) scored higher on behavioral tendencies compared to those in the no-affirmation condition ( $3.3 \pm .09$ ), a statistically significant mean difference of .38 (95% CI, .055 to .703),  $p = .016$ . Likewise, participants in the mastery-affirmation condition ( $67.79 \pm 2.10$ ) scored higher on outgroup feelings when compared to those in the no-affirmation condition ( $60.75 \pm 2.01$ ), a marginally significant difference of 7.04 (95% CI, -.005 to 14.08),  $p = .05$ . There were no significant group differences in perceived outgroup threat between participants in the mastery-affirmation ( $1.91 \pm .08$ ) and no-affirmation ( $2.11 \pm .08$ ) conditions,  $p = .219$ . These findings offer partial support for Hypothesis 3 and suggest that mastery recall affirmation had a statistically significant main effect on behavioral tendencies (H3b), and to a lesser extent outgroup feelings (H3a).

**Hypothesis 4.** The purpose of Hypothesis 4 was to compare the main effects of values-affirmation and mastery recall affirmation on prejudice outcomes. It was hypothesized that participants in the mastery recall affirmation condition will score significantly higher on measures of (H4a) outgroup feelings and (H4b) and behavioral tendencies, and lower on a measure of (H4c) perceived threat toward transwomen compared to participants in the values-affirmation condition. There were no significant group differences in behavioral tendencies, ( $p = 1.000$ ), outgroup threats ( $p = 1.000$ ), and outgroup feelings ( $p = 1.000$ ) between participants in the values-affirmation and mastery-affirmation conditions. These findings do not offer support for Hypothesis 4, suggesting that there were no significant differences between both methods of self-affirmation on the dependent variables.

**Table 6***Pairwise Comparisons for Self-Affirmation*

Dependent variable	Affirmation condition	Affirmation condition	Mean difference	Std. error	Sig.	95% CI	
						Lower bound	Upper bound
Behavioral tendencies	Values	Mastery affirmation	.030	.137	1.000	-.302	.361
		No affirmation	.408*	.133	.007	.088	.729
	Mastery	Values affirmation	-.030	.137	1.000	-.361	.302
		No affirmation	.379*	.134	.016	.055	.703
	None	Values affirmation	-.408*	.133	.007	-.729	-.088
		Mastery affirmation	-.379*	.134	.016	-.703	-.055
Outgroup feelings	Values	Mastery affirmation	-.414	2.985	1.000	-7.619	6.791
		No affirmation	6.624	2.886	.068	-.341	13.589
	Mastery	Values affirmation	.414	2.985	1.000	-6.791	7.619
		No affirmation	7.039	2.918	.050	-.005	14.082
	None	Values affirmation	-6.624	2.886	.068	-13.59	.341
		Mastery affirmation	-7.039	2.918	.050	-14.08	.005
Perceived threat	Values	Mastery affirmation	.042	.116	1.000	-.239	.323
		No affirmation	-.163	.112	.448	-.434	.109
	Mastery	Values affirmation	-.042	.116	1.000	-.323	.239
		No affirmation	-.205	.114	.219	-.479	.070
	None	Values Affirmation	.163	.112	.448	-.109	.434
		Mastery Affirmation	.205	.114	.219	-.070	.479

**Interaction Effects.**

The purpose of hypotheses 5 and 6 was to examine the interaction effect between mediated contact and self-affirmation. Multivariate tests did not show a statistically significant interaction effect between mediated contact and self-affirmation on the combined dependent variables, while controlling for the covariates,  $F = (6, 406) = .646$ ,  $p = .693$ , Wilk's  $\Lambda = .981$ , partial  $\eta^2 = .009$ . Despite non-significant interaction effects, simple main analysis was conducted for self-affirmation given the present study's interest in assessing whether adding a self-affirmation intervention to mediated contact would improve study outcomes beyond the effect of mediated contact on its own. As such, pairwise comparisons were run for differences between

self-affirmation conditions for participants engaged in mediated contact. Data are adjusted mean  $\pm$  standard error, unless otherwise stated. Figures 1, 2, and 3 below show depict the nature of this interaction effect/simple main effect of self-affirmation on mediated contact for all three dependent variables.

**Table 7**

*Pairwise Comparisons for the Simple Main Effects of Self-Affirmation*

Dependent variable	Contact condition	Affirmation condition		Mean difference	Std. error	Sig.	95% CI	
							Lower bound	Upper bound
Behavioral intentions	Contact	Values	Mastery	.116	.199	1.000	-.366	.597
			None	.405	.182	.082	-.035	.845
		Mastery	Values	-.116	.199	1.000	-.597	.366
			None	.290	.183	.346	-.153	.732
Outgroup feelings	Contact	Values	Mastery	4.228	4.336	.992	-6.238	14.693
			None	10.405*	3.963	.028*	.840	19.970
		Mastery	Values	-4.228	4.336	.992	-14.693	6.238
			None	6.177	3.984	.368	-3.440	15.795
Perceived threat	Contact	Values	Mastery	-.022	.169	1.000	-.429	.386
			None	-.262	.154	.273	-.635	.110
		Mastery	Values	.022	.169	1.000	-.386	.429
			None	-.241	.155	.368	-.615	.134

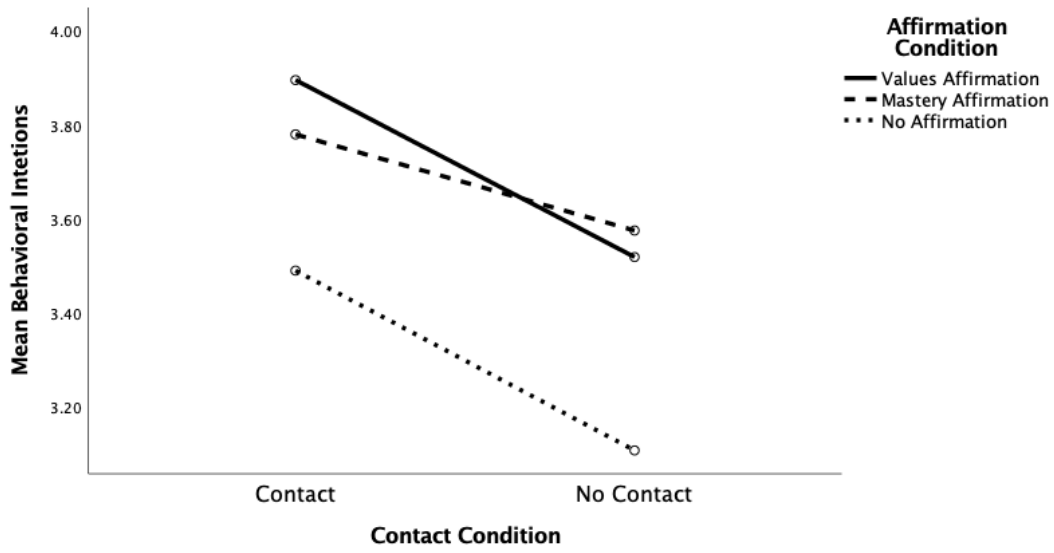
**Hypothesis 5.** It was hypothesized that there will be a positive interaction effect between values-affirmation and mediated contact, whereby participants assigned to values-affirmation plus mediated contact will score significantly higher on measures of (H5a) outgroup feelings and (H5b) positive behavioral tendencies, and lower on a measure of (H5c) perceived threat toward transwomen compared to participants assigned to no-affirmation plus mediated contact. Participants who engaged in values-affirmation prior to mediated contact exhibited higher outgroup feelings ( $71.44 \pm 3.01$ ) compared to participants who engaged in no-affirmation prior to mediated contact ( $61.04 \pm 2.58$ ), a statistically significant difference of 10.41 (95% CI, .840 to

19.970),  $p = .028$ . Furthermore, participants who engaged in values-affirmation prior to mediated contact exhibited higher behavioral tendencies ( $3.9 \pm .14$ ) compared to participants who engaged in no-affirmation prior to mediated contact ( $3.5 \pm .12$ ), however this difference did not reach significance,  $p = .082$ . A marginal effect cannot be evaluated as a significant effect and could either be a function of low power or an actual non-effect. Only replication with a larger sample could ascertain which of the two possibilities is more likely. There were no significant group differences on perceived outgroup threats between participants who engaged in values-affirmation ( $1.79 \pm .12$ ) versus no-affirmation ( $2.06 \pm .1$ ) prior to mediated contact,  $p = .273$ . These findings offer partial support for Hypothesis 5, such that combining values-affirmation with mediated contact significantly improved outgroup feelings (and to a lesser extent behavioral intentions) when compared to mediated contact on its own.

**Hypothesis 6.** It was hypothesized that there will be a positive interaction effect between mastery-affirmation and mediated contact, whereby participants assigned to mastery-affirmation plus mediated contact will score significantly higher on measures of (H6a) outgroup feelings and (H6b) positive behavioral tendencies, and lower on a measure of (H6c) perceived threat toward transwomen compared to participants assigned to no-affirmation plus mediated contact. There were no significant group differences between participants who completed mastery-affirmation versus no-affirmation prior to mediated contact for feelings thermometer ( $p = .368$ ), behavioral tendencies ( $p = .346$ ), and outgroup threat ( $p = .368$ ). These findings do not offer support for Hypothesis 6, such that combining mastery recall affirmation with mediated contact did not significantly improve prejudice outcomes when compared to mediated contact on its own.

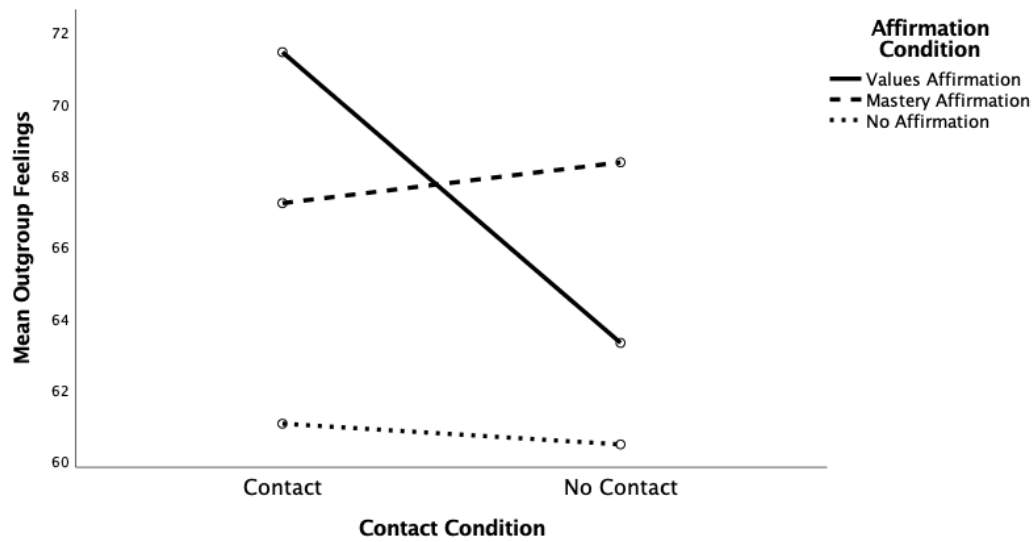
**Figure 1**

*Simple Main Effects of Self-Affirmation on Behavioral Tendencies*



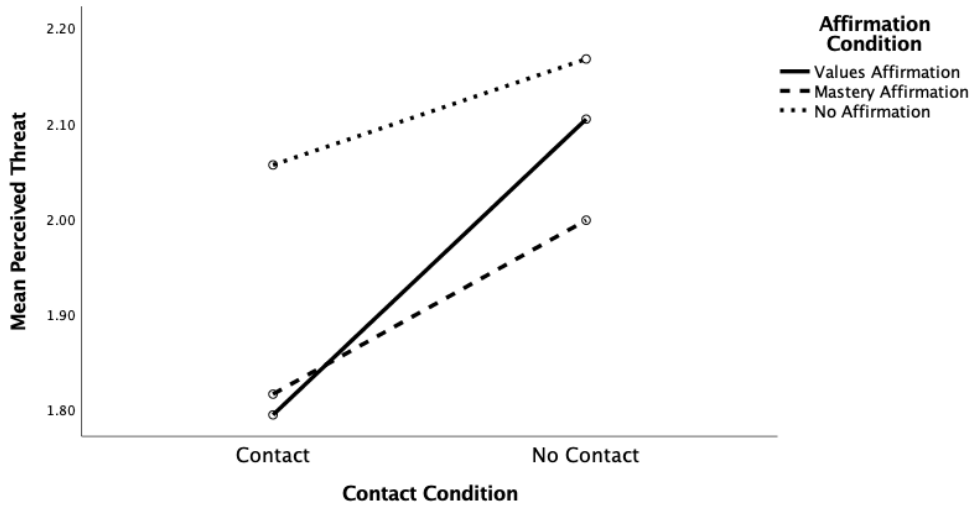
**Figure 2**

*Simple Main Effects of Self-Affirmation on Outgroup Feelings*



**Figure 3**

*Simple Main Effects of Self-Affirmation on Perceived Threat*



## CHAPTER VI

## DISCUSSION

The present study evaluated the effectiveness of theory-based interventions in reducing Lebanese cisgender individuals' prejudice toward transgender women while controlling for the effects of eight covariates – SDO, RWA, religiosity, gender, LGB friend, LGB family, total study duration, and contact duration. Specifically, the study examined whether mediated intergroup contact (Allport, 1954), values-affirmation (Steele, 1988), and mastery recall affirmation (Tavitian-Elmadjian et al., 2020) could effectively improve outgroup feelings and behavioral tendencies, and reduce perceived threat toward this population. The present study also examined the interaction between mediated contact and self-affirmation (values and mastery recall) in the form of combined interventions. Specifically, it examined whether engaging participants in self-affirmation prior to mediated contact improves prejudice outcomes beyond the effects of mediated contact on its own. Drawing upon published findings in the literature, six hypotheses were tested.

**Mediated Intergroup Contact**

The first intervention evaluated by the present study was mediated intergroup contact, where participants came into contact with a transgender woman through an online video. Data analysis revealed a main effect for mediated contact on behavioral intentions and perceived threat, but not on outgroup feelings. This finding offers partial support to the hypothesis that mediated contact, when compared to no-contact, would improve all three prejudice outcomes. The results are consistent with prior experimental work showing mediated transgender contact to be a useful tool for prejudice reduction (e.g., Case & Stewart, 2013; Galinec & Korajlija, 2017; Tompkins et

al., 2015). However, a closer examination of which prejudice outcomes were amenable to change and how this compares to similar studies is warranted.

Contrary to predictions, mediated contact did not have a statistically significant main effect on outgroup feelings. Plausible explanations for this null effect include the following: (1) the null finding is a true effect, (2) the type of scale and wording used impacted participant responses, or (3) characteristics of the present sample, including response style, impacted the results.

One explanation may lie in the type of measurement used to assess participants' feelings, and in particular, the wording of the scale itself. The present study utilized a Feelings Thermometer rating scale, a simple and straightforward tool that instructs participants to rate their feelings toward a social group on a scale from 0 (*extremely negative, cold*) to 100 (*extremely positive, warm*), with 50 being the midpoint (*neutral*). In contrast to the measures on behavioral tendencies and perceived threat, the Feelings Thermometer rating scale in the present study was worded in the third-person (e.g., "Would you be willing to [behavior]" versus "Rate your feelings toward [outgroup] as a social group"). Third-person wording of the scale may have situated the participant as an impartial rater of transgender women in general, rather than eliciting their personal affective reactions toward them. Eliciting feelings toward an unfamiliar, and possible threatening, outgroup may require wording a scale in a less impersonal manner. Pertaining to other aspects of the thermometer scale, research shows that respondents are much more likely to opt for mid-point responding when it is offered to them (Moors, 2008), and when the rating scale only includes verbal labels to the middle and extreme categories, as it did in the present study (0-50-100; Weisberg & Miller, 1979). Moreover, it may be that respondents with ambivalent or less intense feelings toward the social group under study are more likely to

gravitate toward mid-point responding when compared to those who feel more strongly about it (Presser & Schuman, 2008, as cited in Moors, 2008). Indeed, the present study sample included participants who expressed neutral and/or less intense feelings toward transgender women.

Another explanation for the null effect of mediated contact on outgroup feelings may be attributed to response styles. Indeed, response styles on surveys have been shown to vary across cultures (He & van de Vijver, 2012; Johnson et al., 2010). Different response styles include socially desirable responding (i.e., tendency to respond in a way that makes one look more favorable/less prejudiced), acquiescent response style (i.e., tendency to agree versus disagree with statements in general), and extreme response style (i.e., tendency to use extreme ends of response scales). No study has as of yet examined response styles in the cultural context of Lebanon, and even then, we find great variability within the population itself. Although adjusting for response styles was beyond the scope of the present study, it is nonetheless recommended that future studies pay considerable attention to how the cultural context may affect response styles on study measures. For instance, to control for desirable responding, one may add a measure of social desirability (see Johnson et al., 2010).

As predicted, but contrary to some experimental studies in the field, mediated contact had a statistically significant main effect on behavioral tendencies. Experimental research applying short mediated contact interventions (2 to 5 minutes) in the context of transprejudice have found improvements in attitudes, but not behavioral tendencies (see Case & Stewart, 2013; Galinec & Korajlija, 2017). However, longer interventions have been proven to impact the behavioral domain of prejudice. In a study by Tompkins et al. (2015), participants reported significantly greater desire for transgender contact after a 15-minute mediated contact intervention that was followed by a perspective-taking task. Alternatively, it may be that the addition of a perspective-

taking task played a pivotal role in observed behavioral change. Indeed, perspective-taking and empathy have been identified as mediators for the effect of mediated contact on prejudice (Banas et al., 2020). Consequently, the presence of certain factors or conditions seems to moderate the effectiveness of a mediated contact intervention on prejudice outcomes.

The success of the present study's mediated contact intervention may be partly attributed to tight control over said factors or conditions. The selection of the contact video was informed by research on optimal conditions for mediated contact with outgroups in general (e.g., positive valence, typicality; Atwell & Mastro, 2015; Joyce & Harwood, 2014; Mazziotta, Mummendey, & Wright, 2011; Solomon & Kurtz-Costes, 2018) and with the transgender population in specific (e.g., empathy elicitation; Cramwinckel et al., 2018, Tompkins et al., 2015). The transgender woman in the video chosen for the present study was portrayed positively (i.e., positive valence) and was considered to be moderately atypical of her group (i.e., outgroup typicality). Moreover, the video was selected to reflect certain attributes; this includes being focused, informative, narrative-authentic, and empathic. The narrative was told from the outgroup's perspective and focused on a Lebanese transgender woman sharing some lived experiences of discrimination and social exclusion (typically faced by the transgender community in Lebanon). Such a narrative was deemed to encourage perspective-taking and feelings of empathy toward the transgender character, and by extension the group to which she belongs, thus facilitating prejudice reduction. This is in line with research showing mediated contact to function through affective processes, largely by increasing empathy and perspective-taking and reducing feelings of threat and anxiety (Banas et al., 2020). Indeed, the present study's findings are consistent with this assertions: the use of mediated contact intervention did in fact yielded lower values of perceived threat toward transgender women.

The finding that mediated contact was effective in improving behavioral tendencies and reducing perceived threat is promising, considering the evidence that certain limitations may reduce contact's effectiveness in cultural contexts that do not meet Allport's optimal conditions (e.g., equal status between groups; Kende et al., 2018). To illustrate, intergroup contact has been shown to have weaker effects on prejudice in cultures that value hierarchy when compared to those that value equality (Kende et al., 2018). To be sure, the majority of studies showing an effect of intergroup contact interventions on prejudice have been carried out in egalitarian societies where majority and minority group members hold equal status in society (Kende et al., 2018). In Lebanon, we find large disparities between cisgender and transgender individuals in many areas of life, including socioeconomic status, access to healthcare and education, employment opportunities. (Helem, 2017). What's more, institutional support, another optimal condition set forth by Allport, is also lacking in Lebanon. The Lebanese legal system criminalizes trans identities and non-conforming gender behaviors deemed a "threat" to Lebanese identity and values (Nasr & Zeidan, 2015). The present study findings suggest that even when Allport's optimal conditions are not met, interventions based on mediated intergroup contact may still effectively reduce prejudice. However, it may also be that Allport's conditions are more essential for contact that is face-to-face versus mediated. Despite the promising findings of the present study, a cautious interpretation may be in order, given some characteristics of the study sample. The average participant was in their late twenties, highly educated, slightly-to-moderately religious, slightly-to-moderately conventional, and low on preference for group-based hierarchies. This stands in contrast to the average Lebanese participant in the study by Nasr and Zeidan (2015) which revealed very negative attitudes toward transgender men and women, and where the average participant was in their late thirties, highly

religious with highest level of education attained for the majority of respondents being secondary school. Future studies with a more representative sample are needed to shed further light on the applicability of mediated contact to hierarchical societies.

### **Values-Affirmation**

Beyond mediated contact, the present study evaluated two methods of self-affirmation – values affirmation and mastery recall affirmation – as intervention strategies to reduce transgender prejudice. In the values-affirmation intervention, participants affirmed to values central to the self (Cohen & Sherman, 2014; Steele, 1988). Data analysis revealed a significant main effect for values-affirmation on behavioral intentions, a marginal effect on outgroup feelings, and no effect on perceived threat. This finding offers partial support to the hypothesis that values-affirmation, when compared to no-affirmation, would improve all three prejudice outcomes. Although no research has examined whether engaging in values-affirmation could reduce prejudice toward transgender individuals, it has been shown to reduce prejudice towards other stereotyped groups (Sherman et al., 2017; Cohen & Sherman, 2014), including gay men (Lehmiller, Law, & Tormala, 2010).

Consistent with prior studies, values-affirmation had a significant main effect on behavioral tendencies but not on outgroup feelings. In a study by Badea et al. (2018), values-affirmation effectively reduced discriminatory behavioral tendencies toward Muslim immigrants but had no effect on attitudes. Likewise, in another study by Schneider and Weber (2020), values-affirmation reduced discriminatory behavioral tendencies and increased social support toward ex-prisoners but had no effect on attitudes.

Contrary to predictions, values-affirmation did not have a statistically significant main effect on perceived threat toward transgender women. Although this finding may seem counter to

the theoretical framework conceptualizing prejudice as defensive reaction to protect self-integrity from threatening outgroups (Badea & Sherman, 2019; Sherman, Brookfield, & Ortosky, 2017), a closer examination of the present study's sample may explain the apparent contradiction.

Participants were low on individual factors, such as SDO and RWA (conventionalism), typically associated with feeling threatened by members of certain outgroups. These characteristics point toward a more liberal sample that may be more accepting of, and thus less threatened by, transgressions of traditional gender norms and the gender binary. Replication with a more conservative sample with higher levels of perceived threat would help elucidate values-affirmation's effects on perceived threat toward transgender woman.

Alternatively, the order of the experimental manipulation may explain the lack of effect on perceived threat. In the present study, self-affirmation manipulation occurred prior to mediated contact. The rationale behind this orderly manipulation derives from previous research on values-affirmation (McQueen & Klein, 2006) and mastery recall affirmation (Tavitian-Elmadjian et al., 2020), showing both to function as “preventive” mechanisms whereby self-worth is protected against perceived threat. Alternatively, self-affirmation in the context of prejudice reduction may also function as a “corrective” mechanism whereby self-worth is maintained after the threat – coming into mediated contact with a transgender woman – is presented. Applying this reverse order – mediated contact prior to self-affirmation – may help elucidate whether the order in which self-affirmation is presented impacts prejudice outcomes differently, and in particular perceived threat.

The success of values-affirmation in improving behavioral tendencies in the present study may be attributed to tight control over threats to internal validity. First, the study took into consideration the moderating role of the value being affirmed. Affirming to values that falls

within the same domain of the threat can backfire and widen the gap between two groups by making salient certain group distinctions (Steele, 1988). To guard against this problem, the present study excluded ‘family’ from the original protocol by Badea et al. (2018), which falls within the same domain as the threat. Had it been kept, the intervention might have lost its effectiveness or may have backfired by increasing prejudice. To illustrate, Lehmiller et al. (2010) demonstrated that while affirming to the domain-irrelevant value of humor reduced prejudice toward gay men, affirming family values maintained prejudice. In another study by Rivera (2007), participants who affirmed their masculinity reported increased prejudice toward gay men. Thus, a successful values-affirmation intervention would benefit from promoting values not associated with the threat posed by the outgroup under study. Furthermore, the present study utilized the values-affirmation protocol by Badea et al. (2018) which encourages positive interpersonal/relational values that are related to the self vis-à-vis others (e.g., respect, listening, tolerance, empathy). It is unclear whether the intervention would have been equally effective had we used values that are considered more individualistic (e.g., being smart, being athletic, being creative; Cohen, 2000). Future studies may assess whether affirming equality values facilitates enacting said values toward an unfamiliar outgroup (e.g., whether affirming to empathy helps one feel more empathic toward an outgroup).

Second, although not controlled for in the present study, it is important to consider whether the values being affirmed are culturally-relevant to the context under study. Standard values-affirmation protocols that rely on values that are dominant in Western contexts may not be applicable to non-Western contexts (Tavitian-Elmadjian & Bender, 2020). Indeed, affirming to values one does not find personally relevant may fail to affirm the self, and thus render the intervention ineffective. Consequently, values affirmation interventions need to be tailored to the

specific cultural context under study. One possible course of action is to identify dominant societal values prior to constructing a values-affirmation protocol (see Schneider & Weber, 2018).

### **Mastery recall affirmation**

The second method of self-affirmation evaluated in the present study was autobiographical mastery recall, where participants recalled personal memories of a difficult experience and ways used to overcome it (Tavitian-Elmadjian et al., 2020). Data analysis revealed a main effect for mastery recall on behavioral intentions and to a lesser extent outgroup feelings, but not on perceived threat. This finding offers partial support to the hypothesis that mastery affirmation, when compared to no-affirmation, would improve all three prejudice outcomes. Although mastery affirmation has been shown to increase collective self-esteem in the face of social identity threat (Tavitian-Elmadjian et al., 2020), no study as of yet has applied it to the study of prejudice. The present study provides initial evidence that autobiographical mastery recall as a method of self-affirmation may be a successful tool for prejudice reduction.

It is unclear how recalling autobiographical mastery memories may reduce prejudice toward outgroups. According to Tavitian-Elmadjian et al. (2020), and consistent with self-affirmation theory (Steele, 1988), recalling past mastery events may have affirmative effects by reviving a sense of competence and self-efficacy. Specifically, mastery recall can evoke a sense of competence by reminding a person of his or her past triumphs, and provide guidance on how to overcome a current predicament by drawing on past successful solutions. In the context of the present study, it could be that feeling good about oneself (by drawing on past accomplishments) equips one with the ability to cope with threats stemming from yet another difficult situation – an

encounter with an unfamiliar outgroup. It would be useful for future studies to determine whether self-efficacy is a mechanism through which mastery affirmation reduces prejudice.

Seeing as mastery recall affirmation circumvents the limitations of a standard values-affirmation intervention (e.g., cultural relevance; same-domain affirmations), it was hypothesized that mastery recall affirmation would be more effective than a standard values-affirmation for all three prejudice outcomes. As a non-specific method of self-affirmation, mastery affirmation could restore one's sense of self-efficacy without having to affirm specific values that are culturally-relevant and/or in a different domain than the threatened self. However, this hypothesis was not supported. In fact, mastery affirmation was just as effective as values-affirmation in improving all three prejudice outcomes. However, when compared to values-affirmation, mastery recall did have a significant albeit weak effect on outgroup feelings. This finding is promising and warrants further investigation, while at the same time requires caution due to aforementioned limitations of the Feelings Thermometer rating scale. The equal effectiveness of both methods of self-affirmation may be attributed to meticulous tailoring of values-affirmation protocol to the cultural context under study. Had any values-affirmation protocol been applied without modifications, it would have likely failed to improve prejudice outcomes. For these reasons, we suggest autobiographical mastery recall as an alternate, non-specific method of self-affirmation that gives participants the freedom to affirm their chosen memory without requiring them to affirm specific values.

### **Combined Intervention**

In addition to evaluating singular interventions, the present study tested the utility of combining self-affirmation and mediated contact into a hybrid intervention. The decision to include a combined intervention arose in response to certain limitations of intergroup contact,

and is consistent with recommendations to combine techniques to build more effective interventions (Cramwinckel et al., 2018). There is evidence that intergroup contact with transgender individuals may elicit feelings of disgust in prejudice-prone individuals, such as those high on SDO and RWA which, in turn, limits its effectiveness (Casey, 2016; Miller et al., 2017). The addition of a self-affirmation task prior to contact would conceivably reduce defensiveness and increase openness to threatening information. In this case, self-affirmation prior to mediated contact would enhance the effects of mediated contact, or guard against unintended side-effects (e.g., increased disgust). Furthermore, a combined intervention could help improve study outcomes by targeting both attitudinal and behavioral domains of prejudice, which is also in line with recommendations for designing effective intervention against prejudice (Cramwinckel et al., 2018).

Contrary to expectations, there was no multivariate interaction effect between self-affirmation and mediated contact. Despite non-significant findings, simple main analysis was conducted for self-affirmation to assess whether combining self-affirmation with mediated contact would improve study outcomes beyond the effects of mediated contact on its own. While simple main effect for mastery affirmation was non-significant, data analysis showed a simple main effect for values-affirmation on outgroup feelings for participants engaged in mediated contact. However, a critical approach must be adopted here as the finding may well be attributed to an artifact, or a systemic bias that may threaten the internal validity of the study. For instance, it may be that participants' expectations influenced their response on study measures. One possibility is that participants behaved in ways that support the study's hypotheses. Another possibility is that participants experiencing evaluation apprehension wanted to appear "good"

and “nonjudgmental”. The presence or absence of an artifact may only be determined through replication, particularly with a larger and more conservative sample (Lewis-Beck et al., 2004).

Artifacts aside, plausible explanations for the null interaction effects include the following: (1) the sample size was too small to uncover such effects, (2) characteristics of the present sample skewed the data, in the direction of making difference less detectable, (3) the analysis model was unsuitable, or (4) an interaction effect does not exist.

First, there is the matter of sample size. In theory, a large enough sample size is necessary to detect an intervention’s supposed effect(s), given the relationship between size and statistical power. However, sample size wasn’t an issue in the present study. A power analysis put the required number of participants at 171; whereas the actual number of people who participated in the study was 219. Therefore, the sample size appears to be adequate. On the other hand, some characteristics of the sample itself may be at issue and, perhaps, can explain the null findings. As mentioned prior, the suggestion of a combined intervention stems from potential unintended effects of mediated contact for highly prejudiced individual, limiting the intervention’s efficacy. It was hypothesized that this resistance to the effects of mediated contact may be countered by adding another intervention reduces the likelihood of defensive reaction, such as self-affirmation. Thus, for the combined intervention to guard against the unintended effects of contact, the sample needs to include prejudice-prone participants who are more representative of the population under study. Given the present sample’s characteristics (low on conventionalism and SDO), it is unlikely that mediated contact with a transwoman elicited feelings of threat and/or disgust in participants to begin with. To properly assess the utility of the proposed intervention, the experiment would need to be replicated with a more representative sample.

Yet another explanation for null findings may lie in the model used for analysis. Instead of being a matter of interaction, perhaps self-affirmation moderates the strength of the effects of mediated contact on prejudice outcomes. Indeed, engaging in self-affirmation may render an individual more receptive to threatening information presented through mediated contact, which in turn facilitates prejudice reduction. In this context, moderation analysis would be a more appropriate model to consider. Finally, it may well be that no interaction effect exists between self-affirmation and mediated contact. However, a definitive answer to this question –whether an interaction effect exists – requires study replication with a sample that is more likely to benefit from a combined intervention. Seeing as the present study is the first to combine self-affirmation with mediated contact, an improved replication of the present study seems like a logical next step.

In summary, it emerges that the behavioral tendencies measure is the clear ‘winner’ as it was the most sensitive to change across interventions. A closer inspection of the measure shows it to tap into perceived social distance and willingness for future contact. This indicates that the interventions tested in the present study may successfully reduce perceived social distance between the ingroup and outgroup and may increase willingness to come into future contact with members of said outgroup. However, caution should be used when generalizing these findings. The reason this measure was so amenable to change may be due to the type of interpersonal behaviors assessed. The seven behaviors listed within the scale are less threatening and less close to the core of oneself; they do not insert the outgroup into one’s personal life but rather keep them at a safe distance. For instance, it taps into behaviors such as willingness to have a transgender woman as a work colleague, a teacher, or a fellow passenger on a bus. However, it does not tap into more intimate behaviors such as willingness to have a transgender woman teach

or babysit one's child, to have a transgender child in the same school as one's children, or to have a transgender person marry into the family. These findings cannot be generalized to more intimate behavioral tendencies that approach one's close circle, be it friends or family members. Such question may only be answered by assessing for willingness to engage in more personal and intimate behaviors.

### **Implications**

Prejudice stands out as a major source of suffering for transgender people, inasmuch as it underlies the discriminatory behavior and violence directed at them (Hoffarth & Hodson, 2018). Improving individual attitudes toward transgender persons on a small scale can promote collective societal action, thus increasing support for large-scale policy change (e.g., intergroup equality; transgender rights). Therefore, an intervention that helps reduce prejudice can mitigate the suffering of transgender persons by increasing support for fair policies. Moreover, understanding effective ways to reduce transgender prejudice is critically important for researchers, academics, practitioners, and policy-makers who seek to transgender prejudice. In this vein, the present study has important implications in multiple domains, including research and practice.

### **Research**

The present study yields a number of research benefits. It expands an understanding of what constitutes effective interventions against transgender prejudice, particularly in non-Western, non-egalitarian contexts such as Lebanon. Furthermore, it assesses a novel intervention of an eclectic nature, thus testing out the proposal of combining techniques to enhance effectiveness, as proposed by Cramwinckel et al. (2018). The present study contributes to the literature on mediated intergroup contact (Allport, 1954), values-affirmation (Steele, 1988), and

mastery recall affirmation (Tavitian-Elmadjian et al., 2020). The study provides an evidence base for the effectiveness of mediated intergroup contact (Allport, 1954), values-affirmation (Steele, 1988), and mastery recall affirmation (Tavitian-Elmadjian et al., 2020) and, possibly, for selecting one over another. Lastly, the study is the first to experimentally manipulate “values-affirmation” and “mastery recall affirmation” and assess for impact on transgender prejudice.

### *Practice*

Expected benefits from the present study extend beyond helping the transgender population per se to people and entities concerned with them. Specifically, social scientists, clinicians, policymakers, educators and administrators, among others, stand to gain from techniques or interventions that are likely to reduce transgender prejudice. Given the deleterious impact of prejudice on the lives of transgender people, there is a pressing need for such effective interventions. Inasmuch as few interventions are shown to effectively improve reactions to transgender persons, the findings of the current study supplement our knowledge base and inform related practice.

The findings of the present study can help design better programs to combat transgender prejudice across various societal domains, such as healthcare, employment, and education. Such knowledge can also assist concerned entities, including local and national governments, organizations, and institutions, achieve similar goals. To illustrate, NGOs and other organizations working to advance LGBTQ rights can draw on effective methods of intervention to create programs that are likely to succeed with a target group or the general population. Practitioners and policymakers at the local and national levels can create evidence-based guidelines aimed at the reduction and/or prevention of transgender prejudice.

The proposed study can inform counter-transgender prejudice programs and interventions across settings. For instance, in healthcare, one prominent issue has been the biased treatment transgender persons experience when trying to access needed medical support. Such negative experiences include denial of medical care, harassment, and insensitivity to transgender needs (HRW, 2019; James et al., 2016). In this respect, cultural competence and sensitivity training—informed by what has come to light about effective interventions in this study—can help healthcare practitioners make successful “contact” with the out-group and lose their “defensive responding”, enabling them to learn or apply with ease the competencies for adequate transgender healthcare.

In educational settings (e.g., schools), where transgender prejudice and discrimination are widespread, transgender persons are confronted with serious issues, including high dropout rates due to harassment and violence (HRW, 2019; James et al., 2016). In this regard, school-wide interventions for both students and teachers may be modeled after effective methods, some of which identified in the present study. Work organizations can similarly design policies for an inclusive workplace and/or provide training for Human Resources personnel, hiring managers, and employees, following a successful “contact” intervention from the present study. Thus, one can effectively counter some of the negative behaviors transgender persons are subjected to in the workplace, such as discrimination, harassment, mistreatment, unjustified employment refusal or termination (FRA, 2014, 2020; HRW, 2019; James et al., 2016). In sum, the present study can unlock serious benefits across multiple settings, for professionals and non-professionals alike.

### **Limitations**

Despite its many strengths, including its focus on testing theory-based interventions, the present study does have certain limitations. As regards internal validity, high incompleteness rate

(i.e., attrition) was an issue in the study; participants who dropped out of the study may have been characteristically different from participants who continued with the study (e.g., male gender; more prejudiced). However, exploratory data analysis showed no significant difference in gender for those who did not complete the study. There is no possible way of knowing whether participants who dropped-out may have been more prejudiced than those who did not. Furthermore, due to time constraints, the video selected for the no-contact condition was not voiced-over in Arabic to match the mediated contact video, and thus the mother tongue of the present population.

As regards external validity, or generalizability of the present findings, one issue was the representativeness of the sample. The present sample underestimates levels of transgender prejudice in the Lebanese population. Participants do not appear to be representative in terms of demographics – including age, educational level, religiosity, conventionalism, and SDO – of the Lebanese population. It is unclear whether the experiment would have yielded different results with a more conservative sample. Therefore, to generalize to the Lebanese population at large, the results of the current study need to be replicated. Likewise, study findings may not generalize to prejudice toward other minority groups, even to other queer identities such as transgender men or non-binary individuals. Another limit to generalizability of the findings pertains to sampling method used. Convenience sampling was applied to recruit participant online via advertisements on social media and networking platforms. It is important to consider how characteristics of the recruited sample differs from general population in terms of age, level of education, socioeconomic status, previous knowledge on issues such as the LGBTQ community, to name a few. Although minimum required sample size to detect small effects size was achieved in the present study, a larger sample may have elucidated on the marginal effects which may have been

obscured by the present study's sample size. All that being said, the biggest limitations within the current study pertain to generalizability of the findings to the Lebanese population.

### **Recommendations and Future Directions**

Findings from the current study suggest possible directions for future research. First, while the findings shed light on effective interventions in Lebanon, additional work needs to replicate the findings with a sample that is more representative of the Lebanese population. It is also suggested to replicate the findings in other non-egalitarian societies besides Lebanon. This would help evaluate whether the interventions are applicable to non-Western contexts (e.g., Middle-Eastern countries). Considerable attention must be paid to the measures used to assess for prejudice outgroups, and particularly when measuring personal feelings toward the outgroup. Furthermore, may be important to uncover the mechanisms through which each intervention reduces prejudice. It is uncertain whether the present study interventions' effects endure beyond the immediacy of the experiment. Future studies in this domain need to assess not only the short-term effects but also look for long-lasting effects (e.g., a month post-intervention).

When considering mediated contact, it is important to consider several factors and conditions prior to applying it. Intervention need to be tailored to meet certain optimal conditions for mediated contact in general (e.g., positive valence; outgroup typicality) and for mediated contact with the outgroup being studied in specific. In the context of transgender prejudice, it is recommended that the intervention be narrative-authentic, focused, informative, and empathic. An intervention's ability to elicit perspective-taking and empathy are key factors underlying its success in reducing transgender prejudice. Actually, it would very informative for future research to assess intergroup emotions as mechanisms for mediated contact with the transgender population, and in particular positive emotions such as perspective-taking, empathy, and trust,

and negative emotions such as anxiety and perceived threat. Furthermore, additional work like the present study are needed to clarify whether interventions based on intergroup contact theory can be successfully applied to non-egalitarian cultures that do not meet Allport's optimal conditions for direct contact (e.g., equal status; institutional support), and with a sample that is more or less representative of the population under study.

When considering values-affirmation, one's target population and the type of prejudice under study need to be taken into consideration. In other words, a successful values-affirmation intervention will need to be tailored prior to its application. A values-affirmation protocol with values that are not culturally-relevant to the context under study, or with values that fall within the same domain as the threat, may fail to exert effects on prejudice. It would be informative to consider whether values that promote intergroup acceptance and equality (e.g., empathy, tolerance) may be more effective than other types of values. One suggestion for future research is to identify dominant societal values prior to implementing the intervention. Moreover, it would be informative to consider whether the order of self-affirmation, whether performed prior to or after presentation of the threat, impacts prejudice outcomes differently.

The present study proposes autobiographical mastery recall as a potential avenue of self-affirmation that is less restrictive than, yet perhaps just as effective as values-affirmation. In particular, mastery affirmation allows the freedom to choose which mastery memory to recall without being restricted to a list of values or morals that need to be tailored to the culture under study. Indeed, mastery affirmation presents all the benefits of self-affirmation while at the same time overcoming the limitation of a standard values-affirmation intervention. In light of these findings, it is recommended that future researchers interested in prejudice-reduction evaluate the efficacy of mastery affirmation as an intervention strategy. However, further research is needed

to examine this empirically given the novelty of the approach. It is also suggested to evaluate the mechanisms through which mastery recall may reduce prejudice.

It is uncertain as to whether a hybrid intervention combining self-affirmation and mediated contact is more effective than mediated contact on its own. Although the present study did not find strong evidence in favor of a combined intervention, we nevertheless suggest combining self-affirmation and mediated contact to target prejudice that is more resistant to change, for instance when dealing with a more prejudiced sample that is prone to reacting defensively when coming into contact with a threatening outgroup (e.g., transgender women). However, replication with a more representative sample becomes necessary before drawing conclusions about the efficacy of a combined intervention. Furthermore, it may be illuminating to test whether self-affirmation acts as a moderator in the relationship between mediated contact and prejudice. In fact, by reducing perceived threat, self-affirmation may increase willingness to engage in contact with an unfamiliar outgroup, and may increase receptiveness to contact-based interventions.

## **Conclusion**

The current study arose in response to a pressing need to address the harrowing experiences of prejudice, discrimination, and violence endured by the transgender population in Lebanon. To this end, a number recommendations for designing and implementing effective prejudice-reduction interventions were adopted and built upon (Cramwinckel et al., 2018). Specifically, the study evaluated a number of theory-based interventions to reduce Lebanese cisgender individual's prejudice toward transgender women. Results indicated that coming into contact with a transgender woman through the media (mediated intergroup contact; Allport, 1954) effectively improved behavioral tendencies and reduced perceived threat toward this

population. Affirming personal values (values-affirmation; Steele, 1988) effectively improved behavioral tendencies. Recalling mastery autobiographical memories of a difficult situation and ways used to overcome it (mastery recall affirmation; Tavitian-Elmadjian et al., 2020) effectively improved behavioral tendencies, and to a lesser extent outgroup feelings toward transwomen. On the other hand, there was no strong interaction effect between self-affirmation and mediated contact, and despite a significant simple main effect for values affirmation on outgroup feelings, the findings remain tentative.

The present study has important implications in multiple domains, including research and practice. Despite the evidence on the injustices and inequalities experienced by the transgender community in the Middle-East, no studies have examined interventions targeting transgender prejudice in the region, including Lebanon. Findings from the current study fill this gap in research by providing evidence for potential interventions in non-Western cultural contexts such as Lebanon. Although further work is needed to substantiate the applicability of said interventions with a more representative sample, the findings contribute to our understanding of what constitutes effective interventions against transgender prejudice.

The present study findings also have real-world applications and provide important tools for addressing societal prejudice and discrimination against the transgender community in Lebanon. For instance, the findings could help design programs and interventions to combat this type of prejudice across various societal domains, including healthcare, housing, education, workplace settings and even within law enforcement institutions who are identified as being the number one perpetrators of violence against transgender women (HRW, 2019). In turn, improved attitudes can translate into greater support for fair policies (e.g., anti-discrimination

laws). It is our hope that the study's findings will spur more research into exploring ways to change hearts and minds about hidden minorities, particularly the transgender community.

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**Appendix A**

## Screening Questions

Are you a Lebanese citizen?

- Yes
- No

Do you currently reside in Lebanon or have left less than 2 years ago?

- Yes
- No

Are you 18 years and above?

- Yes
- No

What is your gender identity?

- Cisgender Man
- Cisgender Woman
- Transgender
- Non-binary
- Other

What is your sexual orientation?

- Straight
- Gay/Lesbian
- Bisexual
- Other

## **Appendix B**

### Participant information letter

Dear Participant,

My name is Isabel Abou Samra and I am a Master's student at Haigazian University in the Faculty of Social and Behavioral Sciences. I am currently conducting two separate research studies. The first study investigates the relation between memory types and information processing, while the second study explores attitudes toward social groups in Lebanon. You are being invited to participate in this research because you have self-identified as a Lebanese cisgender heterosexual man or woman who is 18 years or older and has been residing in Lebanon for the past two years.

Kindly read the below information to decide whether you would like to participate in this research study.

#### **Purpose of the Research Project**

You are invited to participate in two separate studies. The first study aims to investigate how recalling different types of memories (e.g., routine memories vs. personal memories) affects how we process information presented to us through the media. Findings from the first study may help us better understand how memory relates to learning new information. The second study aims to investigate public attitudes toward different stigmatized groups in Lebanon, such as persons with disabilities, refugees, and sexual minorities. The findings of the second study can help us better understand the attitudes surrounding a number of stigmatized social groups in Lebanon and also the individual factors associated with these attitudes.

This study will contribute towards the partial fulfillment of my academic study requirements at Haigazian University.

**What will I be asked to do?**

If you choose to participate in this research, you will be asked to take part in an online experiment (study 1) and to fill out a questionnaire (study 2). Participation in both studies will take about 30 minutes of your time. In the first study, you will be presented with a memory task and then asked to watch a short video. Next, you will be asked to answer questions about the video in an attempt to assess what you have learned from it. In the second study, you will be asked to fill out a demographic form and a questionnaire that entails statements that you will have to rate based on agreement. These will include questions about your attitudes toward one of five social groups in Lebanon.

**What are my rights?**

Participation in this study is completely voluntary, anonymous and confidential. Your name or any other identifying information will not be asked.

Data you provide along with data from all participants in the present research will be stored in aggregate in a password protected computer. The data will be analyzed and reported in aggregate. Only the principal investigator and faculty advisor of this study will have access to the compiled data which will be stored for a period of 10 years post data collection. During this time, you have the right to access your data.

You have the right to withdraw your consent or discontinue participation at any time for any reason.

This research study has been reviewed and has received clearance from the Haigazian University ethics committee. If you have any further concerns about your rights as a research participant,

please, do not hesitate to contact faculty advisor Ms. Lucy Tavitian,

[lucy.tavitian@haigaizian.edu.lb](mailto:lucy.tavitian@haigaizian.edu.lb)

### **What are the risks and benefits of participation?**

Participation in this study does not involve any physical risk or emotional risk to you beyond the risks of daily life. You may experience some mild anxiety when completing some of the questions due to examining your own attitudes. It is predicted that this discomfort will subside within a short while. If you experience distress during your participation you can discontinue your participation without penalty. If you are in crisis, please dial Embrace Lifeline at 1564 to speak to a volunteer. This information will also be provided when you complete the survey.

Participation in this study will not benefit you directly; however, your participation does help us better understand the link between memory types and media information processing (study 1) and attitudes toward different social groups in Lebanon (study 2).

### **Will I be compensated for participating in this study?**

After completing both studies, you may enter a randomized draw to win one of twenty Toters gift cards worth 50,000 L.B.P each. If you decide to enter the draw, you will be asked to create a unique anonymous ID. After data collection is complete, the unique ID will be announced on the following webpage. The IDs are anonymous and are not linked to study responses.

### **Contact information**

If you have any questions or concerns about the research you may contact:

Principal Investigator: **Isabel Abou Samra**, Faculty of Social and Behavioral Sciences,

Haigazian University, [iabousamra@students.haigazian.edu.lb](mailto:iabousamra@students.haigazian.edu.lb)

Faculty Advisor: **Ms. Lucy Tavitian**, Faculty of Social and Behavioral Sciences, Haigazian

University, [Lucy.tavitian@haigazian.edu.lb](mailto:Lucy.tavitian@haigazian.edu.lb)

## Appendix C

### Participant consent form

Please read the following statements.

- I have read the information letter and I am aware that I am being asked to consent to participate in two research studies
- I am aware that participation is voluntary and that I can choose to withdraw from participation any time and for any reason. I also hold the right to decline to respond to any question(s) that I may feel uncomfortable with.
- I understand that my participation involves an experiment of approximately 15 minutes (study 1) and a questionnaire of approximately 15 minutes (study 2).
- I have been assured that the researcher will maintain my identity confidential.
- I have been assured that the information from this research will be used for the purpose of academic study.
- I have received the assurance that this research study has been duly reviewed and approved by the Haigazian University ethics committee.
- I agree that the data gathered be kept in a secure location under the care of the study investigators for a period of 10 years.
- I have been assured that I can access my data (if identified) at any time.
- I have read and fully understand the information letter and consent form provided
- I, therefore, choose to voluntarily participate in this research study.

**By clicking Next, you are consenting to take part in this study.**

**Appendix D**

## Feelings Thermometer Scale

Use the 'feeling thermometer' to indicate whether you have positive or negative feelings toward transgender women as a social group. You may mark any degree between 0 and 100. Fifty degrees represents neutral feelings. Markings above 50 degrees indicate positive or warm feelings, and markings below 50 degrees indicate cold or negative feelings.

**Appendix E**

## Behavioral Tendencies Scale

Please indicate to what extent you would engage in the below behaviors.

1. Would you be willing to meet a transgender woman?
2. Would you be willing to sit next to a transgender woman on a 3-hour bus trip?
3. Would you be willing to work on a job with a transgender woman?
4. Would you be willing to have a transgender woman eat lunch with you often?
5. Would you invite a transgender woman to your home?
6. Would you ask a transgender woman for advice?
7. Would you be willing to have a transgender woman supervise your work?

5-point Likert scale: 1= Not at all, 2= Slightly, 3= Moderately, 4= Very much, 5= Extremely

**Appendix F**

## Perceived Threat Scale

Please indicate to what extent you feel the following. In general, I feel that transgender women:

1. Promote values that are incompatible with the values of people like me
2. Damage the moral image of people like me
3. Endanger the physical safety of people like me
4. Increase the risk of physical illness for people like me

5-point Likert scale: 1= Strongly disagree, 2= disagree 3= neutral, 4= Agree, 5= Strongly agree

**Appendix G**

## Very Short Authoritarianism Scale (Conventionalism subscale)

Please indicate how much you agree with the following statements.

1. God's law about abortion, pornography, and marriage must be strictly followed before it's too late.
2. There is nothing wrong with premarital sexual intercourse.\*

5-point Likert scale: 1 = strongly disagree, 2 = disagree 3= neutral 4= agree, 5 = strongly agree

**Appendix H**

## Social Dominance Orientation Short Scale

1. An ideal society requires some groups to be on top and others to be on the bottom.
2. Some groups of people are simply inferior to other others.
3. No one group should dominate society.\*
4. Groups at the bottom are just as deserving as groups at the top.\*
5. Group equality should not be our primary goal.
6. It is unjust to try to make groups equal.
7. We should do what can to equalize conditions for different groups.\*
8. We should work to give all groups an equal chance to succeed.\*

7-point Likert scale: 1 = strongly oppose, 2 = somewhat oppose, 3 = slightly oppose, 4 = neutral, 5 = slightly favor, 6 = somewhat favor 7 = strongly favor

**Appendix I**

## Demographic Sheet

What is your age in years? \_\_\_\_\_

What is the highest level of education that you have achieved?

- No schooling completed
- Nursery education to 8<sup>th</sup> grade
- 9<sup>th</sup>, 8<sup>th</sup>, or 10<sup>th</sup> grade
- 12<sup>th</sup> grade, no diploma
- Highschool graduate, with diploma
- Some university, but less than 1 year
- One or more years of university, no degree
- Bachelor's degree
- Master's degree
- Doctorate degree (PhD or MD)

Did or do you currently attend school in Lebanon?

- Yes
- No, specify: \_\_\_\_\_

Did or do you currently attend university in Lebanon?

- Yes
- No, specify: \_\_\_\_\_

Do you have a friend or family member who is transgender?

- Yes
- No

## Appendix J

### Participant debriefing form

Thank you for your participation in this study! Your participation is greatly appreciated.

#### **Purpose of the Study**

Earlier in the consent form you were informed that the purpose of the study was two-fold: (1) to investigate how media information is processed in relation to different types of memories people have and, (2) to investigate social attitudes toward different social groups in Lebanon. In actuality, the study was about assessing the effectiveness of different interventions, including a combination of interventions, in reducing Lebanese cisgender individuals' prejudice toward transgender women. Specifically, the study aimed to assess whether reflecting on important personal values (something we call values-affirmation), recalling a difficult situation and ways used to overcome it (mastery recall affirmation), and coming into contact with a transgender woman through the media (mediated intergroup contact) will improve attitudes and behavioral intentions while reducing perceived threat toward transgender women. People who took part in this study were randomized to six different groups and thus to different combinations of the three interventions mentioned above: (1) reflecting on personal values then watching a video featuring a Lebanese transgender woman, (2) reflecting on personal values then watching a video on being left-handed, (3) recalling a mastery memory then watching a video featuring a Lebanese transgender woman, (4) recalling a mastery memory then watching a video on being left-handed, (5) recalling a routine memory and watching a video featuring a Lebanese transgender woman, and (6) recalling a routine memory and watching a video on being left-handed. You were randomized to one of these six conditions.

The use of a cover story about your participation in “two unrelated studies” was necessary in order to prevent you from knowing the true purpose of the study. The “first study” on “media and memory” allowed us to administer the study interventions, while the “second study” on “attitudes toward different groups” allowed us to measure your attitudes, behaviors, and perceived threat toward transgender women. Although you were told that the selection of a social group would be done at random, all people who participated in the study were assigned ‘transgender women’ as the social group.

Unfortunately, in order to properly test the study’s hypotheses, I could not provide you with all of these details prior to your participation. This ensures that your reactions in this study were spontaneous and not influenced by prior knowledge about the purpose of the study. If you were informed about the actual purposes of the study, your ability to give unbiased responses concerning your attitudes and behaviors could have been affected. I regret the deception but hope you understand the reason for it.

This study is important because research suggests that transgender women in Lebanon experience widespread and severe prejudice, discrimination and violence across different sectors of life such as employment, education, healthcare and housing (Human Rights Watch, 2019). Most importantly, studies show that transgender woman suffer from disproportionately high rates of depression and anxiety, and that they are 14 times more likely to attempt suicide than the general population (Kaplan et al., 2016). Examining interventions that can reduce prejudice toward transgender women might help design better programs to combat prejudice across various societal domains and thus alleviate their suffering.

**Confidentiality**

Please note that although the purpose of this study has changed from the originally stated purpose, everything else on the consent form is correct. This includes the ways in which we will keep your data confidential, including your decision about whether to withdraw from the study. Now that you know the true purpose of the study and are fully informed, you may decide that you do not want your data used in this research. The data collected during this research will contribute to finding effective ways to alleviate the suffering of transgender women in Lebanon. If you would like your data removed from the study and permanently deleted please contact the principal investigator.

Whether you agree or do not agree to have your data used for this study, you will still be able to enter the draw to win 1 out of 20 Toters gift cards worth 50,000 LBP.

You are kindly asked not disclose the research purpose or procedures to anyone who might participate in this study in the future as this could affect the results of the study, and the data collected would not be usable. Regardless of your attitudes toward this population, please remember to be kind.

**Useful Contact Information**

If you have any questions or concerns regarding this study, its purpose or procedures, or if you have a research-related problem, please feel free to contact the principal investigator Isabel Abou Samra at [iabousamra@students.haigazian.edu.lb](mailto:iabousamra@students.haigazian.edu.lb) or faculty advisor Ms. Lucy Tavitian at [lucy.tavitian@haigazian.edu.lb](mailto:lucy.tavitian@haigazian.edu.lb)

If you feel upset after having completed the study or find that some questions or aspects of the study triggered distress, talking with a qualified volunteer may help. If you feel you would like assistance please contact Embrace's lifeline on 1564 for short-term support.

**Please keep a copy of this form for your future reference. Once again, thank you for your participation in this study!**

My answer below indicates that I have read and understand the information in this debriefing form, and (select one)

I give permission for the data collected from or about me to be included in the study.

I DO NOT give permission for the data collected from or about me to be included in the study.

**Appendix K**

## Values-affirmation Manipulation

Below is a list of values, some of which may be important to you, some of which may be unimportant. Please rank these values and qualities in order of their importance to you, from 1 to 8 (1 = most important item, 8 = least important item). Use each number only once.

- \_\_\_ Honesty
- \_\_\_ Respect
- \_\_\_ Listening
- \_\_\_ Empathy
- \_\_\_ Tolerance
- \_\_\_ Love
- \_\_\_ Loyalty
- \_\_\_ Sharing

Now think about the value you ranked the highest (ranked 1) and write three reasons that your top-ranked value is important to you personally. Give one example of something that demonstrates the importance of this value in real life. Please write down your description in as much detail as possible. Writing down the description should not take longer than 3-5 minutes.

**Appendix L**

## Mastery Recall Affirmation Manipulation

Please take a few minutes to remember a time in your life when you experienced a difficult situation. Recall and focus on how you overcame it, and how this past experience may have guided you in your life.

After that, please start writing down your memory in as much detail as possible. There are no right or wrong descriptions. You might want to include the setting or location, who else was there, and what happened, so that the event is described in a way that others will understand. Writing down the memory should not take longer than 3-5 minutes.

**Appendix M**

## No-affirmation Manipulation

Please take a few minutes to list, in as much detail as you can, everything you have eaten or drank in the past 48 hours. Please do not worry about things you find yourself unable to remember. Completing this task should not take longer than 3-5 minutes.

**Appendix N**

## Values-Affirmation Essays

*“It seems to me that all the other values cannot be applied without listening. For example, if I don’t listen to you, how are you going to be honest with me? If we listen to how we define things, I believe most arguments will get more direct to the point and much shorter. So here is my definition of listening: Listening is giving a certain amount of attention to a person’s communication enough for them to finish the ideas they plan to share with the listener. In my life, I think we don’t listen enough. Our attention spans are decreasing, for example. Also, listening seems to most people as a passive action, and in our society, people prefer being more dominant over others, due to the nature of our social hierarchies, leading to the mentioned problem.”*

*“I try to practice empathy in my day to day life. People do not always have someone who understands them when they are going through rough situation. Sometimes empathy is all it takes to help someone else, for instance, by listening and accepting without judgment. These days this value is missing in most people, leaving the rest to feel utterly alone. When I’m going through difficult times, I would appreciate if someone would show empathy toward me and so I practice this with everyone I meet. Sometimes people just want someone to listen and to know that they are being heard. I think many of life’s difficulties can be solved if we just listen to each other before reacting. There are no specific situations that stand out where this value determined what I did as I try to use it on a daily basis with almost everyone I meet. It makes people feel better.”*

## Appendix O

### Mastery Affirmation Essays

*“In school I had dyslexia but didn't know that back then. Exams were so stressful and depressing for me. They were always timed and words just jumbled up together. I'd never finish on time and I'd often leave class crying. I got bullied by peers and teachers alike for being a "cry baby". Even my parents didn't understand what was happening to me and I'd just be labeled the "lazy child". It wasn't until I went up to 10th grade and my philosophy teacher (who majored in psychology at university) recognized what I had and insisted I be referred to a specialist. That one teacher changed my life back then. I finally had a name to whatever I was experiencing and school had to accommodate it during exams. Suddenly taking an exam wasn't so stressful and my grades started improving again. I learned that it just takes that one attentive and caring person to spot something wrong, I also learned to seek help when I feel in need instead of just feeling helpless. To this day I still remember my professor and check in with him every once in a while.”*

*“I was diagnosed with OCD when I was in university after being under a lot of stress in med school. OCD already runs in the family and I had always been fearful of being susceptible to it. It ate away a lot of my time and really destroyed my self-esteem and my ability to function. The more I ruminated about it and fought it, the harder it came back. Thankfully due to my profession it was easy to get into contact with a psychiatrist after I learned not to be ashamed of my illness. I was put on a regimen of medication and ultimately adopted more healthy patterns such as a stable sleep schedule, exercise, proper eating, and I taught myself how to recognize the signs of stress. Having OCD taught me to take better care of my mental health and to put it ahead of all else, including performance.”*

**Appendix P**

## Mediated contact video transcript

I always felt that I was in the wrong body. That the person I was looking at in the mirror was not me. I felt helpless. It was something I couldn't control. Imagine your whole life feeling trapped inside your body. Feeling imprisoned in your body and unable to get out of it. My name is Leah and I am a transgender woman. I was born in the body of a boy and there was always a conflict between my body and my mind. I could not accept myself as a man, not even before puberty. I used to wait for the house to be empty to go through my sister or my mother's clothes put them on and just look at myself in the mirror. I come from a very conservative family and a conservative society that is not accepting of who I am. I spent my whole life fighting who I was. I went to great lengths doing that and I even tried when I became an adult, to kill Leah. I tried so hard to kill Leah, but I couldn't because that meant jumping off a balcony. I wanted to kill myself, and that's when I realized that I actually love life, that I wanted to live, not the life that my family imposed on me, but rather the life that I wanted to live. That's when I decided to leave my parents' home and decided to be myself. In or out of Beirut, and all over Lebanon, we have a problem moving around. If we are not worried about society then we are worried about checkpoints. I have not done anything against the law, and yet when I cross a checkpoint I get so scared. I get so worried about the officer asking for my identity card. He can either arrest me and take me to prison or simply harass me.

Ghassan: *"It's hard for those who know this double personality, two persons in one"*.

Leah: *"I am no longer two persons, I am one"*

Ghassan: *"According to whom? It's still very difficult for me to accept that."*

Leah *“Yes I know, it’s been only three year.”*

I have diplomas, I am educated, and I have been teaching for ten years. I am a graphic designer and a photographer, and I have supposedly built myself a career but I found it very hard to work anywhere. We are not asking the government to help us find jobs, we are just asking for protection from discrimination. I have nothing against sex workers if this is really what a woman wants, but I have a problem when a transgender woman is obliged to be a sex worker because that’s the only job she can get. Maybe she wants to do something else, be a chef or something, but she can’t because they won’t allow her to work. I just want to have a normal life and be a productive member of this society like everyone else. What do trans people want in general? They just want people to allow them to be themselves, to come out from the prison in which they live, that is their body, out of that and into freedom.

Link to the video: <https://www.youtube.com/watch?v=9JZGa5MGEpk&t=82s>

## Appendix Q

### No-contact control video transcript

If you know an older left-handed person, chances are they had to learn to write or eat with their right hand. And in many parts of the world, it's still common practice to force children to use their "proper" hand. Even the word for right also means correct or good, not just in English, but many other languages, too. But if being left-handed is so wrong, then why does it happen in the first place? Today, about 1/10 of the world's population are left-handed. Archeological evidence shows that it's been that way for as long as 500,000 years, with about 10% of human remains showing the associated differences in arm length and bone density, and some ancient tools and artifacts showing evidence of left-hand use. And despite what many may think, handedness is not a choice. It can be predicted even before birth based on the fetus' position in the womb. So, if handedness is inborn, does that mean it's genetic? Well, yes and no. Identical twins, who have the same genes, can have different dominant hands. In fact, this happens as often as it does with any other sibling pair. But the chances of being right or left-handed are determined by the handedness of your parents in surprisingly consistent ratios. If your father was left-handed but your mother was right-handed, you have a 17% chance of being born left-handed, while two righties will have a left-handed child only 10% of the time. Handedness seems to be determined by a roll of the dice, but the odds are set by your genes. All of this implies there's a reason that evolution has produced this small proportion of lefties, and maintained it over the course of millennia. And while there have been several theories attempting to explain why handedness exists in the first place, or why most people are right-handed, a recent mathematical model suggests that the actual ratio reflects a balance between competitive and cooperative pressures on

human evolution. The benefits of being left-handed are clearest in activities involving an opponent, like combat or competitive sports. For example, about 50% of top hitters in baseball have been left-handed. Why? Think of it as a surprise advantage. Because lefties are a minority to begin with, both right-handed and left-handed competitors will spend most of their time encountering and practicing against righties. So when the two face each other, the left-hander will be better prepared against this right-handed opponent, while the righty will be thrown off. This fighting hypothesis, where an imbalance in the population results in an advantage for left-handed fighters or athletes, is an example of negative frequency-dependent selection. But according to the principles of evolution, groups that have a relative advantage tend to grow until that advantage disappears. If people were only fighting and competing throughout human evolution, natural selection would lead to more lefties being the ones that made it until there were so many of them, that it was no longer a rare asset. So in a purely competitive world, 50% of the population would be left-handed. But human evolution has been shaped by cooperation, as well as competition. And cooperative pressure pushes handedness distribution in the opposite direction. In golf, where performance doesn't depend on the opponent, only 4% of top players are left-handed, an example of the wider phenomenon of tool sharing. Just as young potential golfers can more easily find a set of right-handed clubs, many of the important instruments that have shaped society were designed for the right-handed majority. Because lefties are worse at using these tools, and suffer from higher accident rates, they would be less successful in a purely cooperative world, eventually disappearing from the population. So by correctly predicting the distribution of left-handed people in the general population, as well as matching data from various sports, the model indicates that the persistence of lefties as a small but stable minority reflects an equilibrium that comes from competitive and cooperative effects playing out

simultaneously over time. And the most intriguing thing is what the numbers can tell us about various populations. From the skewed distribution of pawedness in cooperative animals, to the slightly larger percentage of lefties in competitive hunter-gatherer societies, we may even find that the answers to some puzzles of early human evolution are already in our hands.

Link to the video: <https://www.youtube.com/watch?v=TGLYcYcm2FM&t=70s>

**Appendix R**

## Progress rate of incomplete responses

		Section	Frequency	Percent
Percent	2	Q1 Nationality	6	3.2
progress	4	Q2 Years lived	2	1.1
	8	Q3 Age	1	.5
	10	Q5 Sexual orient.	4	2.2
	12	Information letter	51	27.4
	14	Consent form	6	3.2
	16	First study prompt	3	1.6
	27	Values list	18	9.7
	29	SA essays	51	27.4
	43	Contact videos	18	9.7
	47	Contact questions	8	4.3
	53	Second study prompt	1	.5
	55	TG women prompt	5	2.7
	57	Feelings thermometer	3	1.6
	59	Behavioral tendencies	1	.5
	61	Perceived threat	1	.5
	63	RWA	1	.5
	69	SDO	1	.5
	76	Demographics	1	.5
	86	Probing	1	.5
	94	Consent	3	1.6
	Total		186	100.0