

THE GENDER CONFIDENCE GAP:
A LIFE COURSE AND INTERSECTIONAL APPROACH

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Abstract

The confidence gap is the well-documented phenomenon that women are less self-confident than men. I consider the patterns of the gap across the life course and social categories of race to test theories of the gap. I adopt an intersectional and life course approach to test nature versus nurture theories of the gap. Analyzing data from the three-wave MIDUS, I provide evidence that the gap remains consistent across the life course (age groups) and race categories. I show that the gap is most significant among working-age groups and that education has a positive impact on self-confidence that is more significant for females. These findings suggest that self-confidence is not simply driven by genetics. The significant effects of age, race, and the interplay between race and the life course suggest it is created by cultural socialization and experiences. I discuss how the gap exacerbates the wage gap and mental health gap.

Keywords: self-confidence, intersectionality, life course, gender, age, race

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Introduction

The possibility that non-cognitive phenomena could shape socioeconomic outcomes on a scale equal or greater to that of cognitive abilities generated considerable intellectual vibrancy and theoretical commotion in the first decade of the twenty-first century (Ahammer, Lackner, and Voigt 2019; Risse, Farrell, and Fry 2018). Indeed, weaving together otherwise divergent research strands and loosely shared agendas, the reflexive engagement of researchers studying this possibility involved an intellectual itinerary focused on teasing out how life trajectories under exploration may themselves mutate and reorganize, in qualitatively consequential ways, based on non-cognitive psychological characteristics such as self-confidence, self-esteem and other non-cognitive characteristics shaping self-beliefs and self-views (Ahammer et al. 2019; Bénabou and Tirole 2002; Compte and Postlewaite 2004; Filippin and Paccagnella 2012; Judge, Hurst, and Simon 2009; Keller 2010; Risse et al. 2018).

Indeed, the preliminary yet significant interest in the intuitive link between non-cognitive psychological characteristics and socioeconomic outcomes eventually became stabilized due to a widespread and abiding commitment to investigating the ways in which alternative life trajectories could generate when two individuals endowed with equal cognitive ability made diverging educational choices and investments in human capital acquisition as a direct outcome of having unequal non-cognitive characteristics such as a noticeable difference in their level of self-confidence (Ahammer et al. 2019; Bénabou and Tirole 2002; Compte and Postlewaite 2004; Filippin and Paccagnella 2012; Judge et al. 2009; Keller 2010; Risse et al. 2018).

Empirical entry points into the question of why self-confidence matters thus formulated and had ample researchers largely measuring self-confidence with self-ratings and self-evaluations which are, by definition, subjective. Researchers especially favoured measuring self-

confidence using indicators of self-esteem and self-efficacy for, researchers argued, self-esteem is fixed in one's view of their value and self-worth, while self-efficacy communicates an individual's assessment of their ability to navigate difficulties and overcome setbacks (Bandura 1997; Rosenberg 1965; Wolak 2020).

Accordingly, self-confidence generally refers to one's belief in one's worth and odds of success, and in this sense, may be characterized as a combination of self-esteem and self-efficacy (Greenacre, Tung, and Chapman 2014; Wolak 2020). Hence, all empirical measurements of self-confidence lay on the same conceptual ground for all measurements coincide with a general interest in how individuals view their ability to accomplish their goals and whether individuals identify with a sense of agency, assertiveness, competitiveness, and personal power (Martin and Phillips 2017).

Thus, the foundational arguments of early researchers forged an empirical focus into the manifold ways—extant, latent, anticipated and imagined— an individual's level of self-confidence could shape their life trajectory by increasing or attenuating their motivation, improving or impairing their performance and demonstrating or hiding their competence (Ahammer et al. 2019; Bénabou and Tirole 2002; Compte and Postlewaite 2004; Heckman et al. 2006; Judge and Hurst 2007; Kay and Shipman 2014).

Indeed, a review of Bénabou and Tirole's (2002) key definitional framing of self-confidence identifies three elemental benefits tied to being self-confident. First, self-confidence is associated with a positive self-image, and there is substantial utility in thinking well of oneself (Bénabou and Tirole 2002). Second, self-confidence is a trait that convinces others of one's competence and skills, and this is essential to realizing positive organizational outcomes (Bénabou and Tirole 2002). Third, self-confidence increases one's belief in one's capacities and

skills even if they remain untested, and this in turn elicits a strong sense of volunteerism and leadership as well as a wish to achieve one's goals (Bénabou and Tirole 2002).

Enlarging on the empirically founded certainty that self-confidence is beneficial, researchers systematically demonstrate the importance and consequences of being self-confident. But one specific concern continues to crop up in their investigations: gender membership influences an individual's level of self-confidence (Bleidorn et al. 2016; Kamas and Preston 2012; Kay and Shipman 2014; Martin and Phillips 2017; Niederle and Versterlund 2007; Wolak 2020). For example, a voluminous number of studies have since reiterated Hogan's (1978) key finding that men's self-estimates of their general intelligence tend to be significantly greater than women's (Visser, Ashton, and Vernon 2008).

A more recent test of children's ideas about brilliance by Bian et al. (2017) has further documented that girls are appreciably less prone to associate brilliance with their own gender as compared to their male counterparts. Providing a rationale, Smith and Huntoon (2014) document that girls and women are restrained by a modesty norm that encourages them to have a moderate opinion of themselves and reject their accomplishments and role in affecting success while accepting blame for failures and drawbacks (Lindeman, Durik, and Dooley 2019).

As it were, the link between gender and self-confidence continues to haunt and animate explorations into self-confidence to date. This has led scholars to document a gender gap in self-confidence directly, systematically, and reflexively on a global scale (Bleidorn et al. 2016; Costa, Terracciano, and McCrae 2001). Indeed, even as debates rage regarding how best to measure self-confidence, the link between gender and self-confidence may be to all intents and purposes universally documented (Bleidorn et al. 2016; Costa et al. 2001).

The gender confidence gap as a pancultural phenomenon has been famously and precisely crystallized in Bleidorn et al. 's (2016) publication which has tested a sample of almost one million participants across cultures to effectively capture the all-pervasiveness of the gender confidence gap. Bleidorn et al. 's (2016) publication redrew the contours of explorations into the gender confidence gap and further led to other terrains of conceptual experimentation. For instance, feminist researchers such as Gill and Orgad (2015:330) began to understand the self-confidence deficit among women as “a set of internally focussed discursive formations and individualised strategies of psychic labour geared towards the production of self-belief in girls and women”.

Conforming to their thread of argumentation, Sterling et al. 's, (2020) powerful study puts into clear relief the ways in which gender and self-confidence are linked to produce destructive outcomes for women. Specifically, they find that cultural beliefs depicting men as better suited to STEM than women led to a female confidence challenge in career fitness that detrimented the pay of equally (or more) qualified women (Sterling et al. 2020).

Thus, whatever their differences of conceptual parameters, measure and methodology, most researchers investigating the link between self-confidence and socioeconomic outcomes rest their studies upon two underlying assumptions: a) self-confidence is in uneven supply between men and women and b) the gender disparity in self-confidence may exacerbate other gender inequalities (Ahammer et al. 2019; Bénabou and Tirole 2002; Compte and Postlewaite 2004; Judge et al. 2009; Keller 2010; Risse et al. 2018).

Following the literature, theorization on the gender confidence gap has matured greatly. However, recently, the demonstrated link between gender and self-confidence has been called

into question with commentators arguing that there are no gender differences in self-confidence (Guillen 2018; Hart 2019; Thomson 2018).

Within the emergent literature, the empirical patterns of the gender confidence gap are contradicted and viewed as part of a myth that seeks to pathologize self-doubt in women (Elting 2022). To this end, researchers of this habit of mind argue that women are just as self-confident as their male counterparts, but their self-confidence does not translate into influence as it does for men but rather backlash (Guillen 2018). While it is found in the wide body of scholarly literature that women experience backlash for appearing self-confident, it is equally true that women are less self-confident compared to their male peers (Bleidorn et al. 2016; Guillen 2018; Kamas and Preston 2012; Kay and Shipman 2014; Martin and Phillips 2017; Niederle and Versterlund 2007; Wolak 2020).

Therefore, as the veracity of the gender confidence gap has been undermined with greater or lesser degrees of coherence to stitch together a patchwork quilt of theoretical differentiation, there is a revitalized and basic concern for researchers to explore and re-establish the broader social, temporal, and cultural configurations that produce a gender confidence gap that may be wholly mutable (Bleidorn et al. 2016).

Hence, this thesis is devoted to a systematic exploration of the theories, biological and sociocultural, to unearth the alchemy behind the empirical patterns of the gender confidence gap over the life span (Costa et al. 2001). There are three guiding purposes of this thesis. Specifically, Chapter 1 will set up the literature against which our quantitative analysis will take place.

First, this thesis will document the empirical patterns of the gender confidence gap. To this end, Chapter 1 will demonstrate the patterns of the gender confidence gap across age and

across racial groups. In this way, Chapter 1 offers a solid foundation on the ways in which the gender confidence gap has been studied to point out a strong need to explain the gender confidence gap beyond gender membership.

Indeed, what has remained conspicuously absent in the body of scholarly literature is a presentation of the key sources driving the gender confidence gap in the form of an encompassing theoretical synthesis. Hence, Chapter 1 will also organize what scholars have identified are the mechanisms of the gender confidence gap into three main theories. In so doing, Chapter 1 provides a theoretical synthesis of the a) biological predictors which include genetic determinants b) the cultural/socialization predictors which include determinants such as parenting, culture and race and c) the experiential predictors which include determinants such as exposure to discrimination, experience of low wage, and experience of mental health challenges.

Given the potential that differential sources between men and women produce gendered self-confidence trajectories, Chapter 2 will prescribe a life course and intersectional approach as a powerful theoretical antidote to then-productive studies on the gender confidence gap. Hence, Chapter 2 will be dedicated to discussing our life course and intersectional approach and how we test our life course and intersectional approach.

In Chapter 2, we elaborate on the key findings from our regression analyses by first describing the empirical patterns found and then by providing figures and tables. After discussing and providing visualizations of the empirical patterns of the gender confidence gap across the life span (age), life course (age groups), race categories, gendered race categories (intersectionality) and educational attainment, we proceed to the third goal of our thesis.

Chapter 3 will consider the implications of the gender confidence gap. Importantly, instead of a focus on why self-confidence matters and the consequences of low confidence,

Chapter 3 focuses on why the gender confidence gap matters, that is, the consequences of gender inequalities in self-confidence. Specifically, Chapter 3 demonstrates how the gender confidence gap may help institute and support the gender wage gap and the gender gap in mental well-being. We provide results from our regression analysis in the form of a discussion and table to capture the ways in which the gender confidence gap exacerbates the gender wage gap and the gender gap in mental well-being respectively.

Deciphering the patterns, sources and consequences of the gender confidence gap is indeed an essential task for critical research. Therefore, following reinvigorated efforts to explore the gender confidence gap anew, this thesis offers a powerful new conceptual tool through which to investigate the empirical patterns of the gender confidence gap across educational level (which we use as an indicator for experience), racial categories (which we use as indicator for culture/socialization) and over time. Thus, this thesis plans to test a life course and intersectional approach to the gender confidence gap.

To date, investigations devoted to the gender confidence gap have been impressively expanded to improve analytical precision and to rest ongoing arguments on intellectual common ground. However, despite evidence of an all-pervasive gender confidence gap that is patterned by age, educational levels and race, a conceptual framework through which to decipher the gender confidence gap's evolving patterns is absent. This lends itself to a number of consequential limitations, missing analytical connections, and blind spots that critically compromise a researcher's ability to grasp the sources and consequences of the gender confidence gap.

Hence, a life course and intersectional perspective represents compelling and judicious grounds on which the horizons for investigations in the gender confidence gap may today be

broadened in response to the variegated challenges of deciphering the reconstitution of the gender confidence gap across contexts as well as over time. To this end, a life course and intersectional approach to the gender confidence gap provides fertile ground in which to form testable hypotheses concerning what drives the gender confidence gap and its potential changes in magnitude and size across cultures and contexts and over time.

Indeed, it is well understood that the extent to which an individual can adjust to life course changes varies along key social divisions of race, social class, and gender that may further interlock (Settersten 2003). Following the tenets of the life course approach and intersectionality, this study aims to demonstrate and elaborate on the basic dynamic of the confidence gap over the lifespan and as a function of social categories that may interact. A life course and intersectional perspective thus affirms two intentions.

First, a life course perspective allows us to investigate the continuity and variation in the confidence gap over time. Second, an intersectional perspective allows us to provide an intersectional critique of then-productive studies to the gender confidence gap as well as consider how self-confidence is nurtured or diminished in individuals from multiply oppressed and marginalized groups. Hence, this thesis may be characterized as intersectional work for it complicates the empirical patterns of the confidence gap by describing how social categories interact to form differential self-confidence trajectories.

From this point of view, a life course and intersectional perspective offers powerful analytical tools of theorization, investigation, and critique to document and explain the gender confidence gap along dimensions of diversity and over the life span.

Importantly, the findings in this thesis concern gender, age, race, and educational status, although this thesis recognizes that other social categories may play a singular or intersectional

role in the development of the gender self-confidence gap. Much remains to be investigated in this respect.

Altogether, a life course and intersectional perspective stands in stark contrast to presently influential strands of theorizing on the gender confidence gap for it can expose partial, and incomplete efforts to decipher the empirical patterns of the gender confidence gap over time and across social categories. Indeed, a life course and intersectional perspective is committed to an explicit discussion of the ways in which the gender confidence gap is ineluctably determined by social categories to correct a gap in the literature that sees these categories of analysis and their intersection go under-researched.

To explore the gender confidence gap over the life course and across social categories and their interaction, this thesis will analyze publicly available data from the three-wave Midlife in the United States Series (MIDUS). Analyzed by a multidisciplinary lineup of scholars exploring the aging process with a bio-psycho-social perspective, the MIDUS study has produced a national probability sample of American adults between the ages of 24 to 74 ($N = 3,487$) at three time periods: 1995-1996, 2004-2009 and 2013-2017. These representative panel data are highly suitable and beneficial for this study's purposes. Not only do these data allow us to posit generalizable findings, but these data also allow us to map individuals' self-confidence over time. Hence, the use of MIDUS data allows this thesis to test what may underlie the gender confidence gap.

More broadly, by using panel data (which is ideal to observe age trends and chart trajectories over time), this study is better equipped to posit a relationship between environmental influences as well as genetic influences on the gender confidence gap. Specifically, we are better able to determine whether the gender confidence gap is driven by sex

or gendered norms by drawing inferences from our regression analyses. To this end, our conclusion will summarize and reiterate the key findings from our regression analyses and submit our recommendations for future research.

Ultimately, this thesis extends scholarly knowledge on the determinants of high self-confidence and low self-confidence and furthermore identifies what engenders differential patterns of self-confidence within groups and between groups in the form of a theoretical synthesis. Against this background, this thesis develops an intersectional and life course approach to the gender confidence gap and defends its effectiveness at eliciting a more theoretically precise and contextually nuanced understanding of the gender confidence gap which is all important to diagnosing both the causes of the gender confidence gap as well as the symptoms of the gender confidence gap.

Chapter One

Patterns and theories of the gender confidence gap

One of the most productive findings of gender research focusing on gender gaps is that women systematically provide less positive accounts of their own performance and abilities relative to their equally performing male counterparts (Bleidorn et al. 2016; Exley and Kessler 2019). To this end, what has been categorically demonstrated across divergent study designs, cohorts, samples, and measures is that self-confidence tends to be in unequal supply between men and women, with men tending to have higher self-confidence than their female counterparts (Bleidorn et al. 2016).

The rationale for this expected finding has been developing for more than forty years, and indeed, based on established findings, social scientists as a rule of thumb hypothesize that women will report and/or demonstrate lower self-confidence than their male counterparts.

To this end, the gender confidence gap has been amply studied. An almost exclusive interest in the explanatory power of gender in relation to individual differences in self-confidence has characterized the attention of researchers studying self-confidence (Barrick and Mount 1991; Twenge and Campbell 2001). But, although the gender confidence gap is one of the most well-documented phenomena in gender research, there remain important contributions to make in the literature.

Indeed, more recently, there has been a shift from a demonstration of the ways in which gender is critically implicated in individuals' development of self-confidence to a demand to investigate the ways in which the female confidence challenge may be exacerbated by other categories of analysis such as gender discrimination, poverty, social class, race, ethnicity and so on (Cheryan and Markus 2020).

Hence, the goal of Chapter 1 is to document the diverse empirical patterns of the gender confidence gap to provide a broad context from which to proceed to a life course and intersectional approach in the following chapter, Chapter 2. Importantly, this chapter describes the empirical patterns of the gender confidence gap across the life course (age groups), and social categories (racial groups and gendered race). Our literature review is limited to these categories of analysis although other intersecting categories are of vital relevance. To this end, Chapter 1 is organized as follows.

First, this chapter documents the relationship between gender and self-confidence. Particularly, here, we consider the ways in which the size of the gender confidence gap may vary as a function of age. We find a large volume of studies documenting that the gender confidence gap manifests in adolescence, persists throughout adulthood, and steadily narrows over the life span, that is, with age. In so doing, we also introduce the ways in which research on the gender gap in confidence tended to settle its analyses on Western industrialized samples.

What is more, we show two other general patterns we tease out from the literature: a) the gender confidence gap manifests across divergent measures and this supports findings that document the gender confidence gap cross-culturally and b) the role of race in the gender confidence gap is apparent although not extensively researched in the body of literature (Cheryan and Markus 2020; Livingston, Rosette, and Washington 2012; Toosi et al. 2019).

Concerning the former, we establish that across cultures, the gender confidence gap becomes pronounced at puberty, a stage in which cultural forces and biological changes interface to influence a young person's decision-making and actions (Bleidorn et al. 2016; McLean and Anderson 2009). Concerning the latter, we demonstrate the ways in which the gender confidence gap may be moderated by race.

Indeed, in Chapter 1, we follow studies of researchers documenting racial inequalities in self-confidence to report a stream of findings suggesting that bias against self-confident women may be more apparent for white women than black women (Livingston et al. 2012). What is more, we report findings that suggest that black women are more self-confident than white women (Livingston et al. 2012). Further, we report that there is a self-confidence shortage in both Asian/Asian American men and women, with Asian/Asian American women being more affected (Toosi et al. 2019).

In this way, Chapter 1 systematically assembles seminal studies and paradigmatic accounts that document the diverse patterns of the gender confidence gap across the life course (age groups), across racial groups and across the gendered race (the interaction of gender and race). In so doing, we present theoretical assumptions that continue to underpin and set up current investigations on the gender confidence gap while pointing out blind spots in the body of scholarly literature. Thus, Chapter 1 begins to underscore the effectiveness of a life course and intersectional approach which is discussed at length in Chapter 2.

Patterns of the gender confidence gap

The gender confidence gap is documented across the life span.

The relationship between gender and self-confidence has been documented cross-culturally although data collection and rationales to explain the gender confidence gap have largely found their basis in samples from Western industrialized countries (Bleidorn et al. 2016). Specifically, patterns of low self-confidence among girls and women have been well established in the United States using different data and methods.

For example, in the US, nationally representative surveys in terms of race as well as geographic distribution treating the possibility of gender variations in confidence during

adolescence and adulthood document that the gender confidence gap breaks out at puberty and abides throughout the lifespan (Kay, Shipman, and Riley 2018). Importantly, researchers find no demonstrable differences in self-confidence between boys and girls until the age of 12 but following the plunge of self-confidence that characterizes female puberty, the average young girl, by the age of 14, is found to be leagues away from their male counterparts in terms of their supply and development of self-confidence (Kay et al. 2018).

What is more, Zenger and Folkman (2016) use self-assessments to study gender variations in self-confidence among US adults to demonstrate a pattern of rising self-confidence in adolescent males that abruptly halts when males reach their early 40s. To this end, their 40s signal the beginning of a midlife decline in self-confidence that is modest when contrasted with the descent of females' self-confidence during puberty (Zenger and Folkman 2016). The mid-50s, however, signals a significant resurgence of male self-confidence (Zenger and Folkman 2016).

By notable contrast, US females are documented to begin with considerably less self-confidence than their male counterparts in adolescence and experience a gradual incline in self-confidence that dawns in their mid-20s but terminates in their mid-60s (Zenger and Folkman 2016). Importantly, women's gains in self-confidence remain consistently less than men's throughout the lifespan (Twenge and Campbell 2001; Zenger and Folkman 2016).

Twenge and Campbell's (2001) cross-temporal meta-analysis of US studies also expertly demonstrate that boys tend to draw from greater reserves of self-confidence than girls during adolescence which they categorize as ages 12 through 17. Further, they find that girls experience a reversal of fortune, reviving their childhood self-confidence, as they enter college which is defined as ages 18 through 23 (Twenge and Campbell 2001).

In this way, Zenger and Folkman (2016) are found to replicate Twenge and Campbell's (2001) meta-analytic data, reiterating a pattern in which girls and women experience age-related increases in self-confidence that nonetheless do not parallel the growth of their male counterparts, being instead conspicuously and persistently lower.

Further substantiating meta-analytic findings of a gender confidence gap once more from a US context, Kling et al.'s (1999) analysis of three large nationally representative data sets from the National Center for Education Statistics demonstrate consistent gender differences in self-esteem that are sympathetic to males.

Indeed, their findings, which stem from a sample of roughly 48 000 Americans between the ages of 15 to 32 years old, accords with Zenger and Folkman's (2016) findings as well as Twenge and Campbell's (2001) for all three breakthroughs are testimony to age-related gender differences in self-confidence that are favourably disposed to males, but eventually favourable to women albeit not to the same extent as males.

Thus, the data demonstrates that the gender confidence gap breaks out at adolescence, but the data is also hopeful—women's self-confidence does rise over the life span (Kay, Shipman, and Riley 2018; Twenge and Campbell 2001; Zenger and Folkman 2016). Importantly, the research on the link between gender, age and self-confidence consistently suggests that women's age-related increases in self-confidence do not compare to what men experience (Twenge and Campbell 2001; Zenger and Folkman 2016).

To a large extent, these studies, by investigating samples replete with individuals of different ages, provide better representation of the lifetime prevalence of gender disparities in self-confidence albeit with the use of strictly Western industrialized samples. Ergo, the anticipation of a gender confidence gap over the lifespan that favours boys and men while

disadvantaging girls and women came to be virtually axiomatic among social scientists, and this gave way to an explosion of interest that afforded exceptional prominence to the empirical patterns of the gender confidence gap in adulthood.

The gender confidence gap is salient in adulthood.

In what follows, we assemble findings on the gender confidence gap in adulthood to emphasize how the gender confidence gap progressed from a link that once needed to be mined to findings characterized by impressive consistency to one of the most well-documented findings in gender research (Bleidorn et al. 2016).

For instance, Reuben et al.'s (2012) seminal analysis of data from the 2008 Chicago-Templeton MBA Longitudinal Study (CTMLS) finds that even in a case of overestimation among both US male and female participants, men will overestimate their past performance to a larger extent than females. Reuben et al.'s (2012) analysis, being longitudinal in design, is to this end one among many analyses endorsing the potential causal link between being male and being likely to overestimate performance.

Further, demonstrating a preponderance of female self-effacement among a sample of more than four thousand US respondents, Exley and Kessler (2019) test whether gender differences in self-evaluations hold true in private, that is, in the absence of economic return and other incentives to self-promote. To this end, Exley and Kessler (2019) repeat their experiment over five waves and reliably demonstrate statistically significant gender differences in self-promotion. Specifically, they find that male respondents tend to inflate their self-evaluations and self-promote more than female respondents even in the absence of concomitant self-confidence incentives.

On a parallel note, Kay and Shipman's (2014) reporting of the gender confidence gap, based on a sample of US business school students, document that male participants initiate salary negotiations four times as often than female participants. What is more, when female participants do negotiate, they ask for 30 percent less money than men and are unlikely to self-promote even when they are informed of their absolute and relative performance (Kay and Shipman 2014).

Chen and Moons' (2015) experimental study of a large, racially heterogeneous sample of close to four hundred US male and female undergraduates further documents that women tend to avoid male-dominated domains such as science, technology, engineering, and mathematics (STEM) fields because they expect to lack the power to influence others in male-dominated contexts.

In their study, self-confidence is measured by one crucial item posed as the following: "I would be able to get others to listen to what I say" (Chen and Moons 2015). To this end, Chen and Moons' (2015) findings are viewed to be generalizable given their sample, and consistent with past research demonstrating the devaluation of women in male-dominated domains (e.g., Davies et al. 2002, Moss-Racusin et al. 2012, and Woodcock et al. 2012).

What is more, Papyrina, Strebel, and Robertson (2021), following their analysis of the US Job Outlook 2018 Survey by the National Association of Colleges and Employers, find that among their sample of eight-hundred men and women, men report higher confidence than women when assessing their problem-solving, analytical/quantitative, technical, and computer skills.

Papyrina et al.'s (2021) study is one among many studies which replicate the finding that professional confidence in STEM is appreciably higher for men (e.g., Grunspan et al. 2016). Indeed, further demonstrating the impressive consistency of this finding, Ehrlinger et al.'s (2017)

seminal investigation of two-hundred and sixty-nine US college students' perceptions of the prototypical individual in computer science and engineering reiterates a pattern in which females are generally less self-confident about their intellectual abilities than males and feel less like computer science and engineering prototypes than males.

Another example of data on the gender confidence gap being anchored in Western industrialized countries comes from a study by Howe-Walsh and Turnbull (2016) which involved in-depth interviews of twenty United Kingdom female faculty members in science and technology. Asking evaluative questions to draw out how respondents viewed themselves, Howe-Walsh and Turnbull (2016) document one major theme in their study: accomplished female faculty members tend to doubt themselves and experience an inability to internalize their achievements, rather attributing their successes to luck instead of ability.

Visser et al.'s (2008) study further reiterates a pattern of female self-doubt in the literature. Indeed, Visser et al.'s (2008) study, which unfolds in a Canadian context, investigates the degree to which self-estimated abilities (measured with a self-rating scale) can be predicted by participant sex. To this end, their nationally representative sample of two-hundred Canadians participants indeed found sex differences in self-estimated abilities: female participants demonstrated a smaller degree of overestimation of their abilities than their male counterparts (Visser et al. 2008).

Against a New Zealand context, Kirkwood's (2009) semi-structured interview of fifty entrepreneurs also documents that male participants tend to have higher self-confidence than female participants. Importantly, although their finding, like Howe-Walsh and Turnbull's (2016), is not generalizable due to their study designs. However, it is consistent with results of prior

research demonstrating that women may relate less to entrepreneurship than men because of a lack of self-confidence.

Returning to the demonstrably large US empirical base, Grunspan et al.'s (2016) data of three different iterations of one introductory undergraduate biology class in a US university (n = 196, 759, and 760, respectively) suggests that not only do female students underestimate their abilities, but male students underestimate the abilities of their female peers too, and this diminishes female students' self-confidence to persist in STEM fields.

Research on the gender confidence gap thus documents a harmful pattern whereby men are more likely to promote and exaggerate their abilities in comparison to their female counterparts and hence reap all self-confidence's concomitant benefits on socioeconomic outcomes. To this end, our discussion also highlights that research on the gender confidence gap generally did not stray past Western industrialized samples. We further discuss these critical gaps in the literature in Chapter 2.

In what follows, we illustrate two other general patterns we tease out from the literature: a) the gender confidence gap manifests cross-culturally and b) race may impact self-confidence although the role of race has not yet been extensively tested in the body of empirical literature (Bleidorn et al. 2016; Livingston et al. 2012; Toosi et al. 2019).

Concerning the first pattern mentioned, we reiterate the findings of key researchers who helped establish that across cultures, the gender confidence gap may be observed (e.g., Bleidorn et al. 2016; Costa et al. 2001; Guimond et al. 2007). Concerning the second pattern, we discuss studies that have interrogated the ways in which gender and race may interact to establish gendered racial inequalities in self-confidence (e.g., Livingston et al. 2012; Toosi et al. 2019).

The gender confidence gap is a cross-cultural phenomenon.

Only recently, as late as 2016, did researchers conduct a large-scale cross-cultural examination of gender and age differences in self-perceptions. To this end, Bleidorn et al. (2016) are credited with being pioneers in research on gender and age differences in self-esteem past Western industrialized countries. Indeed, with their publication, Bleidorn et al. (2016) successfully extended the admittedly narrow empirical base and demonstrated that the gender gap in self-confidence may not be a Western idiosyncrasy, but a devastatingly pancultural phenomenon.

Indeed, Bleidorn et al. (2016) were the first to empirically test gender, age, and Age x Gender effects on self-esteem and demonstrate the generalizability of such effects with a representative Internet sample of 985,937 participants across forty-eight nations.

Providing the first large-scale cross-cultural examination of gender and age differences in self-esteem, they test data from the July 1999 to December 2009 Gosling–Potter Internet Personality Project and find significant gender confidence gaps across the lifespan in which male respondents consistently report appreciably higher levels of self-esteem than female respondents (Bleidorn et al. 2016). Importantly, Bleidorn et al.’s (2016) publication helped establish that across cultures, the gender confidence gap becomes pronounced at puberty, and that age-related increases in self-esteem are detectable in both genders from late adolescence to middle adulthood (Bleidorn et al. 2016).

However, despite broad cross-cultural similarities in age trends, the cultures included in their investigation differed significantly in the magnitude of gender, age, and Gender x Age effects on self-esteem (Bleidorn et al. 2016). To this end, Bleidorn et al.’s (2016) meta-analytic data provides a strong empirical entry point to study and test the ways in which the magnitude of

gender, age, and Gender x Age effects on self-esteem are systematically related to and varied by socioeconomic, gender equality, sociodemographic, and cultural value indicators.

The cross-cultural patterns of the gender confidence gap found by Bleidorn et al. (2016) have been further endorsed by the influential contributions of earlier scholars too albeit to a lesser degree. For instance, Costa et al. (2001) secondary analyses of Revised NEO Personality Inventory data from twenty-six unique cultures provides cross-cultural evidence of self-reported gender stereotypes that are pancultural.

Specifically illustrating the pancultural nature of the gender confidence gap, Costa et al. (2001) demonstrate that across the twenty-six cultures they tested, female respondents reported themselves to be higher in Neuroticism, Agreeableness, Warmth, and Openness to Feelings, which according to research by Cheng (2002) may predict low self-confidence. Likewise, male respondents reported themselves to be higher in Assertiveness and Openness to Ideas which may predict high self-confidence according to Cheng (2002) (Costa et al. 2001).

Further suggesting that the gender confidence gap is cross-cultural is Guimond et al.'s (2007) cross-cultural study of almost one thousand male and female university students from the countries of France, the Netherlands, the United States and Malaysia. Their study, which tests the role of social comparison processes as a critical contextual variable that determines gender differences in self-construals finds that across cultural contexts, female respondents tend to enter a self-stereotyping process in which they describe themselves as insecure because they stereotype their ingroup, women, as insecure (Guimond et al. 2007). Conversely, they find that because male respondents do not stereotype themselves as insecure, they do not demonstrate a tendency to self-report being insecure (Guimond et al. 2007).

Further extending the cultural base on which research on the gender confidence gap has been historically conducted, Andersen et al. (2013) explore the relationship between gender, age and self-confidence in four cultural contexts in India, two of which are matrilineal, and two of which are patriarchal. They find that in the matrilineal society, boys and girls are equally likely to choose to compete at any age group, but in the patriarchal society, by the age of 15, boys exhibit a stronger tendency to volunteer to compete in competitions (Andersen et al. 2013).

Altogether, the concrete contributions of Costa et al. (2001), Guimond et al. (2007), Andersen et al. (2013) and especially Bleidorn et al. (2016) hold key implications for future investigations. For one, their research prescribes an urgent need to detangle the sources that are responsible for the cross-cultural similarities in the overall pattern of gender differences in self-confidence from the sources that are responsible for the cross-cultural differences.

Second, their empirical support for a pancultural gender confidence gap has important theoretical implications for strong universal explanations that emphasize the relevance of cross-cultural universal over culture-specific influences and mechanisms.

Third, their cross-cultural research encourages more cross-cultural research to further postulate the robustness and generalizability of their findings as well to challenge and complicate key theories critiquing and refuting the extant patterns of the gender confidence gap.

Indeed, before these scholars' key publications, the extent to which findings collected in Western industrialized countries linking gender and self-confidence were generalizable to individuals in other countries remained ambiguous and unclear. Their data, however, represents a new research background along which researchers' broad assumptions about gender and self-confidence may begin to be empirically tested and defended past Western industrialized countries.

To this end, the cross-cultural findings of these scholars present a coup for the research community committed to investigating the gender confidence gap. Indeed, by performing cross-cultural explorations into the gender confidence gap, these scholars have supplied findings that suggest that the gender confidence gap extends across a diversity of geographical, cultural, and racial contexts.

Altogether, their studies demonstrate a need to refine scholarly understandings of the well-documented empirical patterns of the gender confidence gap for, as Neblett (2019) argued, a diversity-oriented perspective is key to adding nuance to our theorizing psychological phenomena. At a basic level, their studies argue for the need to increase diversity in samples. Livingston, Rosette, and Washington (2012) have already challenged the current body of literature for its almost singular attention to White samples in Western industrialized countries.

In line with a call to make cultural and contextual influences central to examinations of the empirical patterns of the gender confidence gap, we now proceed to assembling those studies that document the intersectional role of gender and race on self-confidence. This is of crucial importance because a slight stream of literature has begun to document that the well-established link between gender and self-confidence may be moderated by race (Livingston et al. 2012; Toosi et al. 2019). Unfortunately, most previous research on gender differences in self-confidence has focused on gender alone without examining the potential moderating influence of race (Toosi et al. 2019).

Nevertheless, the focus here is to assemble key studies that demonstrate the ways in which gendered race may inform prescriptions to be self-confident as well as proscriptions against being self-confident. Particularly, we demonstrate this by discussing studies that are

focused on the complexity of being self-confident as a) a Black woman and Black man and b) an Asian/Asian American woman and Asian/Asian American man.

We consider the self-confidence challenge these racialized groups face in relation to White women and men. In so doing, we report findings illustrating the ways in which race may moderate the gender confidence gap. Importantly, we are limited by the very fact that the potential moderating influence of race on gender differences in self-confidence has been inadequately tested and documented (Livingston et al. 2012; Toosi et al. 2019).

Race, gender, and self-confidence.

Contributing to the literature on gender and race, intersectionality scholars have long shown that racial/ethnic minority women have dissimilar experiences from White women and White men as well as their racial/ethnic minority male counterparts (Cheryan and Rose 2020). Specifically, racial/ethnic minority women may be exposed to more discriminatory experiences than White women, White men, and racial/ethnic minority men, including both sexual and racial harassment.

Hence, based on intersectionality, some researchers have sought to explore the role of gendered race on self-confidence development. For instance, research by Corbin, Smith, and Garcia (2018) and Tribble et al. (2019) document that black women are at risk of unique race- and gender-related biases that encourage them to develop a “strong” attitude. Following this thread of argumentation, a number of researchers have amassed empirical findings that indicate gendered racial socialization patterns in which black girls are raised to be “strong” given the pervasiveness of prejudice and hostility toward Black people in American society (Watson and Hunter 2016).

From this perspective, being strong means being sure of oneself and equipped with psychological resources to resist racism (Watson and Hunter 2016). Being strong may encourage self-confidence development in Black girls to empower them to contest societal oppression and manage encounters with race- and gender-related stressors (Woods-Giscombé 2010).

Indeed, Jones et al.'s (2021) thematic analysis of Black U.S. college women's (n= 220) perceptions of what it means to be "strong" documents that, although Black women are cognizant of the ineluctable fact that their being strong may incite negative reactions from others, they continue to welcome strength as an incontrovertible facet of Black womanhood, equating strength to self-confidence especially in the face of uncertainty. Other scholars with impressive consistency have argued that self-confidence may be prescribed to Black women.

Indeed, being self-confident may be wholly or to some extent congruent with the gender role of Black women (Jones et al., 2021). This is signaled by Livingston et al.'s (2012) finding that strength (which connotes self-confidence) in Black women is not generally met with backlash.

To this end, there are two significant patterns to be teased out from the conspicuously limited empirical literature. First, black women tend to be more self-confident than white women and this may be due in part to gendered racial socialization processes in favour of black female self-confidence and backlash against self-confident white women (Corbin et al. 2018; Livingston et al. 2012; Tribble et al. 2019). Second, black men may be more likely to face backlash for being self-confident than their black female counterparts (Livingston et al. 2012).

We find a handful of studies that provide empirical evidence of a higher level of self-confidence among Black women vis-à-vis their White female counterparts. For example, large-scale nationally representative surveys of US high school students document that Black female

students score highest in self-report measures capturing self-esteem (Bachman et al. 2011).

Another nationally representative survey testing the link between race category and self-esteem in the US finds that in a sample of two thousand women, Black women report at the top of the self-esteem scale, surpassing the scores of White women and Hispanic women (Dreisbach 2017). A recent survey by The Washington Post and the Kaiser Family Foundation further corroborates nascent empirical findings of black women exhibiting higher self-confidence than white women for this survey finds that in a random national sample of close to two thousand adults, Black female participants report significantly greater self-esteem than White female participants (Parker 2012).

Thus, empirical findings suggest that Black women are more self-confident than their White female counterparts. To this end, an argument to explain White women's lesser confidence vis-a-vis Black women's appreciably higher reserves of self-confidence comes from backlash theories which suggest that being self-confident does not accord with the descriptive and prescribed gender roles of White women but rather Black women's (Livingston et al. 2012).

Indeed, Black women are perceived as more masculine than White women, and as an outcome of this, Black women may develop their self-confidence without fearing backlash as White women do (Galinsky, Hall, and Cuddy 2013; Livingston et al. 2012).

One key contribution to the body of literature is Livingston et al.'s (2012) argument that Black women's displays of self-confidence would render treatment typically afforded to self-confident White men. From their perspective, there may be a congruence between the interaction of their social categories and being self-confident (Livingston et al. 2012). This indicates that when Black women experience marginalization and discrimination, it is based on stereotypes

regarding Black women that are distinct from stereotypes about White women (Galinsky et al. 2013).

Providing a rationale from intersectional invisibility theory, Livingston et al. (2012) explain that self-confidence among Black women may be acceptable because the prototypical Black is male, and the prototypical woman White. Therefore, as a wholly nonprototypical member of their racial group as well as their gender group, black women become invisible, and in this way, are insulated from the racial hostilities that may condemn Black men and White women for displaying self-confidence (Livingston et al. 2012). Hence, from this perspective, Black women are not precluded from being self-confident and may, in fact, benefit from a potential moderating influence of race on gender differences in self-confidence (Livingston et al. 2012).

Complicating matters, however, mounting evidence suggests that Black women may encounter backlash when they display self-confidence but perform inadequately (Brescoll, Dawson, and Uhmman 2010). Drawing from Brescoll et al.'s (2010) publication, for example, we view a strong and compelling argument that Black women may face backlash for being self-confident when they commit a competence-related error. Brescoll et al.'s (2010) argument, to this end, states that an error in performance by a Black woman may highlight the incongruence between their social categories (Black and female) and their display of self-confidence.

This being so, another critical gap in the body of literature is the ineluctable fact that studies thus far have failed to test whether Black women encounter the same penalty for competence-related errors that expose their counter-stereotypic behaviour and if so, to what extent (Galinsky et al. 2013; Livingston et al. 2012).

Likewise, whereas agentic behaviour is tolerated in Black women and admired in White men, Black men who exhibit such behaviour are likely to suffer backlash because of prejudices and negative stereotypes depicting Black men as aggressive and threatening (Colley et al. 2019; Livingston et al. 2012).

Livingston et al.,'s (2012) experimental evidence is the first to show that Black male leaders and White female leaders may meet comparable consequences for expressing dominance as opposed to communality: both groups are conferred lower status. Conversely, Black female and White male leaders do not suffer lower status as a result of displaying agency and dominance (Livingston et al. 2012). In fact, prior research reveals that White male leaders' status increases due to their expressing agency (Brescoll et al. 2010).

Altogether, the literature demonstrates a racial pattern whereby Black females may be more self-confident than their White female counterparts. What is more, from the literature, we observe that Black female self-confidence is likely to be described as an acceptable way of behaving compared to Black male self-confidence, which is generally met with negative consequences.

Demonstrating a complicated relationship between being an Asian/Asian American man and being self-confident, Toosi et al. (2019) highlight the intersectional ground Asian/Asian American men walk: behaving with self-confidence may pose a challenge for Asian/Asian American men and present the risk of backlash because Asian American men are stereotyped to be feminine.

To this end, Ghavami and Peplau (2012) analyze descriptors for racial groups and find that assertiveness is typically used to characterize White men, whereas Asian/Asian American men are largely depicted as quiet and shy. Thus, behaving with self-confidence would ultimately

mean engaging in masculine behaviours that may be viewed as incongruous to stereotypes of Asian/Asian American men (Toosi et al., 2019; Galinsky et al. 2013).

Prior research indicates that Asian/Asian American men, compared to White men, deal with stereotypes that portray them as weak and with a lower racial status in American society (Ridgeway 2001). These social factors may render a pattern whereby Asian/Asian American are less likely to develop self-confidence for fear of social penalties ranging from lower pay to less respect, and higher risk of demotion (Brescoll et al. 2012).

To date, however, scarce literature compares the self-confidence of Asian/Asian Americans with White people. Even more limited is a comparison of self-confidence within the Asian/Asian American race category, that is between Asian American men and Asian/Asian American women. What has been mined from the literature is that submissiveness is ascribed to White women and Asian/Asian American women alike (Ghavami and Peplau 2012).

Nevertheless, research reporting on Asian/Asian American male and female self-confidence has largely rendered divergent findings, and this may be attributed to response bias whereby Asians/Asian Americans males and females alike are viewed to provide less positive self-reports in accordance with their cultural values emphasizing modesty and humility (Hofstede and Bond 1988; Toosi et al., 2019).

To this end, the thin racial patterns we have teased out present fertile ground for testable hypotheses concerning the ways in which being an Asian/Asian American male or female complicates self-confidence development. Indeed, altogether, the studies to date may be viewed as demonstrating that Asian/American self-confidence is likely subject to backlash across both genders.

Our review of the literature suggests that the relationship between gendered race and self-confidence has been demonstrated in broad strokes. Indeed, generally, research casted its gaze on one identity category instead of the intersection of identity categories (Toosi et al. 2019). A racialized examination of gender, however, is vital to clarifying how race may moderate the empirical patterns of the gender confidence gap (Toosi et al. 2019). Hence, the studies assembled demonstrate opportunities to study the ways in which self-confidence is shaped by the common structural experiences shared among individuals belonging to the same multiple identity categories.

From the literature, it is clear future researchers should directly explore the possibility that cultural norms shape how women and men respond to expectations about being self-confident, which itself is determined by how their social groups are perceived (Zou and Cheryan 2017). In particular, the experiences of Black people warrant systematic theoretical attention.

Indeed, the additional social identities that individuals may hold are associated with other biases, stereotypes and historical stigma that bring about conditions under which certain groups may exhibit higher, or lower self-confidence than other groups. Hence, it is likely self-confidence is shaped not only by gender but also by social category membership and the interaction of multiple social category memberships.

To this end, what is demonstrated in the literature is that race may moderate the gender confidence gap. Three other patterns may be drawn in the literature: the gender confidence gap remains across a) divergent self-confidence measures, b) across the life course (age groups) and c) across cultures.

Importantly, both men and women report becoming more self-confident over time as they age; the size of the gender gap in confidence may narrow as individuals move along the life

course. Given these empirical patterns, we proceed to reviewing theoretical discussions that may help explain the gender confidence gap.

Theories

The link between gender and self-confidence has received enviable scholarly attention in the last few decades. One key question that has been ventured from observations and findings of cross-cultural gender differences in self-confidence and which continue to be central to aspects of theory, methodology, and concrete research in this field of inquiry is what universal mechanisms are responsible for producing the gender confidence gap on a cross-cultural scale (Bleidorn et al. 2016).

To this end, one of the most essential, if also controversial, implications arriving with the finding that the gender confidence gap may be cross-cultural is the possibility that such universal mechanisms may be purely biological. This may take the form of investigations into a genetic basis of self-confidence.

Within this emergent literature is the quest to causally link genetically based biological processes to individual differences in self-confidence, and such hypotheses have led to the proliferation of divisive debates that have failed to meet and reconcile at a common theoretical ground.

Thus, the literature concerning the determinants of the gender confidence gap is situated in the major, if not paradigmatic, nature versus nurture debate. More generally, the proposal today is to simultaneously interrogate nature (genetics) and nurture (socialization/culture and experience) in relation to individual self-confidence development and, by this means, researchers may reject a once widely prevalent tendency to theorize in separate intellectual containers of nature or nurture.

However, although the literature implicates nature and nurture determinants alike, findings concerned with the impact of potential biological mechanisms remain contradictory (Bleidorn et al. 2016). The currents of debate animating this terrain of inquiry may then illuminate a burgeoning commitment to a sociological conceptual groundwork.

Hence, the goal of this thesis is not to straightforwardly obliterate other researchers' findings as they pertain to the nature (biological) determinants of the gender confidence gap, but to reconsider such hypotheses and rather lend evidence in support of a more sociological line of argumentation on the sources of the gender confidence gap.

Indeed, we do not intend to simply illuminate the revisability of claims espousing the potential of a biological basis, but rather, aim to establish the ways in which a sociological articulation of the key determinants of the gender confidence gap constitute powerful interpretive inroads through which to direct and guide research agendas concerned with what underlies the patterns of the gender confidence gap over the life span.

In this vein, a second major goal of Chapter 1 is to set in motion more sociological explanations of the gender confidence gap. This means presenting arguments that recognize the ways in which environmental factors may trigger the empirical patterns of the gender confidence gap.

To date, we are without a useful theoretical synthesis of the underlying mechanisms and processes instrumentalized in support of the gender confidence gap, much less a sociological one. As such, we now address this conspicuous absence by providing a cohesive basis on which to grasp the gender differences in self-confidence. Importantly, we occupy this research gap by providing a rigorously sociological elucidation of the gender confidence gap for we argue that

such a perspective is explicitly and reflexively attuned to the interplay between social categories and experiences.

Indeed, the salient question investigated here is why girls and women are less self-confident than their male counterparts, that is, what are the key sources driving the gender gap in confidence that have been inherited throughout the decades of research devoted to the investigation of gender differences in self-perceptions. To this end, we address sources that may help render the empirical patterns of the gender confidence gap and organize these sources into three main theories.

First, we interrogate genetic theories belonging to the nature class of theories. This class of theories is interested in how biological factors such as genetic factors, physiological reactivity, hormonal influences, and evolutionary influences contribute to the development of personality traits and attitudes (McLean and Anderson 2009). Our key focus is on studies which have submitted the possibility of genetic influences on self-confidence.

We investigate the role of genetic influences with our regression analyses to follow in Chapter 2. Indeed, this is worthwhile given that self-esteem is viewed to have a genetic basis (Greenacre et al. 2014). Accordingly, given the contributions of self-esteem to feelings of self-confidence, testing whether self-confidence similarly has a genetic basis will allow us to better engage in the debate on the determinants of the gender confidence gap.

Second, we develop a culture/socialization theory to explain the gender confidence gap between men and women. The key predictors we review here are parenting, culture and race. First, we discuss the ways in which parenting styles (paternal or maternal) may be associated with gender differences in self-confidence. Next, we consider the consequences of gendered racial socialization for girls and women on the empirical patterns of the gender confidence gap

(Mckenzie 2020). Indeed, given the proposal that race may moderate gender differences in self-confidence, we discuss how gendered racial socialization may explain gendered and racial inequalities in self-confidence (Livingston et al. 2012; Toosi et al. 2019). Hence, this line of reasoning may further explain the empirical patterns observed in the racial comparative studies assembled in Chapter 1.

Third, we submit an experiential theory to explain the gender confidence gap. We specifically zoom into adulthood for we argue that this life stage is characterized by a high density of differential experiences between men and women across education and work that may aggregate to form fertile ground for a female confidence shortage. Indeed, we follow empirical patterns suggesting that inequality is more active in adulthood to argue that experiences in adulthood shape the salience of the gender confidence gap during this life stage. To this end, it is documented that women tend to be more exposed to instances of discrimination, lower income, and everyday stress in comparison to their male counterparts (Kim and Park 2018; Risse et al. 2018; Matud 2004). We treat women's experiences of discrimination, low income and mental health challenges as key predictors that frustrate their self-confidence in our experiential theory.

Following our elaboration of these three theories, we discuss gaps we have identified in the body of scholarly literature to date. Specifically, we discuss the gaps associated with an empirical basis developed predominantly on Western industrialized samples. Further, we discuss how research was largely dependent on measures that generally failed to be reflective of the diversity of the population.

After discussing these critical gaps, we proceed to illustrate a way to fill these gaps. We explain how the life course and intersectional approach we develop in this thesis may allow us to test our predictors with different measures of self-confidence to explain the gender confidence

gap more accurately. We argue that findings from such a test would be instrumental to providing insight into the potential role of genetics in driving the gender confidence gap.

Explaining the gender confidence gap

Genetic theories

Studies investigating a potential link between biological mechanisms and gender differences in self-confidence continue, but what remains a thorny and significant challenge for theorists to date is to stabilize the intelligibility of findings (Bleidorn et al. 2016).

Indeed, given the incompleteness, ongoing revisability and contested nature surrounding such claims, there is a considerable lack of evidence substantiating the thesis that women's proneness or vulnerability to a self-confidence shortage is the inevitability of pre-existing and natural differences between them and men (Bleidorn et al. 2016). In fact, although the pervasive question of whether biological factors determine gendered self-confidence trajectories has monopolized the attention of researchers for a relatively substantial amount of time, we have observed few studies that have successfully demonstrated genetic influences driving the gender confidence gap.

To this end, some researchers have managed to demonstrate the influence of genetic factors on personality traits with the use of multivariate twin analyses (Vogler 1985). One key example is Roy et al.'s (1995) multivariate twin analysis of self-esteem. Using a sample of female twin pairs, Roy et al (1995) investigate both genetic influences and environmental influences on self-esteem. To this end, they are among the researchers who have demonstrated that self-esteem is a relatively stable trait with moderate heritability. To date, theirs remains a widely cited finding.

In the same way that Roy et al. (1995) have paradigmatically demonstrated that genetic factors may shape self-esteem, Plomin, Chipuer and Loehlin (1990) have also provided evidence that traits such as neuroticism, self-esteem, and locus of control have a genetic basis.

More recently, McLean and Anderson (2009) in their comprehensive review of studies investigating the etiological factors for anxiety and fear, have proposed that vulnerability factors for anxiety and fear are more heritable among women than men.

From the state of the literature to date, interest in a genetic basis of self-confidence is widespread, but findings demonstrating this are scarce. Taking up the debate in the literature, we will consider whether self-confidence is potentially genetic in nature and to what extent. We do so later in this chapter with our regression analyses.

Indeed, given that studies documenting the empirical patterns of the gender confidence gap by age do not find the gap to be a lifetime phenomenon that is stable and immutable from birth to death, it stands to reason that explanations to decipher the sources of the gender confidence gap will be intensely sociological as opposed to genetic. Indeed, given that the gender confidence gap may be narrowed or widened as opposed to being consistent and stable across the life span, we favour sociological understandings of the gender confidence gap.

Importantly, our coming test of our theories cannot rule out genetic explanations once and for all. However, we can test the argument that the gender confidence gap widens and narrows over the life span. We offer this as an argument against the view that the gender confidence gap is a purely genetic creation.

To this end, the nature of our articulation and explanation of the gender confidence gap will henceforth be sociological for we maintain that a sociological understanding of the gender

confidence gap underlies more productive lines of interpretation on the determinants of the self-confidence gap between men and women.

We now proceed to developing our culture/socialization theory on the sources of the gender confidence gap by reviewing literature documenting the facilitative effect of parenting, culture and race on the gender confidence gap. Here, we specifically set our analytical gaze on the ways in which gendered racial socialization processes as well as intersecting race and gender stereotypes bring about within group and between group differences in self-confidence.

Culture/socialization theories

Our culture/socialization theory on the gender confidence gap endeavors not only to systematically assemble key studies illuminating the ways in which our key predictors of parenting, race, and culture provoke the gender confidence gap, but to critically assess each of these in relation to each other. To this end, the common ground between parenting, culture, and race springs into clear focus in our discussion of gendered racial socialization, which is defined as a form of dual socialization that instructs individuals about gendered racism (Tribble et al. 2019).

On this basis, our culture/socialization theory shines a light on the importance of gendered racial socialization to explain the empirical patterns of the gender confidence gap by race. We particularly focus on gendered racial socialization as it pertains to Black people and Asian/Asian American people.

First, we demonstrate how parenting styles may provoke the gender confidence gap. Second, we highlight the powerful intersectional role of social categories of gender and race (as an indicator of culture) in initiating disparities in self-confidence.

According to the gender confidence gap literature, parenting style may impact the self-esteem of children in ways that persist into adulthood (Pinquart and Gerke 2019). To this end, prior research defines four parenting practices along dimensions of responsiveness/warmth and demandingness/control (Baumrind 1966).

Permissive parenting is characterized by high warmth and low control (Baumrind 1966; Szkody, Steele, and McKinney 2021). Authoritative parenting is demonstrated by a blend of high parental warmth and high control (Baumrind 1966; Szkody et al. 2021). An authoritarian style is characterized by little warmth and high control, and a neglectful style by low warmth and low control (Baumrind 1966; Szkody et al. 2021).

To this end, relationships between parenting styles and gender differences in self-esteem are varied and less conclusive in the literature (Pinquart and Gerke 2019). For example, Patock-Peckham and Morgan-Lopez (2009) report that paternal authoritarian styles trigger decreases in male self-esteem, but that paternal authoritative styles and paternal permissive styles see gains in self-esteem for males and females alike (Pinquart and Gerke 2019). At the same time, McKinney et al.'s (2011) data analysis elicits an opposite pattern whereby paternal authoritative styles only see gains in self-esteem among females (Pinquart and Gerke 2019). To this end, McKinney et al.'s (2011) data analysis and Patock-Peckham and Morgan-Lopez's (2009) data analysis only find common ground in their establishment of a positive link between paternal permissive styles and female self-esteem.

Findings concerning the effect of maternal parenting styles may be slightly more consistent. For instance, researchers have posited that permissive maternal styles negatively impact female self-esteem, but that both permissive maternal styles and authoritative maternal styles may benefit male self-esteem (Pinquart and Gerke 2019).

The limited body of literature submits a potential association between parenting styles and gender differences on self-esteem that requires more testing. Indeed, the predictive power of parenting styles on self-esteem may be characterized as indeterminate to date (Pinquart and Gerke 2019). Despite this, Szkody et al. (2021) tease out explanations on why authoritative parenting styles and authoritarian parenting styles (maternal or paternal) may underlie gendered patterns of self-confidence.

First, authoritative parenting styles (maternal or paternal) tend to bring about gains in female self-esteem for a key element of authoritative parenting is appropriate autonomy granting, which facilitates the development of competence and in turn promotes positive self-view among females (Szkody et al. 2021). Second, across both genders, authoritarian parenting (maternal or paternal) may be negatively associated with self-esteem, and this is directly related to a lack of autonomy granting that is characteristic of this parenting style (Patock-Peckham and Morgan-Lopez 2009; Szkody et al. 2021).

What is more, parenting in general may elicit gender differences in self-confidence for it transmits descriptive and prescriptive gender stereotypes to children. In research, for instance, Ferguson (2017) notes that gender roles for males and females are viewed to be situated along two dimensions: the communal and the agentic.

To this end, girls and women are situated along the communal dimension and hence, socialized to be more caring, nurturing, and focused on others (Ferguson 2017). Boys and men, on the other hand, are situated along the agentic dimension and socialized to display self-assertion, self-confidence, independence, and control (Conway and Vartanian 2000; Ferguson 2017).

In this way, the female self-confidence challenge may be a direct outgrowth of descriptive and prescriptive gender norms precluding women from the agentic dimension which is viewed to help individuals (males) build status by emphasizing self-confident and self-promoting behaviours (Conway and Vartanian 2000; Ferguson 2017).

Lindeman, Durik and Dooley (2019) further identify three mechanisms by which a female shortage in self-confidence is ensured by cultural stereotypes of women. First, a cognitive dissonance mechanism drives the apprehension women feel when they display self-confidence for such a display is viewed as counter-stereotypic and counter-normative female behaviour (Lindeman, Durik, and Dooley 2019; Williams and Tiedens 2016). Second, a stereotype threat mechanism drives the anxiety women feel when they do self-promote for women fear realizing the stereotype that they negotiate poorly or worse than men (Lindeman, Durik, and Dooley 2019; McGlone and Pfister 2015). Third, a backlash avoidance mechanism drives the tension women suffer when they self-promote for women are socialized to associate self-promoting and self-confidence with backlash (Duguid and Thomas-Hunt 2015).

These findings confirm another key point in our culture/socialization theory focusing on norms and stereotypes. Specifically, these findings provide an empirical basis on which to argue that there is pervasive bias against self-confident women that directly contributes to the shortage of self-confidence among women. For instance, studies by Rudman (1998) reiterate that self-promoting White women are met with worse evaluations than self-effacing White women. What is more, self-promotion penalties (backlash effects) are imposed on White women (not White men) even in contexts that require competitiveness for success (Rudman 1998; Rudman and Glick 2001).

Equally, the intersection of gender and race in stereotypes and norms may be key to adding nuance to our explanations. Galinsky et al. (2013), Johnson et al. (2012), and Schug, Alt, and Klauer (2015), for instance, have extended an all-important theoretical imperative to interrogate the ways in which gender stereotypes are superimposed on racial stereotypes such that racial groups are rendered along divergent levels of masculinity and femininity. To this end, Cheryan and Markus (2020) document that self-confidence is associated with Western constructions of masculinity and a lack of self-confidence, that is, modesty, is associated with Western constructions of femininity.

Accordingly, the proposal here is that the intersection of race and gender arranges a continuum of “gender profiles” scaling individuals along Western constructions of masculinity and femininity by race (Toosi et al. 2019). To this end, Toosi et al.’s (2019) incisive continuum is comprised of very masculine (Black men) to somewhat androgynous (Black women and Asian men) to very feminine (Asian women), with White men and women viewed as “moderately” masculine and feminine, respectively, for Whiteness is construed as neutral.

This spectrum of “gender profiles” along which individuals may be placed by race offers predictive power concerning who is more self-confident and who is less self-confident (Toosi et al. 2019). For example, Asian women, being regarded as very feminine, may be predicted to be less self-confident than their White female counterparts who are categorized as only moderately feminine (Ahn et al. 2022; Pyke and Johnson 2003). Further following the continuum, Asian men and Black women, being categorized as somewhat androgynous, would be predicted to be more self-confident than Asian and White women alike, but less self-confident than Black and White men alike.

Hence, the gender confidence gap is not only taught to boys and girls insofar as prescriptive and descriptive stereotypes of Western masculinity and femininity are transmitted through socialization. This spectrum of “gender profiles” indicates that race varies gender stereotypes. Crucially, the gender gap in confidence is not only a matter of gender stereotypes depicting males as masculine (self-confident) and females as feminine (modest) (Cheryan and Markus 2020). Race also makes an appearance in this spectrum as a predictor of the empirical patterns of the gender confidence gap (Toosi et al. 2019). As such, we now demonstrate the ways in which gendered racial socialization may complicate this spectrum and underlie the gender confidence gap.

Given the empirical patterns of the gender confidence gap by race, it is important to investigate the ways in which gendered racial socialization inculcates different messages in racial and gender minorities. Given that gendered racial socialization may help explain how race moderates the patterns of the gender gap in confidence, we discuss the gendered racial socialization messages Asian Americans and Black Americans may experience.

Gendered racial socialization messages transmit messages to individuals with respect to their gendered racial identities (Ahn et al. 2022). Specifically, we consider how normative masculinity and female expectations from Asian cultural factors shape Asian American women and men’s self-confidence.

Studies interrogating the ways in which Asian American men define masculinity have discovered culturally specific Asian American masculinities persisting even in the framework of Western hegemonic masculinity (Shek 2007). To this end, within gender group differences in self-confidence between Asian American men and White men may be explained by gendered racial socialization processes that transmit culturally specific Asian American masculinities to

Asian American men. This refers to a masculinity that does not necessarily encapsulate Western hegemonic masculinity traits such as self-confidence, courage, and dominance, but rather integrates some Western femininity traits particularly humility (Kyler-Yano and Mankowski 2020). Thus, different cultural norms largely uncaptured in measures of self-confidence in prior research may contribute to potentially inaccurate findings that Asian American men are less self-confident than White men.

Gendered racial socialization impacts Asian American females too. Anh et al. (2022), for instance, find that gendered racial socialization for Asian American females is characterized by parental messages teaching their daughters to ignore and accept instances of gendered racial discrimination and to work hard despite injustices. As such, researchers have linked gendered racial socialization messages to Asian American women's reporting a loss of their voice and decreases in their self-confidence levels (Anh et al. 2022; Young, Kim and Golojuch 2020)

But where gendered racial socialization messages have been documented to potentially harm Asian American women's self-confidence, the case may be opposite for Black women (Tribble et al. 2019). For example, studies of Black families reveal that Black parents who have suffered racial discrimination are likely to transmit racial socialization messages to their children to protect them from race-based stressors and discrimination (Smith, Fincham and Beach 2016).

However, self-confidence may not follow the same developmental pattern in Black females as it does in Black males. Specifically, Bowman and Howard (1985) find that Black parents are more likely to transmit cultural pride messages to their daughters than their sons (Tribble et al. 2019). Indeed, research on gendered racial socialization messages by Black parents to their daughters tends to document themes of self-determination, gendered racial pride and empowerment, and career/educational success (Brown et al. 2017). To this end, a path

analysis by Stokes et al. (2020) links gendered racial socialization about pride to positive self-views among Black women.

In this sense, gendered racial socialization constitutes a psychological asset for Black girls for the content of their gendered racial messages tends to emphasize Black girls' strength to rise against daily racism/sexism stressors and accomplish their goals (Brown et al. 2017). Thus, gendered racial socialization may underlie Black women's greater self-confidence compared to women from other race categories including White women.

On the other hand, Tribbe et al. (2019) among others document that Black parents are more likely to emphasize managing gendered racism-related events and vicarious racism to their sons. Indeed, for Black males specifically, gendered racial socialization is viewed as a process that teaches Black males to navigate race-based stressors and injustices (Bowman and Howard 1985; Smith, Fincham and Beach 2016).

It is likely gendered racial socialization for Black males generally functions to neutralize racial hostility because of pervasive prejudices depicting them as threatening and dangerous (Smith, Fincham and Beach 2016). In contrast, the self-confidence of Black women may rise owing to gendered racial socialization messages that, at once, aim to prepare them for bias as well as inculcate cultural pride.

Parenting, race, and culture are thus implicated as separate predictors as well as predictors that may coalesce to institute the gender confidence gap. Indeed, these predictors also form the basis for men and women's differential experiences over the life span. Accordingly, challenges unique to women may also support the empirical patterns of the gender confidence gap.

Hence, we now deflect our attention from the relatively abstract ways in which culture/socialization can explain gender differences in self-confidence and return to a basic link between experience and self-confidence. We proceed to develop our experiential theory to explain the gender confidence gap. The key predictors we review here are experiences at adulthood for we view differential experiences, specifically inequalities primed by gender, to be most apparent in adulthood.

Experiential theories

Our experiential theory on the gender confidence gap seeks to tease out the ways in which women's experiences during adulthood promote the gender confidence gap. Particularly, our experiential theory considers those challenges unique to women in adulthood and which impose deleterious effects on women's self-confidence. Indeed, our experiential theory rests on the idea that the circumstances individuals experience may pose a source of differential challenge and stress because individuals, with regard to their gender and race especially, may have very different experiences within the same role. To this end, we argue that gender inequalities are more active in adulthood, and this triggers the salience of the gender confidence gap between adult men and women.

Specifically, we follow three patterns in gender literature and establish these as our experiential predictors. First, women generally hold a minority/subordinated status and may experience or perceive different forms of discrimination in all aspects of their life including labour market discrimination and limited employment opportunities, ageist attitudes concerning their appearance or sexuality, weight/height discrimination, health care discrimination, sexual harassment among a host of others. (Duncan and Loretto 2004; Hosang and Bhi 2018; Puhl, Andreyeva, and Brownell 2008). Second, women may experience less economic well-being than

men, contending with lower lifetime earnings, earnings growth, wealth, and pension coverage (Bajtelsmit and Bernasek 1996). And third, women are reported to experience more daily stress than men (Matud 2004). Taken together, these experiences, which are viewed to be more salient in adulthood, set the stage for gender asymmetries in self-confidence and hence form our experiential theory. First, we consider the negative association between discrimination and self-confidence.

Theoretical and empirical work demonstrate that perceived gender discrimination negatively harms women's self-views when regarded by women as disapproval messages against them (Kim and Park 2018). Further, empirical literature has largely emphasized that parental, social and cultural preferences for males negatively impact female self-esteem (Kira et al. 2020).

Indeed, Kira et al. (2020) have identified one gender discrimination mechanism that may explain women's self-confidence deficit: consistent exposure to sexist microaggressions in interpersonal interactions as well as consistent exposure to sexist macroaggressions committed by systems or persons may lead women to devalue themselves and members of their gender. To this end, perceiving or experiencing demeaned gender identity status may lead women to internalize gender inferiority and adopt gender stigma which may diminish their self-confidence by negatively shaping their self-beliefs (Kira et al. 2020). This is supported by symbolic interactionism which suggests that individuals tie in the outlooks of others to their self-views by assuming the role of the other and identifying with their outlooks (Cooley 1902; Mead 1934).

To provide an example, Carlin et al.'s (2018) publication finds a salary discrepancy favouring men over equally performing women that increases over time as a function of percentage raises and promotions. From this perspective, women come to receive messages that

their work does not merit the same reward as men's work. Hence, discrimination may widen the gap in work-related self-confidence.

Our experiential theory also submits the importance of an intersectional definition of discrimination to explaining the empirical patterns of the gender confidence gap. This is because women of colour may experience discrimination doubly belonging to two minorities/low status groups: female and a racial minority. For instance, gender differences in pay are found to differ by race. For example, Toosi et al. (2019) report that since 2017, White women in the US are paid 81.3 cents for every 1 dollar White men are paid, while Asian American women are paid 78.4 cents for every 1 dollar their same-race male complements are paid.

Just as women are more likely to experience discrimination, the empirical stress literature suggests that women tend to feel more psychological distress than men daily (Galanakis et al. 2016). For instance, Matud's (2004) analysis of data from the American College Health Association (2018) finds that women report greater contact with stressors ranging from academics, finances, family problems and personal health issues than men.

To this end, the present body of literature finds that stress and the experience of poor mental health among women may drive their diminished learning capacities, emotional exhaustion, increased risk for absenteeism and likelihood of underachievement (Giebels and Janssen 2007). These may contribute to the gender confidence gap by undercutting women's ability to perform tasks well and providing a real basis for their frustrated self-confidence.

Indeed, statistics finding that women are more exposed to stress and mental health challenges and are more frequently diagnosed with mental disorders than men may help explain the gender confidence gap for stress and poor mental health are found to negatively impact

performance, and this may play a direct role in women doubting their abilities and skills (Galanakis et al. 2016; Kucharska 2018).

For instance, being female is associated with higher levels of internalizing symptoms (such as anxiety, depression, somatic complaints, obsession-compulsion, post-traumatic symptoms etc.) (Salavera, Usan, and Teruel 2019). To this end, Salavera et al. (2019) have documented three interrelated aspects of internalizing symptoms that may contribute to women's lack of self-confidence: first, at the cognitive level, women may suffer irrational negative views, considerable inhibition and difficulties in communication. Second, at the physical level, women may be prone to tension symptoms, that is, fears (Salavera et al. 2019). Third, at the behavioural level, women may contend with poor social skills and interactions with others (Salavera et al. 2019). Thus, women with internalizing symptoms may be prone to displays of nervousness, ill-temperedness, and self-pity among others, and these may frustrate social interactions that have the potential to support women's self-confidence development (Salavera et al. 2019).

Mendez, Bozzay and Verona (2021) also find that internalizing disorders may specifically manifest in interpersonal and self-directed aggression in women than men. All these aspects may prevent women from participating in activities that will improve their self-confidence and thus may provide some explanation for the gender confidence gap. Hence, we find that the experience of internalizing problems among women may install several mechanisms for a female self-confidence shortage.

Furthermore, our experiential theory posits that the gender confidence gap may also be explained by the extensive body of research capturing that males tend to experience a wage advantage over females while females tend to experience low-income, blocked from ascending the pay ladder. Here, the body of literature demonstrates that women's earning capacity may be

truncated by institutional factors such as their access to childcare, parental leave, and other policy provisions as well as societal factors including discrimination and societal and cultural norms preferring males over females (Risse et al. 2018).

To this end, economists have also begun to mine the ways in which women's experiences of lower wages than men may stem from heterogeneous behaviours between the genders. For example, Niederle and Vesterlund (2007), Martin and Phillips (2017) and Toosi et al. (2019) among others report that women are less likely than men to engage in risk-tasking, self-promotion, negotiation, and competitive behaviours than men.

Gender-based differentials in earnings, however, may explain gender-based differentials in self-confidence. For example, some empirical findings have demonstrated a relationship between earnings and psychological well-being (Povey, Boreham, and Tomaszewski 2016; Yu and Chen 2016). Women's experience of lower wages and men's experiences of higher wages may be expected to contribute to the latter gender group's higher self-confidence and the former gender group's lack thereof.

Important to note, however, the income and subjective well-being nexus lays on contentious theoretical ground (Povey et al. 2016; Schneider 2016; Yu and Chen 2016). Despite this, some studies may be helpful to link women's experience of lower earnings than men to the gender confidence gap.

Accordingly, we submit studies which view the importance of economic well-being to the development of high self-esteem. For example, a large-scale study looking into the relationship between income and well-being finds that higher income is associated with experiencing less daily sadness (Kushlev, Dunn, and Lucas 2015). A year later, Hudson et al. (2016) interrogated Kushlev et al.'s (2015) finding to confirm that individuals with high income

tend to feel less sadness and worry. Specifically, this income may contribute to inequalities in self-assurance because an individual's income shapes how individuals appraise negative events in their lives (Kushlev et al. 2015).

For instance, women experiencing low income may be at risk of experiencing a lower sense of perceived control over negative events in their lives, and this may diminish their self-efficacy, which is considered to be an indicator of self-confidence (Wolak 2020). Indeed, the experience of low wages among women may make it so women view stressful events with a decreased sense of control and a lack of self-confidence.

In contrast, men, being more likely to experience higher wages than women, may be equally more likely to accumulate positive and controllable life experiences, which buffers them against negative self-related thoughts (Kushlev, Dunn, and Lucas 2015).

Not only do workplaces tend to reward women with less income than men, male-dominated workplaces, in particular, are viewed to be endemic to gender differences in treatment (i.e. sexism, paternalism) and experiences (i.e. pregnancy, child-care demands) (Martin and Phillips 2017). Potentially posing as environments in which women's qualities are descended as men's are ascended, the workplace may encompass lower income opportunities for women that contribute to women's lower confidence indirectly, that is, by telling women they are of lower value than men and directly, that is, by making it harder for women to take care of their needs, indulge in their pastimes and accomplish other goals that may contribute to their personal sense of power.

Our experiential theory posits that women's experience of low income as well as mental health challenges and discrimination may leave their self-confidence development frustrated. Indeed, altogether, we have captured some of the ways in which experiencing

discrimination, experiencing lower income, and experiencing mental health challenges may predispose women to self-doubt. In so doing, we demonstrate these experiential factors to be potential determinants of a gender confidence gap in an encompassing theoretical synthesis.

But despite the many gains that have been made in the literature documenting the gender confidence gap as well as in attempts to explain the gender confidence gap, there remain significant drawbacks and gaps. In the following chapter, we discuss two key gaps in the body of scholarly literature: a) the empirical basis of the gender confidence gap was developed predominantly on Western industrialized samples and b) research was largely dependent on measures that generally failed to be reflective of the diversity of the population.

Chapter Two

A life course and intersectional approach to the gender confidence gap

Research gaps: no research has tested three theories against each other

What is largely observed from the body of scholarly literature on the gender confidence gap is that measures have generally depended on participants' self-reports, which may not render representative findings owing to matters of under- or over-response bias. Also, because of the cross-sectional nature of some studies, only probabilistic relationships may be submitted. But what may be the greatest limitation to date is that most samples in the studies comprising the body of literature have limited and biased representation.

Indeed, explorations into the gender disparity in self-confidence have largely been limited to Western industrialized countries, particularly in the US (Bleidorn et al. 2016). This stands as a major challenge for, following Stamarski and Son Hing's (2015) incisive remark, data on Western industrialized countries accumulated and examined between the period of the mid-1980s to the mid-2010s, for instance, might not be representative of other nations, cultural contexts, and time frames.

Furthermore, within American gender norms is the assumption that men should be assertive, and women self-effacing, but these gender norms are particular to gender roles in America and may not hold in other cultural contexts such as Japan where the expectation to be self-effacing, for instance, is imposed on both genders (Smith and Huntoon 2014). From this perspective, cross-cultural studies are all-important to determine the generalizability of the gender confidence gap (Bleidorn et al. 2016).

A wide expanse of social science knowledge on masculinity (in which the prescription to be self-confident rests) has been lacking in the application of quantitative measures and samples that treat groups other than White/European Americans (Cheryan and Markus 2020; Lu and

Wong 2013). By and large, studies have employed structured quantitative measures to interrogate the self-confidence of men and women, and it is likely that such measures, at worst, fail to capture or, at best, under-detects culturally specific aspects of being self-confident (Kyler-Yano and Mankowski 2020).

For instance, given that Asian American men are found to self-endorse and integrate some characteristics encased in the Western construct of femininity, European American-centric masculinity ideals may weakly resonate among Asian American men (Kyler-Yano and Mankowski 2020). Indeed, as feminist scholars, Cheryan and Markus (2020), paradigmatically argue in their recent work, most studies on masculinity and femininity in the U.S. find their study samples in middle- and upper-class White Americans, and as a result, standard measurements of characteristics (i.e. self-confidence) that are identified along masculinity and femininity dimensions are racialized as White and not relative to different populations, particularly racial minority groups and working-class people (Cheryan and Markus 2020; Kyler-Yano and Mankowski; 2020).

More broadly, Asians/Asian Americans cultural values place heightened value and stakes on holistic integration, that is, acknowledging the importance of positive and negative characteristics alike (Hofstede and Bond 1988; Toosi et al., 2019). From Hofstede and Bond (1988) and Toosi et al. (2019), we hypothesize that Asians/Asian Americans may be confident in their self-beliefs which acknowledge both their strengths and areas of growth. Indeed, we hypothesize that Asian American women and men may be able to maintain high self-confidence, while simultaneously incorporating and accepting negative self-beliefs.

Measures of self-confidence may also have limited cultural range for Black women in particular. For instance, stigma consciousness, the concept dealing with individuals' sensitivity

to discrimination opportunities, may have key implications for Black women's reported feelings of self-confidence particularly when behaviours are employed as indicators of self-confidence (e.g., contributing one's opinions in meetings, physically occupying a space, projecting one's voice, being straightforward and direct in conversation, asserting oneself and endorsing one's own ideas or work) (Hart 2019).

To this end, since the trailblazing work of Bénabou and Tirole (2002), researchers have adopted a definition of self-confidence as being sure of one's self and one's abilities, and though this may potentially resonate to universal proportions, capturing this definition in measures has proved a challenge.

Indeed, some studies in the gender confidence gap use measures of overestimation by deducting participant's actual score from their reported estimated score to reveal a gender confidence gap (Moore and Healy 2008). Other studies have operationalized self-confidence in terms of self-perception accuracy which measures how congruent an individual's self-report is with reports made by others (Herbst 2020). Most studies, however, have measured self-confidence using indicators of self-esteem and self-efficacy.

This is not problematic in itself for Rosenberg (1965) has argued that self-esteem is a non-cognitive characteristic that is related to an individual's self confidence in all aspects of human activity. It is the use of the Rosenberg Self-Esteem Scale (RSES), however, that may obscure actual phenomena.

Self-esteem has been most widely measured using the full RSES, which comprises five negative and five positively worded I-statements concerning an individual's global evaluation of their self-regard (Rosenberg 1965). Chao et al.'s (2017) analysis of the RSES with Black samples, however, finds that the RSES, when used normatively, per its original purpose, is only a

suitable measure for Black individuals with low self-esteem; the scope of the RSES is not applicable to Black samples with high self-esteem.

Hence, the RSES may not reflect the diversity of self-esteem levels within Black groups (Chao et al. 2017). Therefore, questions concerning how well the RSES, which has been developed and standardized with predominantly White samples, diagnose, and capture the unique perspectives of different populations likely abound. Specifically, the cultural homogeneity inherent in the RSES triggers several interrogations into the validity and reliability of the RSES when applied to non-White populations (Chao et al. 2017).

On the other hand, the 10-item General Self-Efficacy Scale, which measures an individual's self-confidence in their ability to take on stressful demands and rise to the occasion, may be a more useful measure (Luszczynska, Scholz and Schwarzer 2005). Indeed, meta-analytic data has confirmed the validity, reliability, and stability of the GSE scale across countries and samples (Luszczynska, Scholz and Schwarzer 2005).

Taken together, our review demonstrates that, whatever their differences of measure, past research has still converged on the finding that gender impacts self-confidence. The gender confidence gap manifests across divergent measures and across measures that may not accurately capture self-confidence for non-White/European populations.

Our theoretical review of the problematic ways in which self-confidence has been measured in past studies submits a need to test the gender confidence gap with better measures of self-confidence. Precisely, our thesis resonates with the social psychological defense that self-reports are key measurement tools given that they function as windows into how individuals view themselves and their social worlds (Pozzebon, Visser, and Bogaert 2012). Indeed, by using

self-report measures, Bleidorn et al. (2016) documented that the gender confidence gap is all pervasive.

Hence, we use three self-report measures of self-confidence and an intersectionality and life course approach to blueprint a way to test three theories of the gender confidence against each other. Indeed, what has not yet been undertaken in the literature is research that has tested culture/socialization theories, experiential theories, and genetic theories against each other. Hence, our thesis adopts an intersectional and life course approach to test these theories with better measures to engage in the nature vs. nurture debate in the determinants of the gender confidence gap.

We demonstrate the ways in which our intersectionality and life course approach to the gender confidence gap is a productive and effective conceptual tool through which to acknowledge how the gender confidence gap may be shaped by age groups (life course), race groups (our indicator for culture/socialization), educational attainment (our indicator for experience) and intersectionality (the interaction between social categories).

We discuss our intersectional and life course approach by first discussing the importance of life course theory and then elaborating on the key role of intersectionality. Following these discussions, we submit our intersectional and life course model of self-confidence by arguing that it is the only viable framework for examining the ways in which gender is a powerful structural determinant of self-confidence that may interact with other structural determinants including age, race, and education to explain the gender confidence gap.

Secondly, we explain how we test our three theories (genetics, socialization/culture, and experience) against each other with a life course and intersectional approach. Hence, we occupy gaps in the literature by adopting a life course and intersectional approach and three self-report

measures of self-confidence to provide the first test of these three theories against each other.

After describing our life course and intersectional approach, we provide a description of our data and provide our key variables used in our regression analyses.

Towards a life course and intersectional approach to the gender confidence gap

A life course approach may be essential to update and revitalize inherited approaches to the gender confidence gap. Pioneered as early as the 1960s but not broadly consolidated as a major research paradigm until the late 1970s, the life course approach helps us test the importance of timing of life course events and role transitions (Elder 1994; Elder 1998).

Indeed, we argue that the paradigmatic theme of timing of life course events and role transitions is key to understanding how the gender confidence gap may be shaped by time (age) as well as timing of environmental influences (Elder 1994). Following Elder's (1994) definitions, we define timing as the age(s) of incidence and duration of a role as well as expectations and beliefs tied to that age.

What is more, we view individuals to construct their life course based on their decisions and actions which are themselves shaped by the accessibility of opportunities and the constraints of culture and social structure (Elder 1994). Furthermore, we understand that individuals make choices on timing of life course events and role transitions (Elder 1998). To this end, a life course approach may be critical to updating investigations on the gender confidence gap as it allows for a fundamental retheorization of the gender confidence gap based on when mechanisms driving the gender confidence gap may manifest.

A life course perspective may thus allow researchers to formulate testable hypotheses concerned with the ways in which age affects the gender confidence gap. Such hypotheses are critical because an accumulation of empirical findings in the literature on cumulative advantage

theory finds that ill-timed or off-timed events, that is, early disadvantages, may render a greater likelihood of encountering unfavorable events over time (Diprete and Eirich 2006).

Accordingly, identifying unfavourable life course events that negatively affect self-confidence and the timing of these events may lead to identifying potential mechanisms that produce self-confidence differentials over time. What is more, it is important to pinpoint when self-confidence is rendered in diverging patterns by gender because minute inequalities in self-confidence at the beginning of the life course may help instill differential human capital accumulation between otherwise equal individuals, informing their socioeconomic outcomes (Filippin and Paccagnella 2012).

Following life course theory, normative life events are viewed to be experienced by most people around a specific age, and this is viewed in cross-cultural proportions (Reitz 2022). Hence, following Reitz's (2022) publication, experiencing these life transitions within an appropriate amount of time (i.e., events such as education-to-work and parenthood) may form the basis of normative self-confidence trajectories. In contrast, non-normative events, such as the experience of discrimination, may derail self-confidence trajectories.

Hence, a life course perspective may render hypotheses concerned with the salience and size of the gender confidence gap at different ages and concerned with the age-graded mechanisms driving the gap. For example, given the continuity characterizing midlife, mechanisms at midlife may engender a gap that is more stable and consistent (Reitz 2022). In contrast, late adulthood, a phase viewed to beget more losses than gains in social roles might be expected to initiate differential losses in self-confidence (Reitz 2022).

To this end, a life course approach to empirical investigations of the gender confidence gap may substantially enhance analytical precision concerning the context of mechanisms by

focusing on life events and timing of life events. Moreover, utilizing a life course approach allows us to delineate the ages at which the gender gap in self-confidence may narrow, widen, or remain consistent.

Equally important is an intersectional approach. The importance of intersectionality as an analytic framework has been demonstrated by the elegantly simple yet far-reaching insight of its creator Crenshaw (1989), who argued that the multiple, intersecting identities of an individual could give way to interlocking processes of injustice with respect to the multiplicity of identities an individual may hold (e.g., race, gender, class, sexual orientation, gender identity, ability, religion etc.) (Ahn et al. 2022).

With respect to the gender confidence gap, intersectionality may pose as an analytic tool that incisively demonstrates how gender norms intersect with other group to shape the confidence gap (Cheryan and Markus 2020). Hence, by adopting an intersectional analytic sensibility, we may pay close attention to the ways in which gender and race may interact to create differential sources of self-confidence between groups and within groups.

To date, women of color are viewed to be largely absent in studies that investigate gender or race (Cheryan and Markus 2020). What is more, the potential intersectional role of gender and race on the gender confidence gap has largely rested on the sidelines of research. We argue that research on the gender confidence gap must strongly resonate with the concerns of intersectionality since intersectionality may provide insight into the ways in which differential self-confidence trajectories may be a function of the interaction of social categories.

Indeed, rather than pursuing, as some studies in the scholarly body of literature have, cultural homogeneity in samples and measurement development that annihilates the different experiences of other groups, we argue that research on the gender confidence should shift its

focus to the ways in which self-confidence trajectories may be realized through intersectional power dynamics.

Further pinning down the methodological inadequacies of research to date, an intersectional perspective is intended to fill in research gaps that have ignored or dismissed the divergent levels of self-confidence between men and women as a direct consequence of intersectional power relations. Indeed, without an intersectional lens, the complexity of the gender confidence gap is obscured.

The dearth of intersectional analysis therefore weakens the project of developing accounts on the gender confidence gap for there can be no critical analysis of the consistency or variability of gender differences in self-confidence across the life span without an understanding of the ways in which self-beliefs and actions depend on systems of oppression that are fundamentally interlocked (Ahn et al. 2022). Thus, we submit the analytical significance of intersectionality in studies on the gender confidence gap.

Altogether, we adopt a life course and intersectional approach to test our theories of the determinants of the gender confidence gap against each other. Our study is then the first to resolve a general tendency in inherited approaches to draw a research compass orbiting one social category (gender) to the invisibility of others.

What distinguishes our newly developed life course and intersectional approach to the gender confidence gap is its goal to maintain maximal reflexivity regarding the diverse patterns of the gender confidence gap across the life course (age groups), race categories, and gendered race categories (intersectionality). To this end, a life course and intersectional perspective may be mutually reinforcing and animate each another in deadly productive ways for it allows us to

test our theories of the determinants of the gender confidence gap more effectively against each other.

In what follows, we explain how we test our three theories (genetics, socialization/culture, and experience) against each other with a life course and intersectional approach. We begin by submitting a description of our data. After providing the key variables used in our regression analyses, we discuss our findings.

Specifically, we use race as an indicator for our culture/socialization factors and test how the gender gap in confidence between men and women may vary across race categories over the lifespan. We use education as an indicator for our experiential factors and test the role of education in shaping gender inequalities in self-confidence over the lifespan. What is more, we also consider whether there is an interaction effect between gender and age groups (life course) that may help explain changes in the gap over time. We further consider whether an interaction effect between gender and race may hold explanatory power.

We argue that an intersectional and life course approach enables us to submit a reflexive elaboration on the sources of the gender confidence gap. To this end, we discuss our results with a view to interrogate the potential role of genetic influences in the empirical patterns of the gender gap in self-confidence.

Our life course and intersectional approach coupled with panel data is a productive methodological pairing because it allows us richness in both descriptive and explanatory categories. To this end, this methodological strategy allows us to visualize (describe) inequalities in self-confidence across the life span (age), life course (age groups), race categories, and gendered race categories (intersectionality) and to explain the potential role of genetics, socialization/culture and/or experience in shaping the gender confidence gap.

In what follows, we begin with a description of our data source. Next, we discuss the key variables used in our regression analysis. Table 1 provides the summary descriptive statistics for all our key variables by gender, that is, male or female status. We then discuss our key findings from our regression analyses and provide figures to visualize our key findings. Our recommendations for future research are provided at end of this chapter.

Data and methods

Our regression analyses use participant data drawn from the Midlife Development in the United States Series (MIDUS) longitudinal study. The MIDUS study is a panel exploration of the effects of social, psychological, and behavioural factors on the mental health and physical health of individuals in early adulthood, midlife and later life.

Indeed, conducted by a multidisciplinary lineup of scholars exploring the aging process with a bio-psycho-social perspective, the MIDUS study has produced representative panel data of U.S adults between the ages of 25–74 years at the first of three waves of data collection. Importantly, the data analyzed in our thesis includes the main respondents ($N = 3,577$), a sample of siblings ($N = 950$) of the main respondents, and a national sample of twin pairs ($N = 1,914$). We hoped that the large sample across racial groups would ensure robust estimations.

To this end, data was collected with self-administered surveys as well as phone interviews at each wave of data collection. The first wave of data collection occurred between 1995 and 1996. The second wave was conducted between 2004 and 2006 and a final wave between 2012 and 2014. Within the MIDUS studies, several sub-projects were also initiated to allow for a more refined examination of its specific study objectives. Altogether, the MIDUS data has been reviewed and approved by the Education and Social/Behavioural Sciences and the Health Sciences Institutional Review Boards at the University of Wisconsin-Madison.

More information on MIDUS methodology and limitations are available to the public at the Inter-university Consortium for Political and Social Research (ICPSR) website (Ryff et al., 2007).

In our view, the MIDUS data is immensely well-suited to testing the importance of socialization/culture predictors, experiential predictors, and genetic predictors in provoking gender variations in self-confidence over the lifespan for several reasons.

Indeed, panel data is collected in the MIDUS study, and this better supports our study's capacity to establish the predictors and consequences of a gender gap in self-confidence over the life span. What is more, given that the current literature comprises mostly cross-sectional studies, using the MIDUS data helps us contribute to the data with panel data.

As such, we are better able to establish temporal precedence between a) our predictors and gendered patterns of self-confidence and b) gendered patterns of self-confidence and gender inequalities such as the gender wage gap and the gender gap in well-being respectively. The latter will be discussed in the next chapter, Chapter 3.

Furthermore, the MIDUS data is representative, and this helps us expand the empirical basis of the gender confidence gap and supports the generalizability of our findings.

Following these benefits, the MIDUS data collection used in our study is high-quality and well-suited to our study objectives. Hence, to consider how our predictors captured in our experiential, culture/socialization and genetic theoretical syntheses drive gender differences in self-confidence, we use responses from the self-administered questionnaires at each wave of the MIDUS. In what follows, we discuss how we measured our key variables. We provide summary statistics of the key variables in our regression analyses by gender after discussing our measures (see Table 1).

Measures

Gender: In this study, gender is treated as a categorical variable and coded in a binary manner of male versus female or man versus woman respectively. As it were, there are limitations to coding gender binarily and this is explicitly demonstrated by Hyde et al. (2019). For instance, by definition, the gender binary allows for only two categories of people, hence excluding transgender and nonbinary experiences (Hyde et al. 2019). Moreover, the gender binary assumes that one's category membership is fixed at birth and stable over time (Hyde et al. 2019).

To this end, some scholars have argued that the terms male and female should be reserved for discussions on biologically based differences, whereas gender should be reserved for differences between women and men that are sociocultural creations (Hyde et al. 2019). Our thesis, however, follows literature on the gender confidence gap using the term gender/sex interchangeably. Accordingly, our thesis exists within the compass of these conceptual limitations. Our operationalize of gender as male versus female or man versus woman respectively is viewed as a necessary element (limitation) to test theories which have largely explained how gender organizes and functions within people's lives in a binary manner. Much remains to be investigated and relieved in this respect.

Self-confidence: As part of the procedures for data collection, participants were asked if they were self-confident in the self-administered surveys in all three waves. To this end, the dependent variable in this study is self-confidence.

We use three questions to measure self-confidence. Our main measure of self-confidence uses the question: "*Self-confidence describes you how well*". For all three waves, this measure was applied. Self-confidence status was indicated by responses of 1 (Not at all), 2 (A little), 3 (Some), and 4 (A lot). Responses are coded in the same way from 1-4.

Our second measure of self-confidence uses the question: “Felt confident frequency (30 days)?”. Importantly, this measure was only applied in the last two waves of the MIDUS. Here, self-confidence status was indicated by responses of 1 (None of the time), 2 (A little of the time), 3 (Some of the time), and 4 (Most of the time). Responses are coded in the same way from 1-4.

Our last measure of self-confidence asked respondents if they “Feel positive/confident about self”. Like our second measure, this measure was only applied in the last two waves of the MIDUS. Responses ranged from 1 (disagree strongly), 2 (disagree somewhat), 3 (disagree strongly), 4 (neither agree nor disagree), 5 (agree a little), 6 (agree somewhat), 7 (agree strongly). Responses are coded in the same way from 1-7.

For all three measures, higher scores indicate higher self-confidence. Indeed, we use three measures to capture how self-confident participants feel more accurately. Indeed, scholars have suggested that various groups perceive self-confidence differently. Hence, it is important that we use more measures to minimize misinterpretations of self-confidence.

There are two significant patterns to note from Table 1 (found below) regarding this variable. In all three waves of data collection, a) males report higher self-confidence than females and b) age positively impacts self-confidence for both males and females.

Educational attainment: To measure respondents’ educational attainment, we use the following question item in the survey: “What is the highest grade of school or year of college you completed? The probe is: Did you receive a degree?” There are 12 response categories: 1 (No school/some grade school 1-6), 2 (Grade/junior high school 7-8), 3 (Some high school 9-12), 4 (GED), 5 (Graduated from high school), 6 (1 to 2 years of college, no degree yet), 7 (3 or more years of college, no degree yet), 8 (Graduated from 2-year college, vocational school or associate degree), 9 (Graduated from a 4- or 5- year college or bachelor’s degree), 10 (Some graduate

school), 11 (Master's degree) and 12 (PH.D., ED.D., MD, DDS, LLB, LLD, JD, or other professional degree). Responses are coded in the same way from 1-12.

Importantly, we use educational attainment as an indicator for experience and test how educational attainment shapes the gender confidence gap.

Wage income: To measure respondents' wage, we use the following question item in the survey "Wages, salaries, and other stipends from all your jobs, including self-employment? Do not include pensions, investments, or any other financial assistance or non-wage income." Response categories were in dollars and began with less than 0 dollars. Every subsequent response category increased with the last response category being \$300,000 or more. Higher scores indicate a higher wage income.

A significant pattern to note from Table 1 regarding this variable is that in all three waves of data collection, a substantial wage gap between male participants and female participants is apparent. Indeed, female participants made exactly 24,222.59 US dollars less than male participants.

Mental health: To measure respondents' self-rated mental health status, we use the following question item in the survey "Would you say your MENTAL OR EMOTIONAL HEALTH is excellent, very good, good, fair, or poor?" Response categories include 1 (poor), 2 (fair), 3 (good), 4 (very good), and 5 (excellent). Responses are coded in the same way from 1 to 5. Higher scores indicate better mental health.

Age: All participants reported on their age. Age is measured in years. Further, we categorize age in groups to facilitate easier interpretation of findings. To this end, the age group variable includes six categories (based on age at the time of the first wave of the MIDUS survey): 20-30 years, 31-40 years, 41-50 years, 51-60 years, 61-70 years, and 71 or more years.

Race: Cultural and racial background is measured using the item that asks, “Which do you feel best describes your racial background?”. The publicly accessible data provides the following response categories: 1 (White), 2 (Black or African American), 3 (American Indian or Alaska Native), 4 (Asian, or Native Hawaiian or Pacific Islander). Based on the information, we chose to code race as 1 = Black, 2 = White, and 3 = Other.

Other controls: To ensure results are robust, our analysis also includes major demographic controls such as gender, age, education, occupation, marital status, wage income, neighborhood, household composition, race, and ethnicity, employment status, experience of discrimination and survey cycle.

Below, in Table 1, we provide summary statistics of our key variables by gender.

Table 1. Summary statistics of key variables in analysis

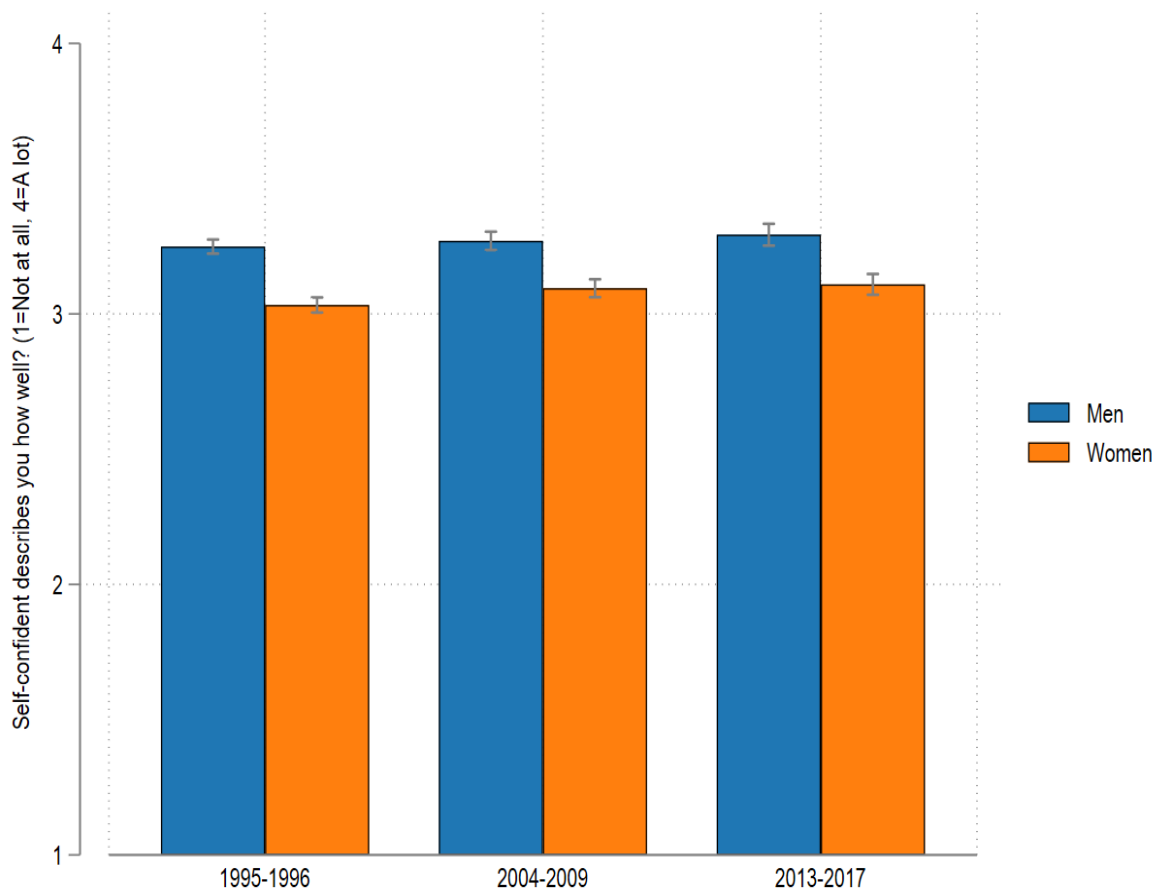
	Male	Female	Total
Self confidence			
Self-confident describes you how well (1-4), 1995-1996	3.25	3.03	3.14
Self-confident describes you how well (1-4), 2004-2009	3.27	3.09	3.17
Self-confident describes you how well (1-4), 2013-2017	3.29	3.11	3.19
Feel confident last 30 days (1-5), 2004-2009	3.85	3.64	3.73
Feel confident last 30 days (1-5), 2013-2017	3.76	3.63	3.69
Feel positive/confident about self (1-7), 2004-2009	6.02	5.85	5.93
Feel positive/confident about self (1-7), 2013-2017	6.02	5.87	5.93
Educational attainment, 1995-1996	7.02	6.54	6.77
Educational attainment, 2004-2009	7.47	6.96	7.20
Educational attainment, 2013-2017	7.80	7.26	7.51
Income, wage	58237.89	34015.30	45515.77
Mental Health (1-4)	3.83	3.72	3.77
Age	46.13	46.61	46.38
White	91%	90%	90%
Black	4%	6%	5%
Other	5%	4%	4%

Findings

We begin with a discussion of our key findings and provide a visualization below.

Figure 1a shows gender differences in self-confidence across the life span in all three waves of data collection using our main measure of self-confidence: “Self-confidence describes you how well”.

Figure 1a. Gender confidence gap when self-confidence is measured as self-confident describes you how well?



We repeat our analysis. To this end, Figure 1b also demonstrates a gender gap in self-confidence, but with another self-confidence measure, “Felt confident frequency (30 days)?” This measure was only incorporated in the last two waves of the MIDUS series. Hence, only two waves of data are depicted.

Figure 1b. Gender confidence gap when self-confidence is measured as feel confident/positive about self

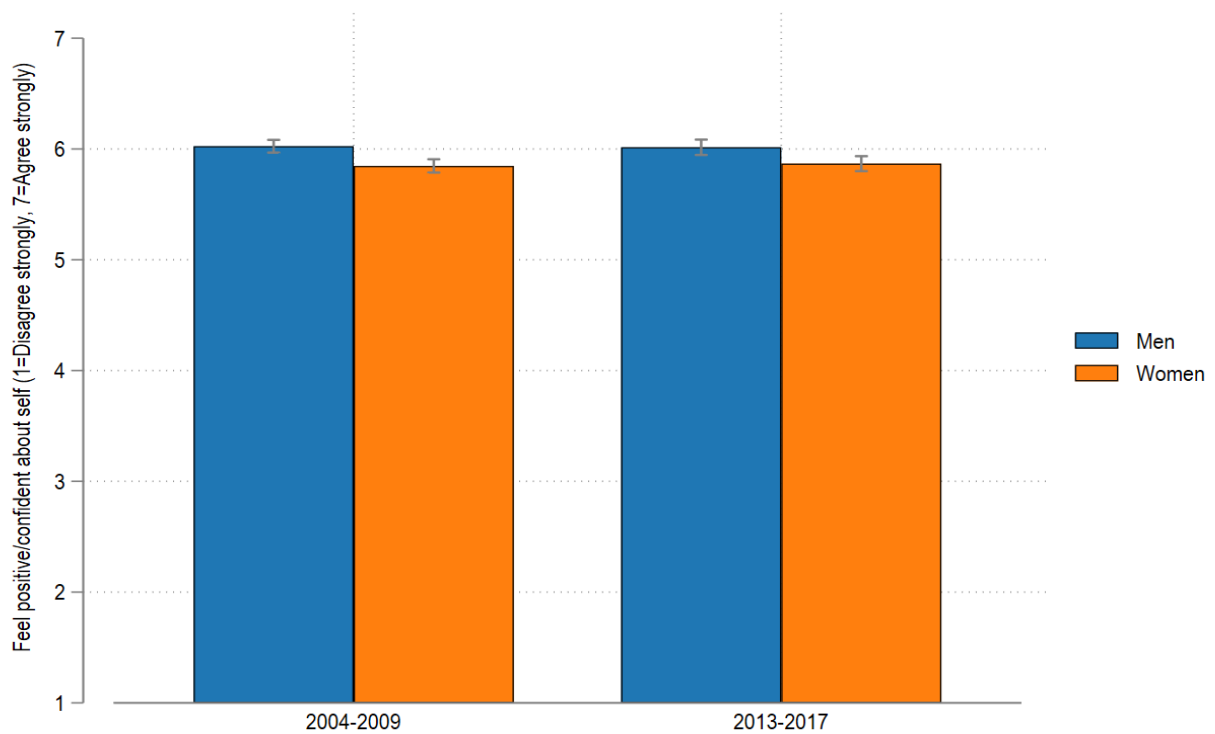
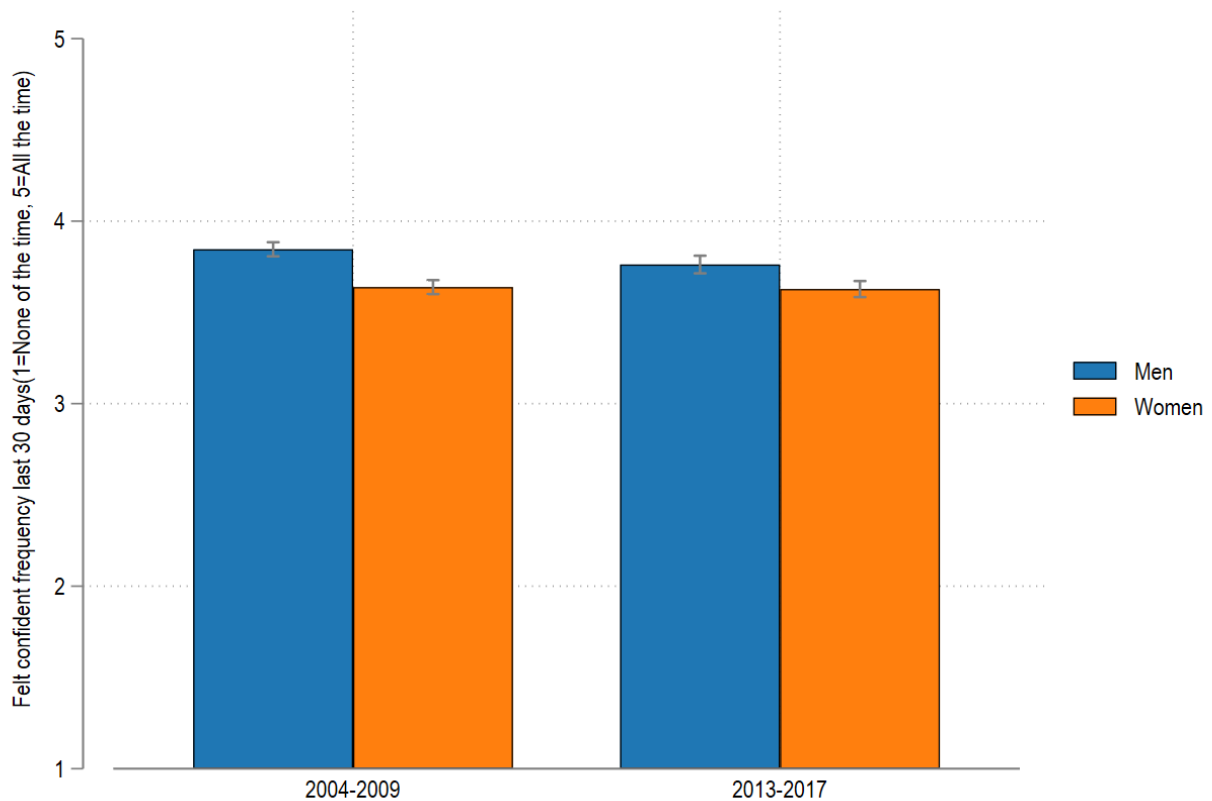


Figure 1c which measures self-confidence as “Feel positive/confident about self” also demonstrates the gender confidence gap using two waves of data collection.

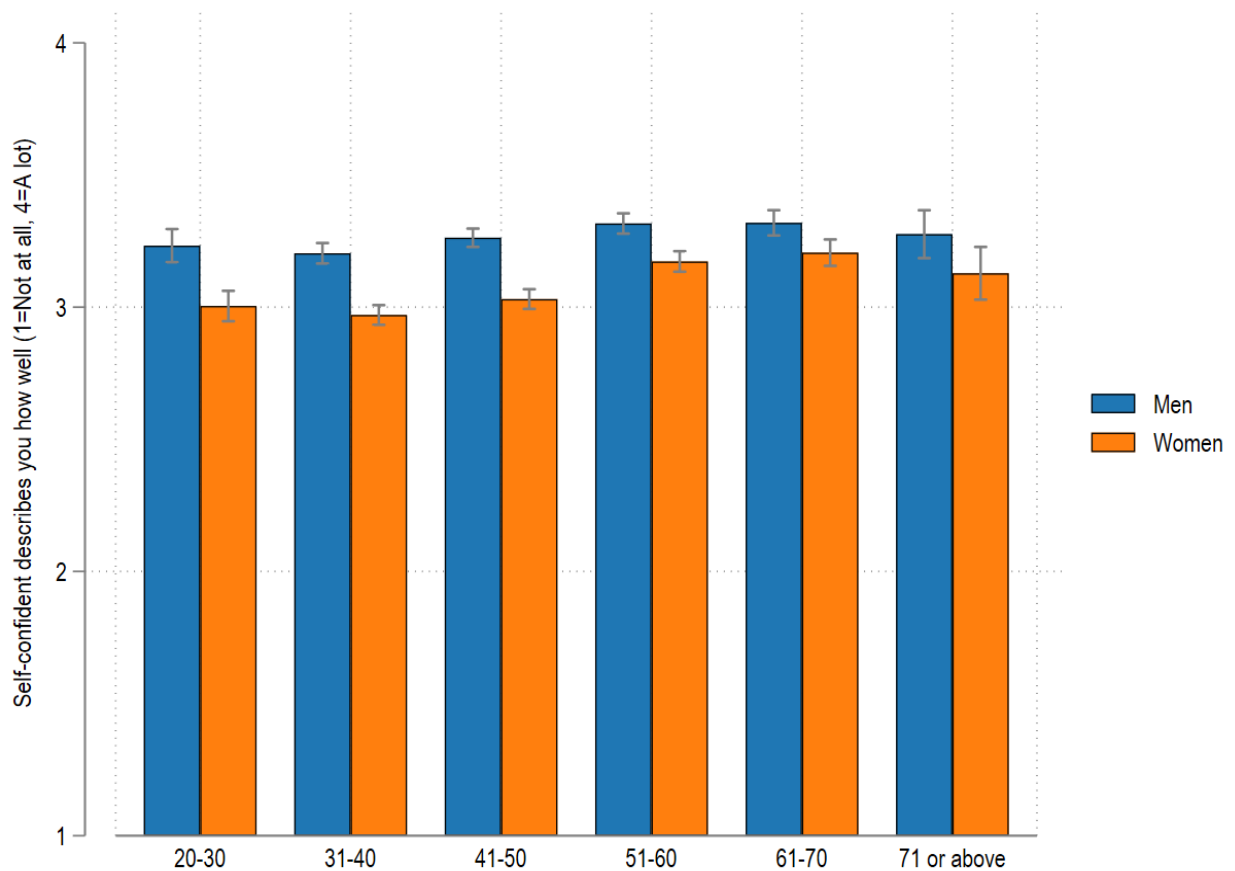
Figure 1c. Gender confidence gap when self-confidence is measured as felt confident last month



One clear pattern is repeated across Figures 1a, 1b and 1c: across all three measures of self-confidence, men are more self-confident than women even as men and women age. Indeed, all three figures, when taken together, provide strong evidence for lower self-confidence among women and a relationship in which being female has a negative impact on self-confidence. This pattern is also expected to hold regardless of age and race category. To this end, we now break down the gender confidence gap by age.

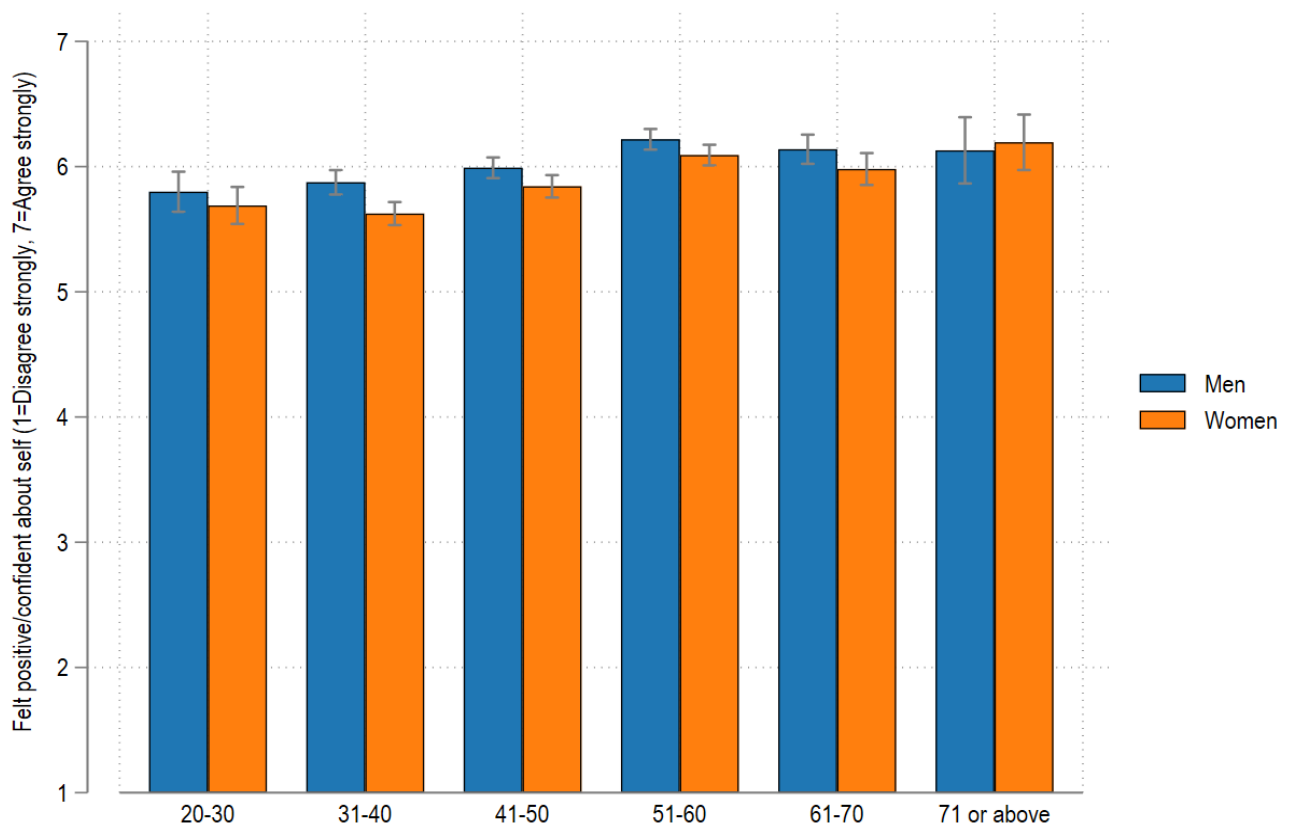
Figure 2a uses our main measure, “Self-confidence describes you how well?” We find that women become more self-confident over time and that the gender confidence gap is similar across age groups.

Figure 2a. Gender confidence gap by age groups when self-confidence is measured as self-confident describes you how well?



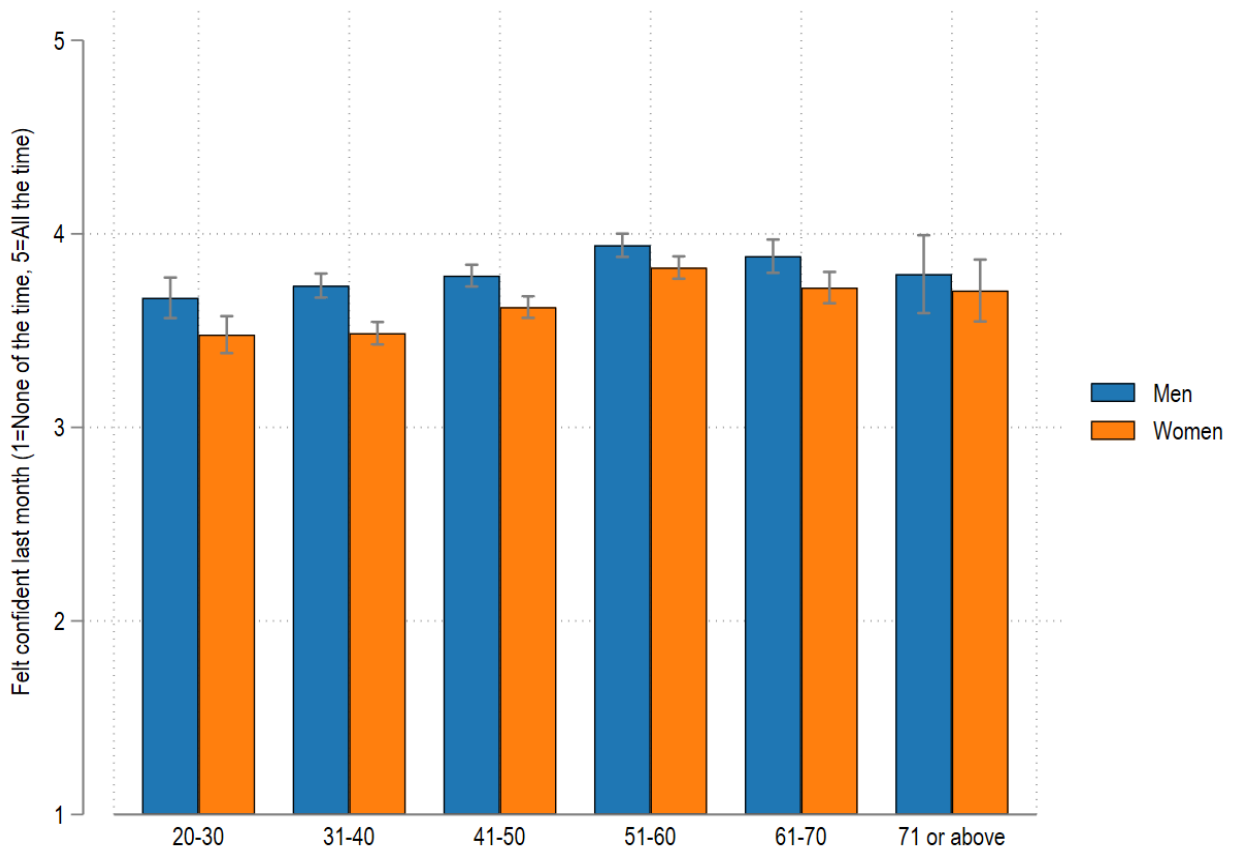
Repeating our analysis, we use a second measure of self-confidence, “Feel positive/confident about self”, and find that Figure 2b manifests a similar pattern to Figure 2a: women become more self-confident over time, and the gender confidence gap is similar across age groups.

Figure 2b. Gender confidence gap by age groups when self-confidence is measured as feel confident/positive about self



When we use a third measure of self-confidence, that is, “Felt confident last month?”, we find the pattern demonstrated in Figures 2a and 2b reiterated. Indeed, Figure 2c demonstrates again that women experience gains in their self-confidence over time (with age) and that the gender confidence gap is consistent across age groups.

Figure 2c. Gender confidence gap by age groups when self-confidence is measured as felt confident last month



Two clear patterns are repeated across Figures 2a, 2b and 2c. First, across all three measures of self-confidence, women are viewed to experience increases in their self-confidence with age.

Secondly, across all three measures of self-confidence, the gender confidence gap is viewed to be

consistent across age groups. To this end, we now consider whether the gender confidence gap will be similarly consistent across race categories. Hence, we will break down the gender confidence gap by race category.

First, we compare racial differences in self-confidence. Consistent with previous research, Figure 3 visualizes the nascent finding that Black people tend to show more confidence than other racial groups. What is unexpected is that Black people also show greater confidence than White people. This warrants further investigation.

Figure 3. Race and self-confidence: black people are more self-confident.

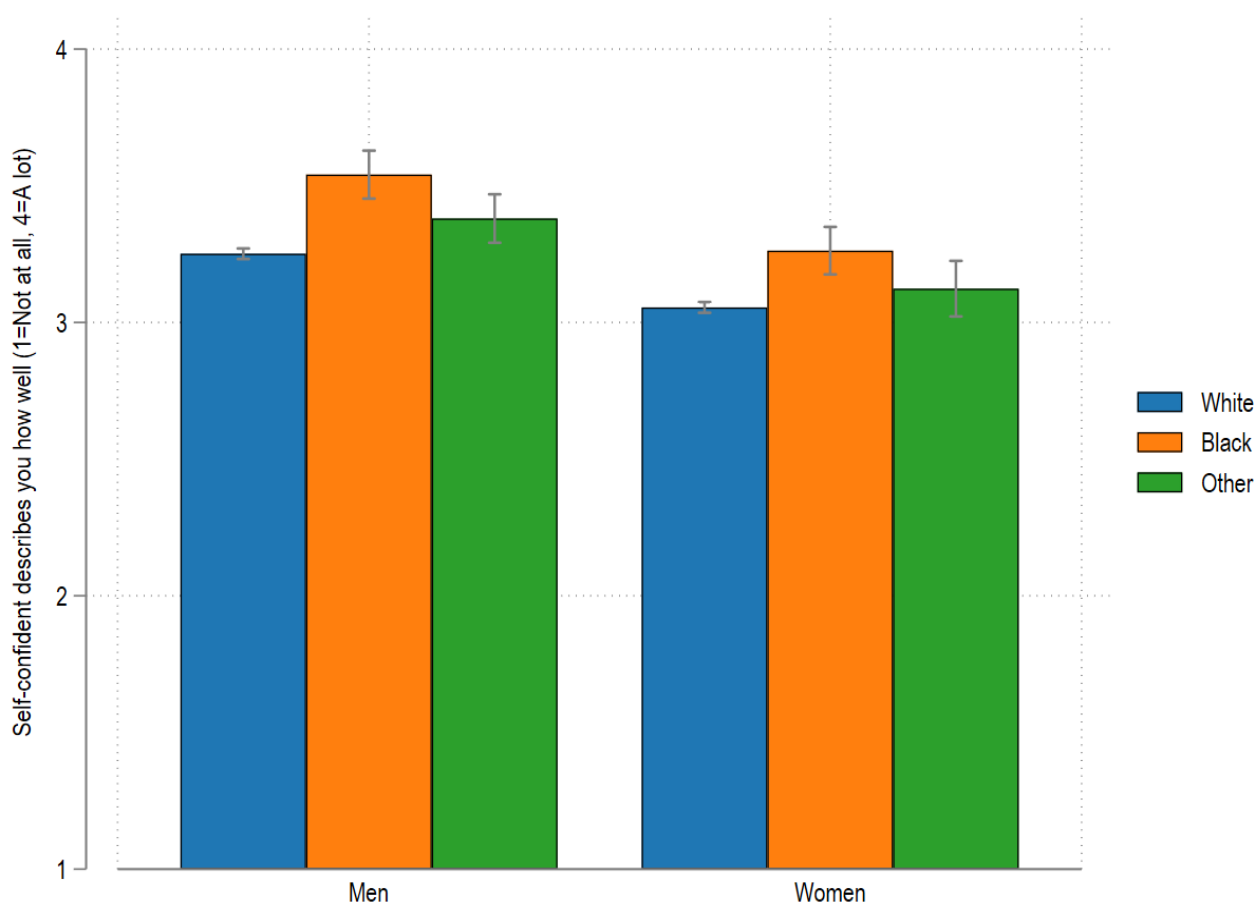
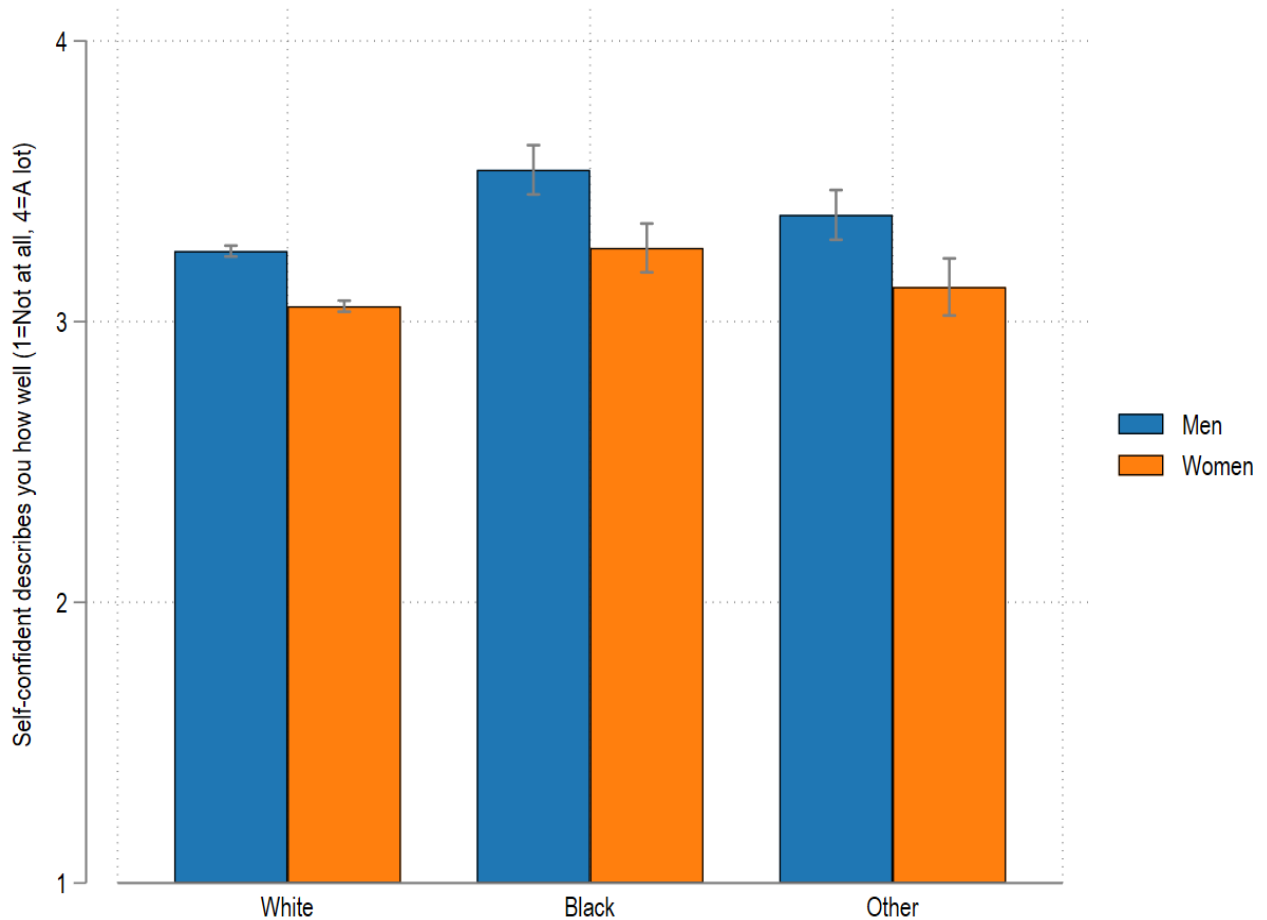


Figure 4a uses our main measure, “Self-confidence describes you how well?” to visualize our finding that race impacts self-confidence but has no bearing on the gender confidence gap. To

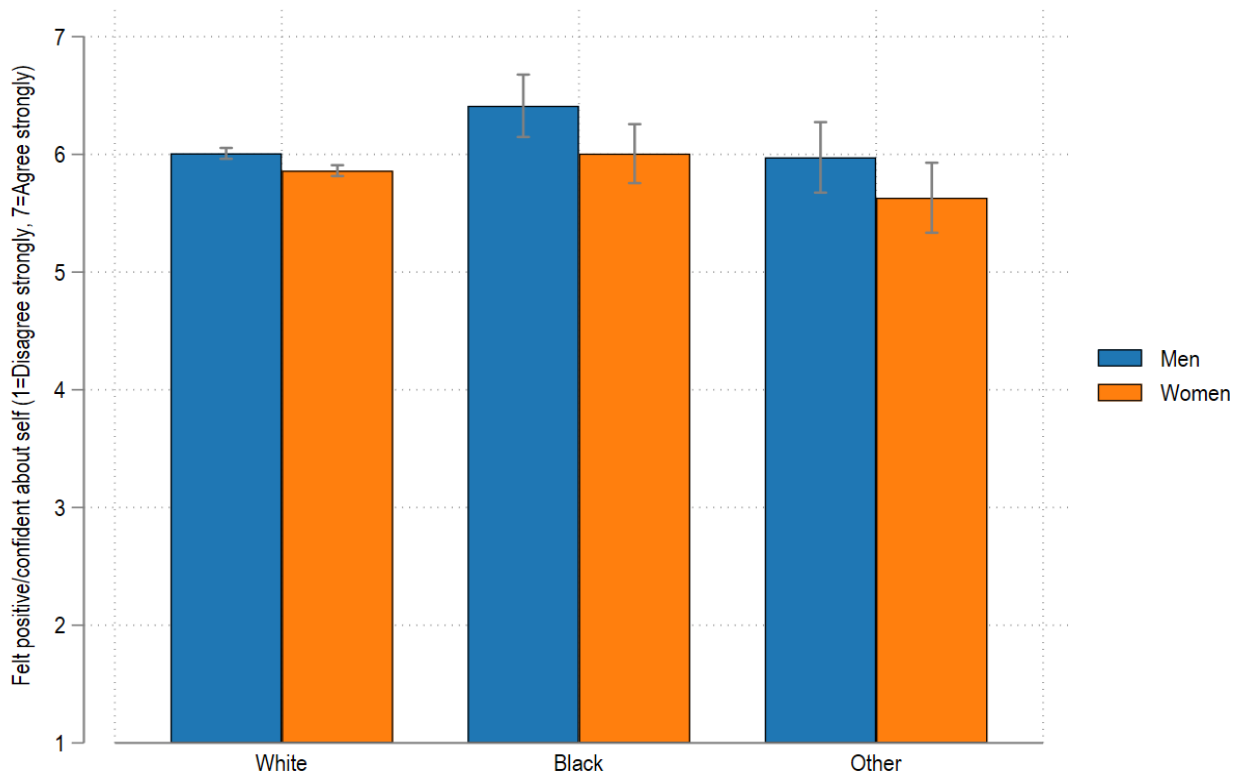
this end, Figure 4a again shows the gender confidence gap is consistent across race categories and does not vary across race categories.

Figure 4a. Gender confidence gap by race when self-confidence is measured as self-confident describes you how well?



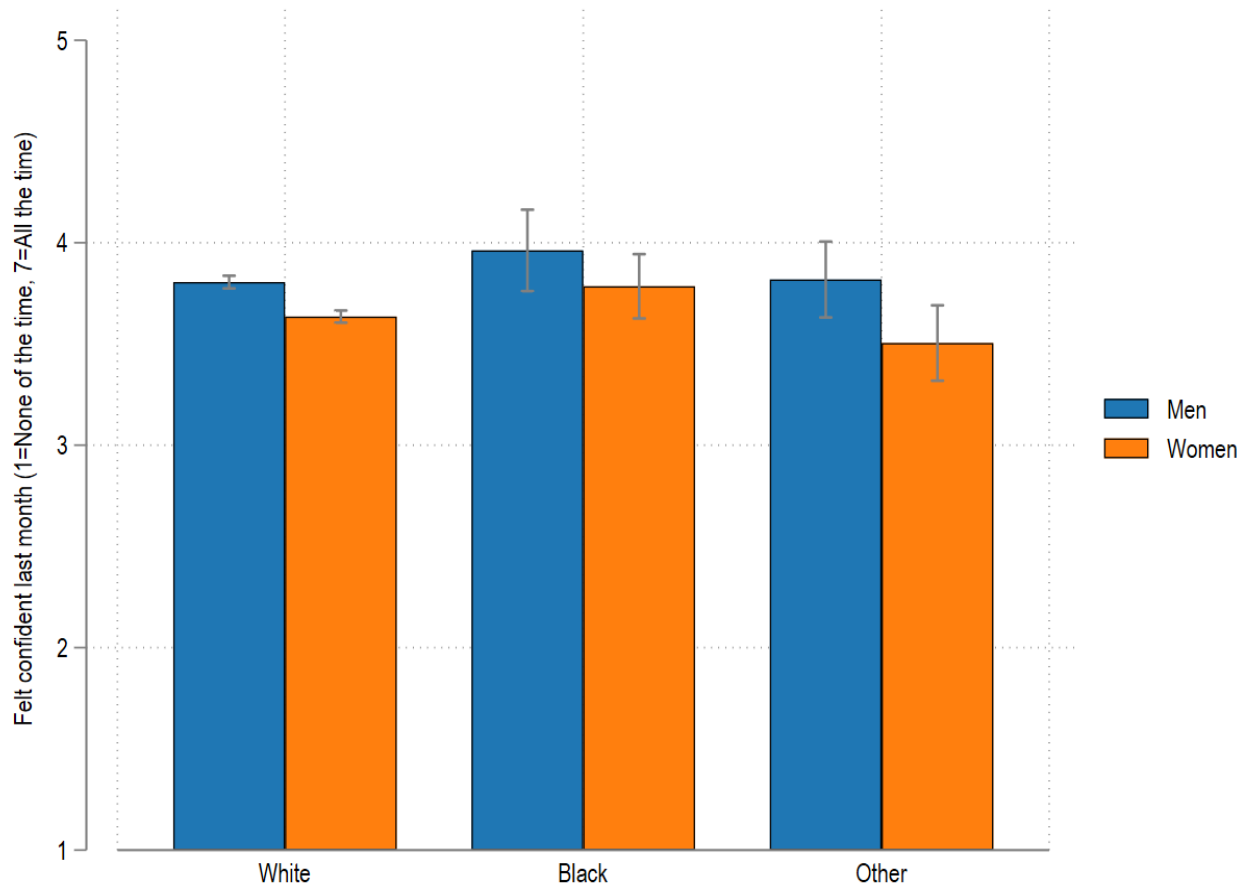
We repeat our analysis with a second measure of self-confidence, that is, “Feel confident/positive about self”. To this end, we find that race impacts self-confidence, but does not impact the gender confidence gap. This is demonstrated in Figure 4b which shows that the empirical patterns of the gender confidence gap are similar across race categories.

Figure 4b. Gender confidence gap by race when self-confidence is measured as feel confident/positive about self



When we use a third measure of self-confidence, that is, “Felt confident last month?” to repeat our analysis, we find, as visualized in Figure 4c, that the gender confidence gap manifests consistently across race categories.

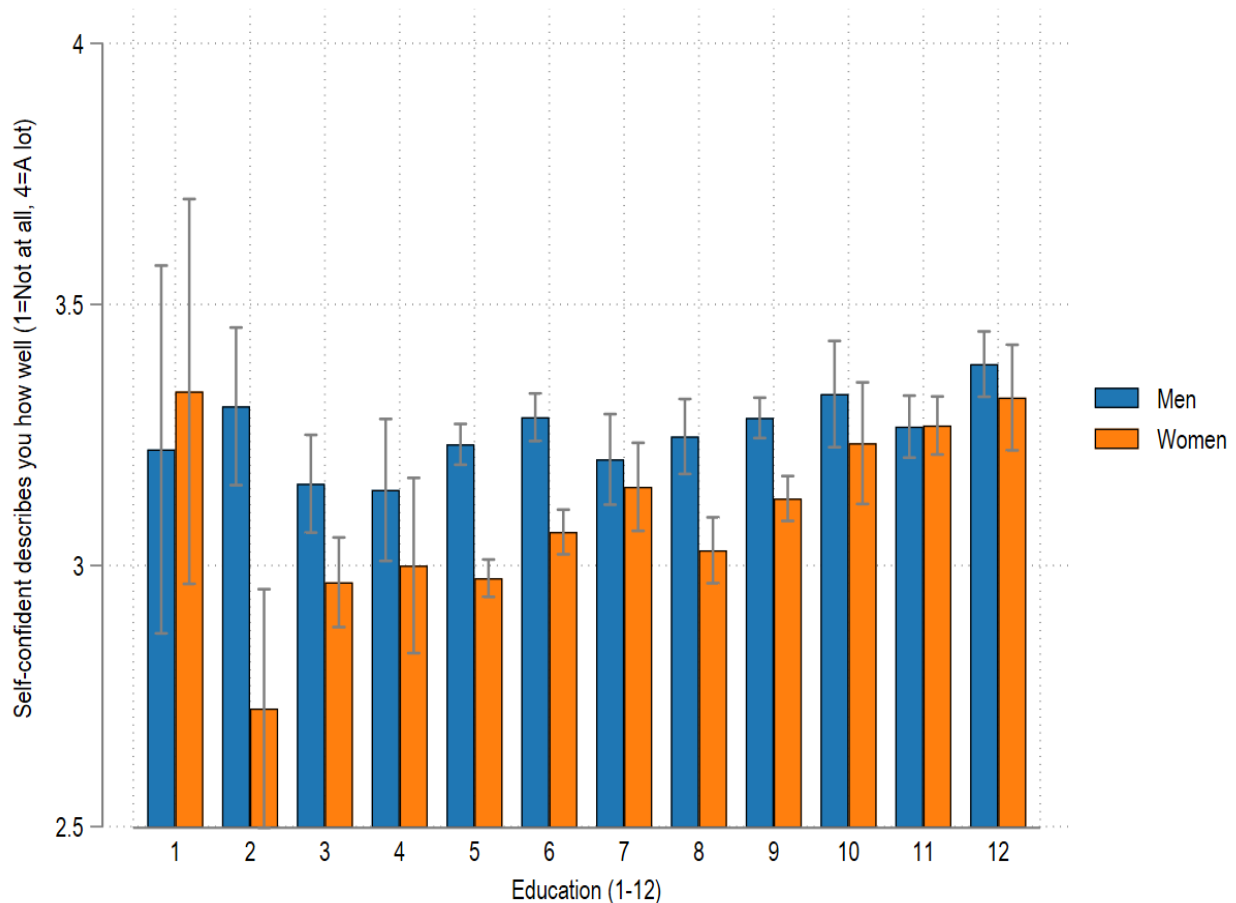
Figure 4c. Gender confidence gap by race when self-confidence is measured as felt confident last month



Two clear patterns are repeated across Figures 4a, 4b and 4c. First, across all three measures of self-confidence, women are viewed to be less self-confident than men, and this pattern manifests similarly across race categories. Secondly, race category influences self-confidence development but does not shape the gender confidence gap. To this end, we now break down the gender confidence gap by educational attainment, which we use as an indicator for experience.

Using our main measure of self-confidence, “Self-confidence describes you how well?”, Figure 5a visualizes our finding that education positively impacts self-confidence. Figure 5a also shows that the positive effect of educational attainment on confidence is more significant for women than men. Hence, the gender gap in confidence narrows as women reach higher educational levels. What is also demonstrated by Figure 5a is that men generally remain self-confident regardless of their educational attainment.

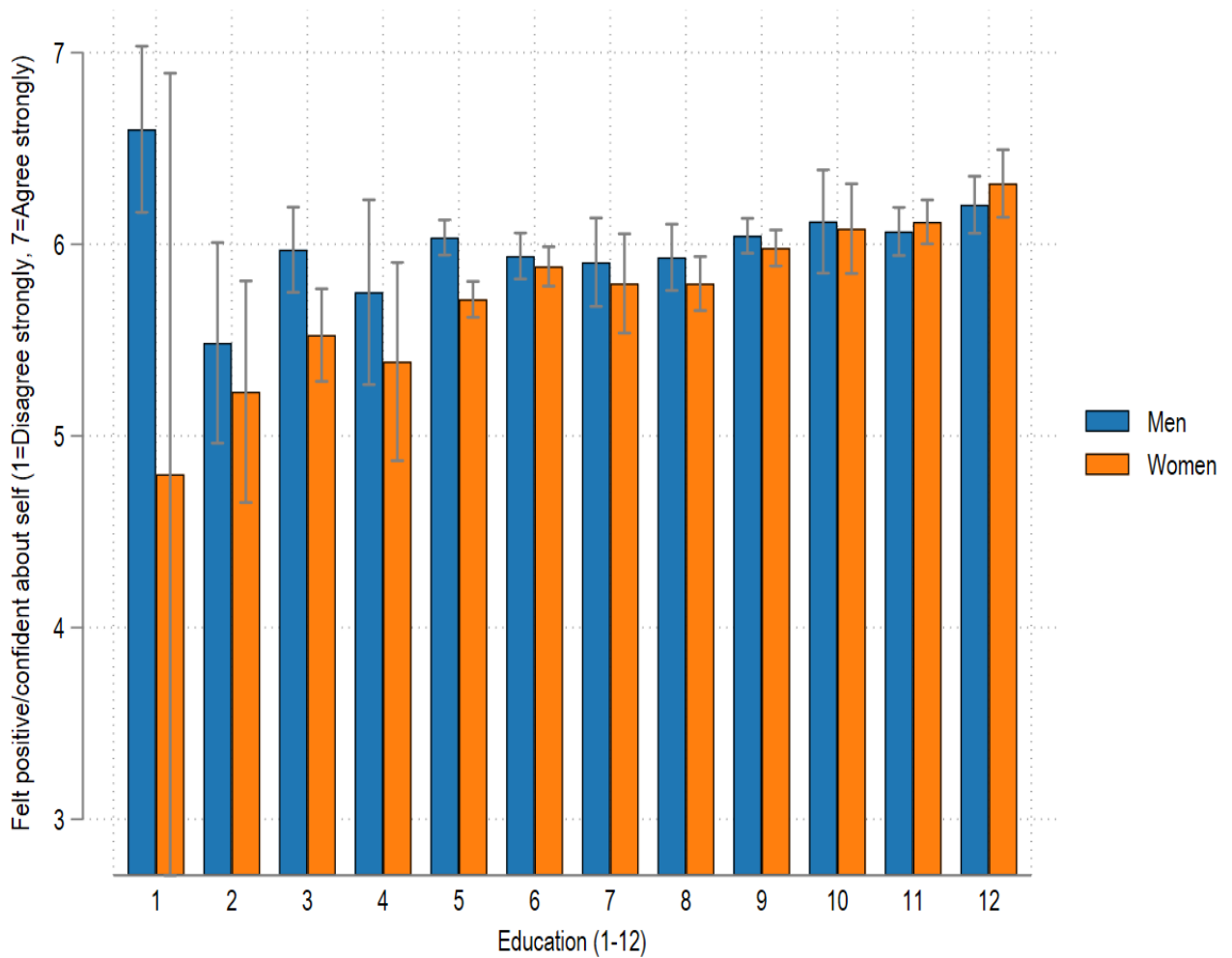
Figure 5a. Gender confidence gap by educational attainment when self-confidence is measured as “Self-confidence describes you how well?”



Repeating our analysis with a second measure of self-confidence, that is “Feel confident/positive about self”, Figure 5b shows the positive effect of education on self-confidence, especially for

women's self-confidence. Similarly, Figure 5b lends further evidence that the gender gap in confidence attenuates as women achieve higher educational levels. Furthermore, men are viewed to be generally high in self-confidence whatever their educational attainment.

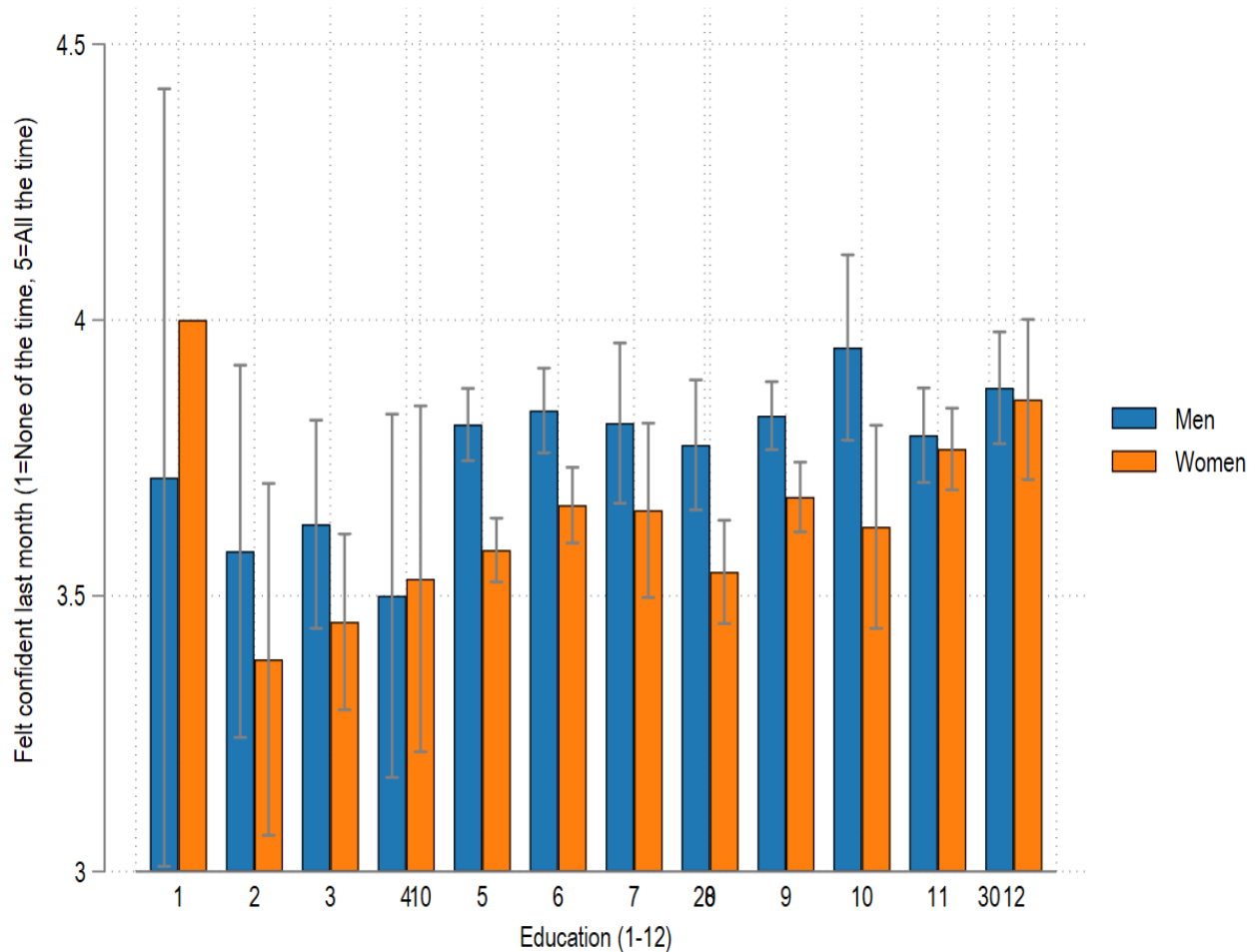
Figure 5b. Gender confidence gap by educational attainment when self-confidence is measured as feel confident/positive about self



When we use a third measure of self-confidence, that is, “Felt confident last month”, we find the pattern demonstrated in Figures 5a and 5b reiterated. Indeed, Figure 5c also demonstrates that as women progress in their educational attainment, women experience higher levels of self-

confidence. What is more, Figure 5c manifests the finding that the gender confidence gap becomes less substantial as women reach higher educational levels.

Figure 5c. Gender confidence gap by educational attainment when self-confidence is measured as felt confident last month



Taken together, Figures 5a, 5b and 5c use different measures of self-confidence to demonstrate the positive effect of education on men and women's self-confidence.

Now that we have discussed and visualized the empirical patterns of the gender confidence gap, this thesis proceeds to provide an explanation for the gender confidence gap

with a life course and intersectionality approach. To this end, there are several key patterns to note in Table 2 (found below) which summarizes the results from our regression analyses.

Specifically, there are four models in Table 2 and each model captures a key explanation of the gender confidence gap.

Importantly, in this analysis we use our main measure of self-confidence, “Self-confident describes you how well?”. Responses are coded in four ways as follows: 1 (Not at all), 2 (A little), 3 (Some), and 4 (A lot). Our key independent variable is gender.

Our first model demonstrates that being female has a negative impact on self-confidence. Specifically, on average, on a 1-4 scale, females are 0.185 units less self-confident than males. Indeed, the gender gap in self-confidence is highly significant even when key demographic variables such as age, race and educational attainment are controlled. Following our first model, between the ages of 20 to 30 years old, there is a decline in self-confidence among females. This indicates that the gender gap in confidence is apparent among working-age groups.

What is more, we find a significant increase in self-confidence experienced by females in older age groups. Therefore, our findings are consistent with studies suggesting that older women may be more self-confident.

Importantly, our first model indicates that self-confidence can decrease and increase over the life course. The implications of our first model are especially crucial to genetic explanations on the gender confidence gap. Specifically, based on this model, we can submit the understanding that an individual’s level of self-confidence is not simply a matter of genetics. Indeed, although we cannot exclude the possibility of genetic effects on self-confidence, we can, from this model, make the sociological argument that self-confidence is shaped by environmental influences for if the gender confidence gap were purely genetic, it would not vary

as individuals age. Indeed, where self-esteem is viewed to be a relatively stable trait of individuals, we view from our findings that self-confidence may constitute a variable, situational state (Wolak 2020).

In our second model, we test whether an interaction effect between gender and the life course (age groups) may help explain the gender gap in self-confidence. We did not observe any significant interaction effects between gender and the life course. Importantly, what our second model did find is that across the life course, the gender gap in self-confidence is observable, and furthermore, across the life span, the gender gap in self-confidence manifests in a consistent manner. Figures 2a, 2b and 2c have illustrated that the gender confidence gap remains consistent throughout the life course. Indeed, these figures visualize that the gender gap in confidence is appreciably similar across age categories.

In our third model, we test whether an interaction effect between gender and race category may explain the shape of the gender gap in self-confidence. To this end, we do not find that an interaction effect between gender and race explains the gender confidence gap. What we confirm is that race has a significant impact on self-confidence although race is not viewed to have an impact on the gender confidence gap. From our analysis, we draw out one key pattern that has been visualized by Figures 3a, 3b and 3c: gender differences in self-confidence remain consistent across race categories. Indeed, the gender gap in self-confidence is viewed to be almost identical across race categories.

In our fourth and final model, we test the role of educational attainment (as an indicator of experience) in explaining the gender confidence gap. We find that education has a positive impact on self-confidence, and that this positive educational effect may be especially significant for females. To this end, we find that the gender gap in confidence is more substantial when we

control educational attainment and when we control for an interaction between gender and education. Thus, based on model four, we predict that the gender gap in confidence is narrowed by females' high educational attainment.

Table 2. Explaining the gender confidence gap

	Model (1)	Model (2)	Model (3)	Model (4)
<i>The gender confidence gap</i>				
Female	-0.185*** (-10.53)	-0.207*** (-3.81)	-0.178*** (-9.69)	-0.366*** (-7.56)
<i>Life course pattern (ref. 20-30)</i>				
31-40 years	-0.0287 (-0.89)	-0.0134 (-0.28)	-0.0288 (-0.89)	-0.0292 (-0.91)
41-50 years	0.0277 (0.87)	0.0272 (0.58)	0.0271 (0.85)	0.0298 (0.93)
51-60 years	0.144*** (4.32)	0.106* (2.14)	0.144*** (4.30)	0.147*** (4.42)
61-70 years	0.185*** (5.10)	0.135* (2.54)	0.185*** (5.10)	0.189*** (5.22)
71 or above	0.134* (2.57)	0.101 (1.30)	0.133* (2.56)	0.138** (2.65)
<i>Gender#life course</i>				
Female#31-40 years		-0.0290 (-0.45)		
Female#41-50 years		-0.000442 (-0.01)		
Female#51-60 years		0.0717 (1.07)		
Female#61-70 years		0.0947 (1.31)		
Female#71 or above		0.0608 (0.58)		
<i>Cultural model (ref. White)</i>				
Black	0.262*** (6.43)	0.264*** (6.47)	0.322*** (4.82)	0.262*** (6.45)
Other	0.145** (3.27)	0.144** (3.24)	0.176** (2.77)	0.143** (3.21)
<i>Gender# race (ref. Female#White)</i>				
Female#Black			-0.0962 (-1.14)	
Female#Other			-0.0599 (-0.68)	
<i>Experiential model</i>				
Educational attainment	0.0306*** (9.42)	0.0309*** (9.52)	0.0306*** (9.44)	0.0177*** (3.87) 0.0257***

Female# educational attainment				(4.01)
Constant	2.963*** (77.42)	2.973*** (63.03)	2.959*** (77.02)	3.055*** (68.54)
N	12877	12877	12877	12877

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 6 visualizes our finding that men and women become more self-confident as they move along the life course. Specifically, between the ages of 30 years old to 50 years old, the gender gap in self-confidence is viewed to be more significant in size than at any other ages. This suggests that the gender gap in confidence may be most significant among working-age groups. Indeed, this accords with our experiential theory suggesting that inequality in adulthood is most active in the domain of work. Hence, workplace experiences may be responsible for the significant widening of the gender confidence gap. Indeed, before and after this age group, the gender gap in self-confidence is viewed to be smaller.

Figure 6. Gender, age, and confidence

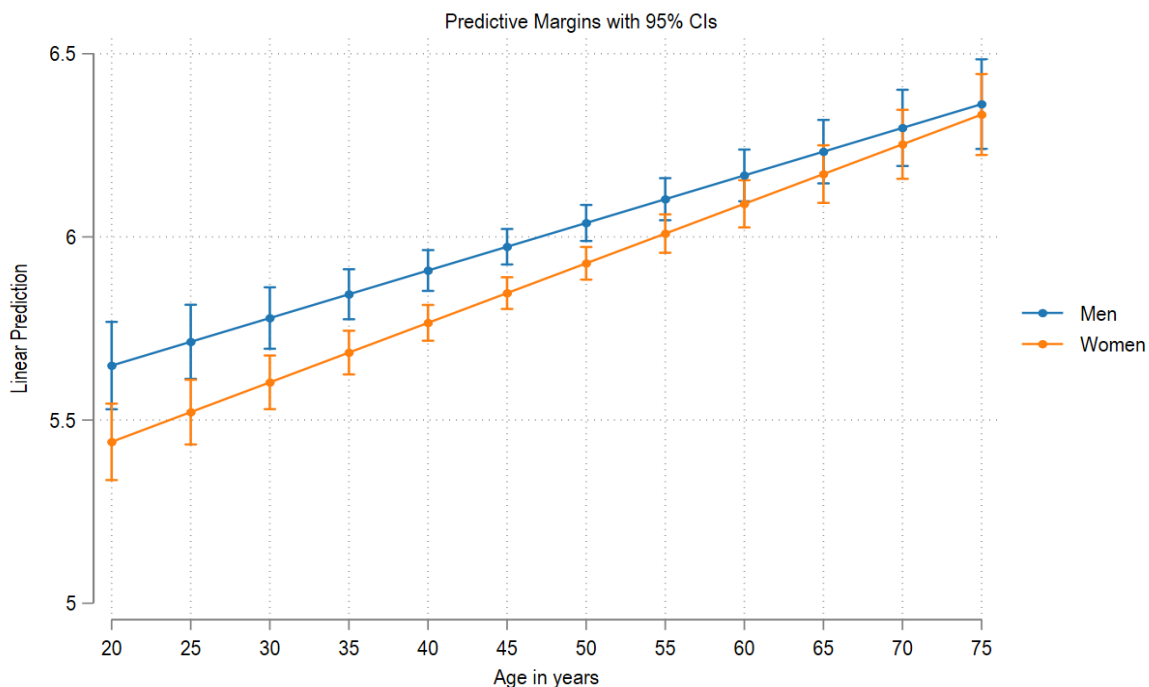
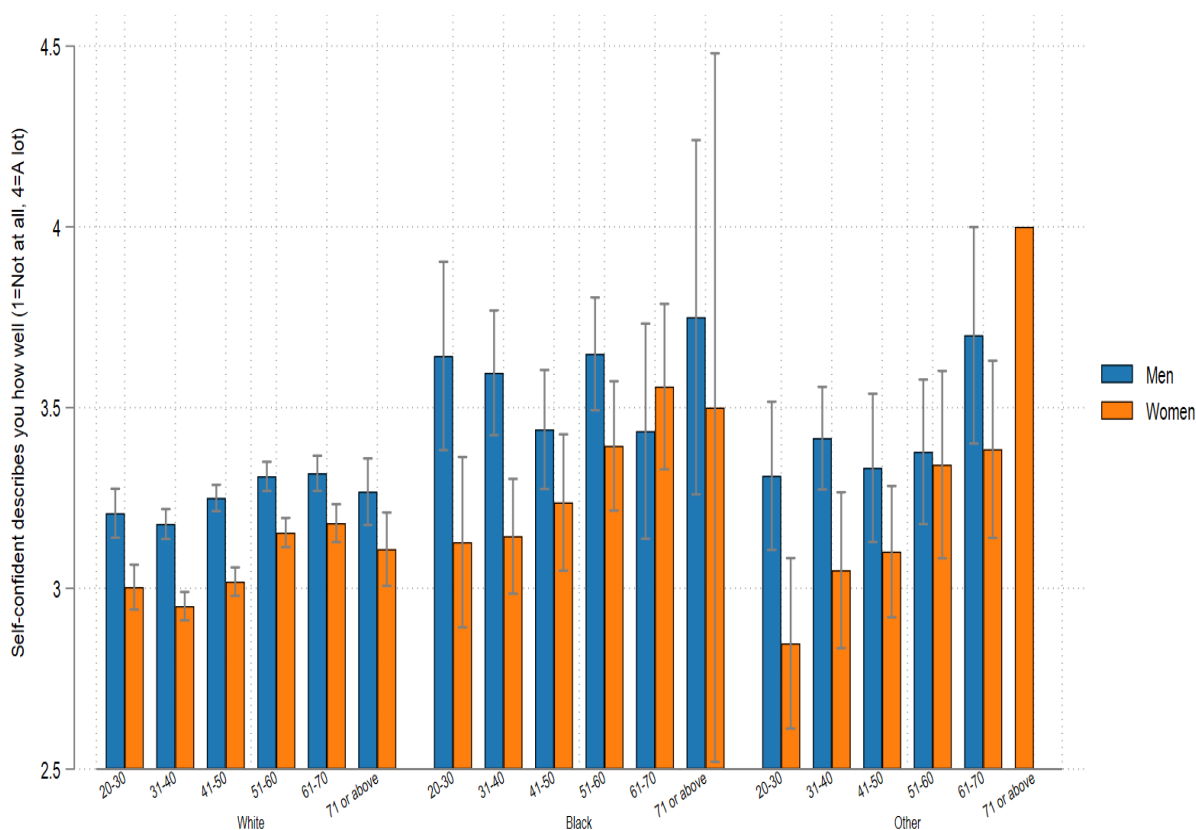


Figure 7 further shows age-related increases in self-confidence across both men and women and that the gender gap in self-confidence manifests across the life course. Importantly, this pattern of age-related increases in self-confidence is visible across genders and across race categories.

Figure 7. Gender, race, age, and confidence



Conclusion

These findings may be crucial to identifying critical age groups for interventions committed to increasing self-confidence among females. In so doing, our findings may be applied practically to help minimize gender disparities in self-confidence. Indeed, the finding that gender differences in self-confidence are more apparent between the ages of 30 to 50 years old suggests that normative life events during these ages, especially experiences in the

workplace, expose women and men to differential sources of low self-confidence that contribute to the gender confidence gap. This warrants further investigation.

What is more, this knowledge can help demonstrate the importance of high educational attainment in minimizing the gender confidence gap. Future research examining the gender confidence gap will need to pay greater attention to any racial impacts of educational attainment on self-confidence. As well, further research should investigate what mechanisms link higher high educational attainment among women with a narrowed gender confidence gap.

More attention to the immense variety of cultural and racial contexts is necessary for these constitute meaningful sources of theoretical innovation and comparative insight into the patterns of the gender confidence gap across the life course (age groups).

From this perspective, we recommend that researchers further study the ways in which self-confidence trajectories differentiate according to identity categories that may also interact to render additive effects on self-confidence. We suggest that researchers consider how individuals from racial minorities can maintain or develop their self-confidence.

Chapter Three

How the gender confidence gap exacerbates gender inequalities

Intuitively, self-confidence is viewed to be crucial to motivation and ambition as well as to persist in the face of challenges and competition. Research similarly views self-confidence to be an individual's general belief in their ability to accomplish their goals and perform their tasks well (Martin and Phillips 2017).

Hence, researchers amply suggest that differences in self-confidence may lead to individuals endowed with equal innate cognitive ability to develop diverging self-beliefs and because of that make unequal educational choices and investments in human capital acquisition (Ahammer et al. 2019; Bénabou and Tirole 2002; Compte and Postlewaite 2004; Filippin and Paccagnella 2012; Judge et al. 2009; Keller 2010; Risse et al. 2018). Cross-sectional and longitudinal data alike document a positive association between self-confidence and labour market outcomes as well as well-being.

Hence, research testing the impact of self-confidence has documented the critical function of self-confidence in shaping academic and job performance, wages, coping ability, interpersonal relations, and leadership emergence (Baumeister et al. 2003; Seitchik 2020). From this perspective, the gender gap in self-confidence doubtlessly disadvantages women for the gender confidence gap precludes women from the concomitant benefits of self-confidence.

We now consider the symptoms of a gender confidence gap in society. To this end, Chapter 3 interrogates the ways in which the gender confidence gap exacerbates other gender inequalities. Chapter 3 is organized as follows.

First, we discuss how the gender gap in confidence may produce gender disparities in wage. To this end, we elaborate on the role of the gender confidence gap in occupational choices. What is more, we discuss the economic return of self-confidence more broadly. In so doing, we

provide a discussion of the ways in which the gender confidence gap sparks into gender differences in earnings. After providing a discussion of the ways in which a female confidence challenge may detriment the economic outcomes of women, we provide the results from our regression analysis.

Second, we review literature documenting the role of self-confidence in determining mental health outcomes. Specifically, we discuss how the gender gap in self-confidence may engender the well-documented gender gap in mental health (Galanakis et al. 2016; Kucharska 2018). To this end, we consider how women's lower levels of self-confidence adversely impacts their mental health. Indeed, following our theoretical discussion of the ways in which a shortage in self-confidence among women may negatively affect their mental health, we provide the results from our regression analysis.

Hence, Chapter 3 is focused on the ways in which gender disparities in self-confidence present themselves as a source that continues entrenched gendered inequalities, particularly, the gender wage gap and the gender mental health gap. In so doing, Chapter 3 puts into clear relief the ways in which the female confidence challenge functions as a pervasive and insidious obstacle to gender equality.

The gendered impacts of self-confidence on income

In defiance of women's unprecedented rates of educational attainment and in defiance of consistent efforts to end occupational segregation, the gender confidence gap between men and women persists and in so doing triggers several consequential disadvantages for women (Kamas and Preston 2018). According to Therese Huston's (2016) concise formulation, the aspiration gap between men and women is related to gender differences in self-confidence.

From a societal point of view, the attrition of skilled and high-ability women because of the gender confidence gap is critical to innovation, productivity, and economic growth. To this end, we direct our attention to theories concerned with the gendered impacts of self-confidence on income.

The female confidence challenge may, in part, be related to gender gaps in wages because of the self-confidence mechanisms driving occupational choice, performance and promotion decisions. One self-confidence mechanism driving women's selection into lower paying jobs, for instance, is the effects of perceived incapability. Indeed, Timothy, Erez, and Bono (1998) find that self-evaluations such as "Am I capable?" or "Can I accomplish this task?" directly shape individuals' motivational decision-making processes. Therefore, when appraising an event, planning to respond or withdraw, an individual determines whether they can manage in a practical sense and emotional sense, and whether they can manage subsequent expectations stemming from the event (Doron and Martinent 2017; Lazarus and Folkman 1984).

To this end, researchers have established that core self-evaluations are linked to the appraisal process and therefore, to decisions concerning course of action (Timothy et al. 1998). Given this, it may be expected that women's lower self-confidence encourages them to view difficult tasks at work negatively and to determine that the task is beyond their capabilities. Accordingly, this may negatively affect their professional outcomes and hinder their chances at organizational success.

Korman's self-consistency theory (1970), as relayed by Timothy et al. (1998), further hypothesizes that individuals are motivated to choose behaviours that are congruent with their self-image. In other words, individuals tend to perform in ways that preserve and reflect their

self-image. What is more, Korman's (1970) theory predicts that individuals will generally choose tasks and are most satisfied with tasks that do not stray from their self-image.

Conforming with hypotheses in self-consistency theory, Ehrlinger et al. (2017) found that, in their study, the female students chose to leave their STEM undergraduate degree program not because of a lack of ability, but rather because they viewed themselves to be incongruous to computer science and engineering prototypes. This is a direct example of the gendered impacts of self-confidence on wage. Indeed, here, the female confidence challenge is viewed to contribute to women's vast underrepresentation in male-dominated jobs such as STEM which historically provides significant wages.

Aronson and Carimith (1962) further contribute to the literature with their proposal that individuals tend to reduce their performance or withdraw from tasks to realign their performance with their self-image. Accordingly, women are viewed to encounter stereotypes that mould their occupational choices, particularly stereotypes steering them away from STEM.

What is more, due to the activation of stereotypes, men and women experience differential perceptions of fitting occupational choices, and this may contribute to the persistence of the gender wage inequality and the sex segregation of jobs (i.e., male-dominated fields) (Ehrlinger et al. 2017). Indeed, an empirical prediction that may stem from Aronson and Carimith's proposal is that women's lack of entry into STEM occupations, despite the high income associated with the field, may be propelled by the view they do not belong and are ill-fitted to the demands of the career.

Testing this prediction, Moakler Jr and Kim (2014) join the conversation on the importance of self-confidence in educational and career outcomes. In their study, they measure self-confidence with individuals' perceptions concerning their abilities (Moakler Jr and Kim

2014). Specifically, Moakler Jr and Kim (2014) test national US freshman survey data to investigate the role of self-confidence and background variables (e.g., gender) as predictors of science, technology, engineering, and mathematics (STEM) major choice. What they document is that females' lack self-confidence in their academic abilities make them less likely to develop outcome expectations toward a STEM career and major choice.

To this end, self-beliefs, determined by stereotypes and social norms, shape an individuals' interests which in turn help individuals choose a career (Dasgupta & Stout, 2014; Robinson-Cimpian, Lubinski, Ganley, & Copur-Gencturk, 2014). Accordingly, low career-fit confidence among women interested in male-dominated jobs may underlie their occupational choice to avoid these fields and offer some explanation for the residual and unexplained components of the gender wage gap. Indeed, women may be dissuaded against high-paying STEM careers because of a lack of self-confidence in their abilities, and this may contribute to the gender wage gap.

More explicitly demonstrating how self-confidence produces the wage gap, research by Heckman, Stixrud, and Urzua (2006) and Drago (2011) find that character traits impact earnings comparably to cognitive skills. Indeed, one such well-valued noncognitive skill is self-confidence. Thus, research has found that the self-assessments women report as it relates to their performance not only tends to be vastly inaccurate and a poor reflection of their skills but detrimental to their candidacy in hiring and promotion decisions as well as their opportunities for career advancement (Herbst 2020).

Research has documented a pattern whereby traits that do not necessarily indicate higher productivity but instead convey competence may support an individual's chance at earning higher wages (Risse et al. 2018). From this perspective, women may not experience a wage

advantage for unlike men they experience backlash when they self-promote to signal their competency. Instead, agreeableness is a trait more detected among women than men, and Mueller and Plug (2006), Braakmann (2009) and Nyhus and Pons (2012) argue that women's higher level of agreeableness contributes to their lower wages.

Indeed, the gender confidence gap may shape the relative rewards that male and female workers receive and expect to deserve. For instance, Ridgeway (1997) suggests that a lack of self-confidence shapes female workers' reward expectations. Hence, female workers' lower sense of entitlement as a result of their lower self-confidence are viewed to exert self-fulfilling effects on their reward outcomes (Ridgeway 1997). A differential sense of entitlement between men and women borne from a gender confidence gap may then reinforce the gender wage gap.

To this end, Risse et al. (2018) relay behavioural theories to submit the argument that personality traits connoting self-confidence are associated with higher wages due to the direct and indirect influence of these traits on career-advancing behaviour, such as nominating oneself for more challenging roles or a promotion, negotiating a pay rise and being attracted to higher-paying and higher-status occupations. From this perspective, a lack of self-confidence among women may negatively impact their motivation and predict their withdrawal from careers they assess as beyond their capabilities.

Substantiating these theories with empirical evidence, Risse et al.'s (2018) analysis of the 2012 HILDA Survey in Australia finds that gendered patterns in endowment levels, namely, men's stronger self-confidence vis-à-vis women's higher fear of failure may carve out an economic advantage for men. Furthermore, Allen (2021) provides an analysis of the two-wave US National Science Foundation funded survey of 559 engineering and computer science

graduates and finds that male graduates are paid more than their female counterparts in their first jobs due to their higher levels of self-beliefs.

Indeed, Lindqvist and Roine's (2011) argue that individuals with poor labour market performances are not necessarily deficient in cognitive abilities but rather non-cognitive phenomena. Further, illuminating this relationship, Dickerson and Taylor (2000) report that female participants do not put themselves forward as candidates for more challenging roles and leadership positions until they can anticipate a positive outcome and are certain of their qualifications. To this end, ascending the pay ladder is not simply a matter of real qualifications but self-confidence for women. This argument is especially significant given Keller's (2010) finding that parts of the gender wage gap remain unexplained even after accounting for human capital variables such as education, cognitive ability, and job-specific training and skills.

Hence, we use data from the MIDUS, but this time focus on wage income to discuss the implications of the gender confidence gap on the gender wage gap. Particularly, we discuss our key findings captured in Table 3.

Our first model in Table 3 establishes that being female is negatively associated with wage income. Indeed, female participants in the MIDUS are viewed to make approximately 2000 US dollars less than male participants in wage earnings. This gender disparity manifests when key demographic variables such as race, educational attainment and age are controlled.

Our second model includes our dependent variable, self-confidence, to consider whether self-confidence may explain the wage gap. To this end, we find that the gender wage gap narrows when self-confidence is included in our analysis. Specifically, we find that self-confidence may explain approximately 1000 US dollars of the gender wage gap.

Our third model includes the gender confidence gap to test whether gendered impacts of self-confidence shape the wage gap. Our third model thus establishes that the gender wage gap is most substantial among highly self-confident males and highly self-confident females.

Accordingly, gendered impacts of self-confidence on income are most pronounced among highly confident men and women. This warrants further investigation.

Table 3. Gendered impacts of self-confidence on income

	Model (1)	Model (2)	Model (3)
<i>Gender</i>			
Female	-21609.7*** (-17.51)	-20668.0*** (-16.58)	-1084.8 (-0.12)
<i>Self confidence (ref. Not at all)</i>			
Self-confident describes you how well: A little		-1999.0 (-0.49)	10190.7 (1.23)
Self-confident describes you how well: Some		2494.5 (0.64)	17470.7* (2.18)
Self-confident describes you how well: A lot		7842.3* (1.98)	24274.3** (3.03)
<i>Gender#self confidence (ref. Female# Not at all)</i>			
Female#A little			-15087.9 (-1.58)
Female#Some			-19445.8* (-2.12)
Female#A lot			-22721.7* (-2.46)
<i>Controls</i>			
Race_Black	1370.0 (0.39)	40.93 (0.01)	153.5 (0.04)
Race_Other	-503.6 (-0.13)	-1024.7 (-0.27)	-1356.2 (-0.36)
Education attainment	4987.4*** (19.96)	4830.3*** (19.16)	4864.4*** (19.29)
Age in years	-597.6*** (-11.88)	-626.1*** (-12.33)	-626.8*** (-12.34)
Constant	48870.9*** (14.79)	47406.4*** (9.50)	32145.9*** (3.79)
N	3358	3342	3342

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The gendered impacts of self-confidence on mental health

Countless studies have elucidated what befalls the individual suffering low self-confidence. To this end, an expansive literature crossing disciplines and theoretical perspectives endorses the view that low self-esteem has a facilitative effect on mental and physical health problems, substance abuse, and antisocial behavior (Brent et al. 2005).

Indeed, more generally, research suggests that low self-beliefs exacerbate an individual's potential to develop internalizing problems of depression and anxiety (Keane and Loades 2016). Other studies have documented a robust association between low self-views and some externalizing problems such as substance abuse and antisocial behavior (Brent et al. 2005).

Hence, a link between poor self-views and poor mental health is indeed well-established. What may require further investigation is the ways in which the gender gap in confidence specifically supplies the gender confidence gap in mental health.

To this end, an evidence-based review by the World Health Organization has found that globally, women bear a greater mental health burden than their male counterparts (Astbury 2000). Indeed, WHO researchers report that across developed and developing countries alike, women are two times more at risk to experience depression than their male counterparts (Astbury 2000). In addition to this, findings demonstrate that emotional distress, depression, anxiety, and other internalizing psychological disorders are more present among women than men (McLean and Anderson 2009; Mendez et al. 2021).

Given the gendered nature of self-confidence development as well as mental health outcomes, it may be important to unearth the implications of the gender gap in self-confidence on the gender mental health gap. To this end, past research presents some basis to argue that the

relationship between a self-confidence deficit and the occurrence of mental health disorders is in fact a course of reciprocal cause and effect (Rosenberg, Schooler and Schoenbach 1989). The aim here is to identify and elucidate how poor self-confidence among women predicts gender disparities in the prevalence of mental disorders.

To this end, Rosenfield et al. (2005) have linked poor self-views to a greater impulse for internalizing problems. Testing their thesis with data from adolescents, Rosenfield et al. (2005) identify a gendered pattern in which low self-views among young women accounts for their higher vulnerability for internalizing problems. What is more, Rosenfield et al. (2005) suggest that women's awareness that they lack control as well as their perceptions of gender inequality may lead to their greater prevalence of internalizing symptoms.

Negative self-views may form the basis of negative emotional states that detriment social interactions and lead unconfident women to form poor interpersonal relationships. Importantly, an individual's self-concept is, to a degree, shaped by interpersonal relationships (Chen, Boucher, and Tapias 2006). Hence, it may be hypothesized that women's poor self-confidence may contribute to their greater risk and prevalence of mental health disorders because their poor self-confidence may function as a barrier to their experiencing positive social interactions.

Furthermore, Ayduk, Gyurak, and Luerssen (2009) find that compared to individuals with high self-esteem (men), individuals reported to be low in self-esteem (women) may view instances of rejection where none exist. For instance, low confidence among women may cause them to develop an impairing sensitivity to rejection cues, and even more impairing expectations of being rejected and disliked by others (Ayduk, Gyurak and Luerssen 2009). To this end, low self-confidence among women may lead to their inability to meet belongingness needs, and this

may frustrate their self-concept. Poor self-concept is found to correlate with indicators of internalizing symptoms (Campbell and Di Paula 2003).

Hence, researchers have found that low self-confidence in females than males may initiate divergent mental health incidences between the genders. Particularly, the gender confidence gap may incite or contribute to women's poor mental health. How the gender confidence gap triggers gender differences in mental health is thus a crucial area to explore in the body of research.

In what follows, we use data from the MIDUS again, but this time, we focus on mental health to discuss the implications of the gender confidence gap on the gender mental health gap. Particularly, we discuss our key findings captured in Table 4. In so doing, we submit compelling arguments that the gender confidence gap may help explain gendered mental health outcomes that disfavour women.

Our first model in Table 4, for example, establishes that being female is negatively associated with mental health. Indeed, female participants are viewed to have worse mental health than male participants.

Our second model includes our dependent variable, self-confidence. Hence, our second model tests the role of self-confidence in mental health outcomes. We find that self-confidence is positively associated with mental health. Furthermore, we find that the gender gap in mental health closes when we include self-confidence in our analysis. To this end, we have evidence that suggests that the gender gap in self-confidence may fully explain the gender gap in mental health gap.

Our third model considers a potential interaction effect between gender and self-confidence but establishes that this effect is not significant. Indeed, our third model confirms that

the positive impact of self-confidence on mental health is similar across gender categories. To this end, low self-confidence among women may explain why women experience worse mental health than men who are generally high in self-confidence.

Table 4. Gendered impacts of self-confidence on mental health

	Model (1)	Model (2)	Model (3)
<i>Gender</i>			
Female	-0.0660** (-2.83)	0.00323 (0.14)	0.0869 (0.91)
<i>Self confidence</i>			
Self-confident describes you how well (1-4)		0.325*** (22.27)	0.341*** (15.11)
<i>Interaction effect</i>			
Female1#c.Self-confidence			-0.0264 (-0.90)
<i>Controls</i>			
Race_Black	-0.0630 (-1.21)	-0.130* (-2.55)	-0.131* (-2.55)
Race_Other	-0.178** (-3.13)	-0.223*** (-4.04)	-0.223*** (-4.04)
Education attainment	0.0721*** (15.27)	0.0609*** (13.21)	0.0610*** (13.23)
Age in years	-0.00414*** (-4.57)	-0.00580*** (-6.59)	-0.00580*** (-6.59)
Constant	3.541*** (59.20)	2.646*** (37.68)	2.595*** (28.68)
N	6235	6173	6173

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Recommendations for future research

Given our findings on the gendered impacts of self-confidence on income, further research is needed to explain the ways in which the gender wage gap is mediated by the gender confidence gap. Indeed, a strong identification with self-confidence triggers greater motivation

and task performance as well as signals competence and productivity. This leads to greater income. Hence, it is crucial to further explore what underlies the link between less self-confidence among women and lower wages among women.

Furthermore, given literature linking high-quality self-views to better mental health outcomes including a decreased risk for internalizing symptoms and externalizing symptoms, we expect that the gender confidence gap helps mediate the gender gap in mental well-being. To this end, future research should consider how mechanisms that drive poor self-confidence among women may also drive poor mental well-being among women.

Conclusion

We have engaged in this vibrant field of inquiry by documenting the diverse patterns of the gender confidence gap, by submitting theoretical explanations of the gender confidence gap and by testing our theoretical explanations of the gender confidence gap with our newly developed life course and intersectional perspective. Further, we have visualized our findings from our regression analyses and proceeded to demonstrate the ways in which the gender gap in self-confidence exacerbates other extant gender gaps. To this end, we have tested the explanatory power of the gender confidence gap in the gender wage gap and the gender gap in mental health.

Indeed, our intersectional and life course approach was found to be an extremely productive way of theorizing and testing our theories. Indeed, we explored the gender confidence gap across the life course (age groups), race categories, educational attainment, and gendered race categories (intersectionality). Our analysis of data came from three cycles of the MIDUS series and has provided several important updates to existing knowledge.

First, we have shown that racial minorities and immigrants do not necessarily show lower levels of self-confidence. In fact, we find that racial minorities are more self-confident than their White counterparts. Self-confidence is lower among White people than racial minorities, and Black people are the race category with the most self-confidence in our analysis. Second, we find that the gender gap in self-confidence is consistent across race categories.

Third, we find that the gender gap in self-confidence manifests consistently across age groups as well. To this end, our fourth finding is that with age, individuals may experience gains in self-confidence.

This finding helps us lend support to a sociological explanation of the gender confidence gap and interrogate notions that the gender confidence gap is a purely genetic creation. Indeed,

we argued that if the gap was simply genetic, the gender confidence gap when tested would be constant and stable across the life span with no indication of narrowing or widening. From our analysis, we do not find this to be the case. Accordingly, our fifth finding is that the gender confidence gap is most significant among working-age groups.

Our sixth finding is that educational attainment has a positive effect on self-confidence for men and women. The positive effect of educational attainment is however more significant among women. Thus, the gender confidence gap is viewed to be at its most narrow between highly educated males and highly educated females.

Beyond these findings, we have also tested how gendered impacts of self-confidence may exacerbate the gender gap in wage as well as the gender gap in mental health. Indeed, the significance of the gender confidence gap is even more compelling because it is manifestly connected to gender inequalities. In fact, our analyses found that the gender confidence gap may explain part of the gender wage gap and all of the gender gap in mental health.

Thus, against the contemporary critique of Lauren Guillen (2018) who has amply asserted that the gender confidence gap is fiction, we have provided strong evidence that reasserts the empirical patterns of the eminently tested gender confidence gap.

Indeed, we have extended a life course and intersectional approach to the gender confidence gap for it affirms that self-confidence is in short supply among women, and equally, demands a critical interrogation of the ways in which the gender confidence gap is a fundamentally sociological creation.

Future research examining the gender confidence gap will need to pay greater attention to the empirical patterns of the gender gap across racial categories and across the life span. Indeed,

altogether, our life course and intersectional approach to the gender confidence gap blueprints a productive way to test determinants of self-confidence against each other.

Furthermore, our life course and intersectional approach calls attention to the ways in which the empirical patterns of the gender confidence gap may be similar or different across social categories. Thus, we have demonstrated and defended the effectiveness of an intersectional and life course approach at eliciting a deeper understanding of the empirical patterns, sources, and consequences of the gender confidence gap by age, social categories and interacting social categories.

References

- Ahammer, Alexander, Mario Lackner, and Jasmin Voigt. 2019. "Does Confidence Enhance Performance? Causal Evidence from the Field." *Managerial and Decision Economics* 40(6):704-717.
- Ahn, Lydia HaRim, Brian Keum TaeHyuk, Gintare M. Meizys, Adil Choudry, Michelle A. Gomes, and Lei Wang. 2021. "Second-Generation Asian American Women's Gendered Racial Socialization." *Journal of Counseling Psychology* 69(2):129-145.
- Allen, Michael. 2021. "Gender Pay Gap is a Confidence Gap, Claims New Study." *Physics World* 33(12):11-11.
- Ayduk, Özlem, Anett Gyurak, and Anna Luerssen, 2009. "Rejection Sensitivity Moderates the Impact of Rejection on Self-Concept Clarity." *Personality and Social Psychology Bulletin* 35(11):1467-1478.
- Bachman, Jerald, Patrick M. O'Malley, Peter Freedman-Doan, Kali H Trzesniewski, and Brent M. Donnellan. 2011. "Adolescent Self-Esteem: Differences by Race/Ethnicity, Gender, and Age." *Self and Identity* 10(4):445-473.
- Bajtelsmit, Vickie and Alexandra Bernasek. 1996. "Why Do Women Invest Differently Than Men?" *Financial Counseling and Planning* 7:1-10.
- Baumeister, Roy. F., Jennifer Campbell D., Joachim I. Krueger, and Kathleen D. Vohs. 2003. "Does High Self-Esteem Cause Better Performance, Interpersonal Success, Happiness, or Healthier Lifestyles?" *Psychological Science in the Public Interest* 4(1):1-44.
- Bénabou, Roland and Jean Tirole. 2002. "Self-Confidence and Personal Motivation." *The Quarterly Journal of Economics* 117(3):871-915.
- Bian, Lin, Sarah-Jane Leslie, and Andrei Cimpian. 2017. "Gender Stereotypes About Intellectual Ability Emerge Early and Influence Children's Interests." *Psychology and Psychiatry Journal* 355:389-391.
- Bleidorn, Wiebke, Ruben C. Arslan, Jaap J. A. Denissen, Peter J. Rentfrow, Jochen, E. Gebauer, Jeff Potter, and Samuel D. Gosling. 2016. "Age and Gender Differences in Self-Esteem-A Cross Cultural Window." *Journal of Personality and Social Psychology* 111(3):396-410.
- Brescoll, Victoria L., Eric Luis Uhlmann, Corrine Moss-Racusin, and Lonnie Sarnell. 2012. "Masculinity, Status, and Subordination: Why Working for a Gender Stereotype Violator Causes Men to Lose Status." *Journal of Experimental Social Psychology* 48(1):354-357.

- Brown, Danice L., Sha’Kema Blackmon, Christopher B. Rosnick, Felicia D. Griffin-Fennell, and Rhonda L. White-Johnson. 2017. “Initial Development of a Gendered-Racial Socialization Scale for African American College Women.” *Sex Roles* 77(3-40):178-193.
- Campbell, Jennifer, Sunaina Assanand, and Adam Di Paula. 2003. “The Structure of the Self-Concept and Its Relation to Psychological Adjustment.” *Journal of Personality* 71(1):115-140.
- Carlin, Barbara A., Betsy D. Gelb, Jamie K. Belinne, and Latha Ramchand. 2018. “Bridging the Gender Gap in Confidence.” *Business Horizons* 61(5):765-774.
- Cheng, Helen and Adrian Furnham. 2002. “Personality, Peer Relations, and Self-Confidence as Predictors of Happiness and Loneliness.” *Journal of Adolescence*, 25(3):327–339.
- Compte, Olivier and Andrew Postlewaite. 2004. “Confidence-Enhanced Performance.” *The American Economic Review* 94(5):1536-1557.
- Conway, Michael and Lenny R., Vartanian. 2000. “A Status Account of Gender Stereotypes: Beyond Communality and Agency.” *Sex Roles* 43(3-4):181–199.
- Corbin, Nicola A., William A. Smith, and Roberto J. Garcia. 2018. “Trapped Between Justified Anger and Being the Strong Black Woman: Black College Women Coping with Racial Battle Fatigue at Historically and Predominantly White Institutions.” *International Journal of Qualitative Studies in Education* 31(7):626-643.
- Davis Tribble, BreAnna, Samuel H. Allen, John R. Hart, Tiffany S. Francois, and Mia A. Smith-Bynum. 2019. “No [Right] Way to Be a Black Woman”: Exploring Gendered Racial Socialization Among Black Women. *Psychology of Women Quarterly* 43(3):381-397.
- Dickerson, Amy and Mary Anne Taylor. 2000. “Self-Limiting Behavior in Women: Self-Esteem and Self-Efficacy as Predictors.” *Group and Organization Management* 25(2):191-210.
- Diener, Ed, Stuti Thapa, and Louis Tay. 2020. “Positive Emotions at Work.” *Annual Review of Organizational Psychology and Organizational Behavior* 7(1):451-477.
- Doron, Julie and Guillaume Martinent. 2017. “Appraisal, Coping, Emotion, and Performance During Elite Fencing Matches: A Random Coefficient Regression Model Approach.” *Scandinavian Journal of Medicine and Science in Sports* 27(9):1015-1025.
- Dreisbach, Shaun. 2017. “50 States of Women.” *Glamour*. Retrieved September 21, 2022 (<https://www.glamour.com/story/50-states-of-women>)

- Duncan, Colin, and Wendy Loretto. 2004. "Never the Right Age? Gender and Age-Based Discrimination in Employment." *Gender, Work, and Organization* 11(1):95-115.
- Elder, Glenn. 1994. "Time, Human Agency, and Social Change: Perspectives on the Life Course." *Social Psychology Quarterly* 57(1):4-15.
- Elder, Glenn. 1998. "The Life Course as Developmental Theory." *Child Development* 69(1):1-12.
- Filippin, Antonio and Marco Paccagnella. 2012. "Family background, self-confidence and economic outcomes." *Economics of Education Review* 31(5):824–834.
- Galanakis, Palaiologou, A., Patsi, G., Velegraki, I.-M., & Darviri, C. 2016. "A Literature Review on the Connection between Stress and Self-Esteem." *Psychology (Irvine, Calif.)* 7(5):687–694.
- Galinsky, Adam, Erika Hall and Amy Cuddy. 2013. "Gendered Races: Implications for Interracial Marriage, Leadership Selection, and Athletic Participation." *Psychological Science* 24(4): 498–506.
- Ghavami, Negin and Letitia Peplau. 2012. "An intersectional analysis of gender and ethnic stereotypes testing three hypotheses." *Psychology of Women Quarterly* 37(1):113–127.
- Giebels, Ellen and Onne Janssen. 2005. "Conflict stress and reduced well-being at work: The buffering effect of third-party help." *European Journal of Work and Organizational Psychology* 14(2):137–155.
- Greenacre, Tung, N. M., & Chapman, T. (2014). "Self-confidence, and the ability to influence." *Academy of Marketing Studies Journal* 18(2):169–180.
- Grunspan, Daniel, Sarah Eddy, Sara Brownell, Benjamin Wiggins, Alison J. Crowe, Steven M. Z. Goodreau. 2016. "Males Under-Estimate Academic Performance of Their Female Peers in Undergraduate Biology Classrooms." *PloS one* 11(2):148405-148405.
- Guillen, Laura. 2018. "Is the Confidence Gap Between Men and Women a Myth?" *Harvard Business Review*. Retrieved February 1, 2022 (<https://hbr.org/2018/03/is-the-confidence-gap-between-men-and-women-a-myth>).
- Hart, Hanna. 2019. "The Confidence Gap Is A Myth, But A Double Standard Does Exist: How Women Can Navigate." *Forbes*. Retrieved February 1, 2022

- (<https://www.forbes.com/sites/hannahart/2019/03/05/the-confidence-gap-is-a-myth-but-a-double-standard-does-exist-how-women-can-navigate/>)
- Heckman, James J., Jora Stixrud, and Sergio Urzua. 2006. "The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior." *Journal of Labor Economics* 24(3):411–482.
- Hofstede, Geert and Michael Harris Bond. 1988. "The Confucius Connection: From Cultural Roots to Economic Growth." *Organizational dynamics* 16(4):5–21.
- Hogan, H. Wayne. 1978 "IQ Self-Estimates of Males and Females." *The Journal of social psychology* 106(1):137–138.
- Hosang, Georgina & Kamaldeep Bhui. 2018. "Gender discrimination, victimisation and women's mental health." *British Journal of Psychiatry* 213(6):682–684.
- Hudson, Lucas, Richard E., Brent Donnellan, and Kostadin Kushlev. 2016. "Income Reliably Predicts Daily Sadness, but Not Happiness: A Replication and Extension of Kushlev, Dunn, and Lucas (2015)." *Social Psychological & Personality Science* 7(8):828–836.
- Hyde, Bigler, Rebecca S., Daphna Joel, Charlotte Tate, and Sari van Anders. 2019. "The Future of Sex and Gender in Psychology: Five Challenges to the Gender Binary." *The American Psychologist* 74(2):171–193.
- Jones, Martinique K., Keoshia J. Harris, and Akilah A. Reynolds. 2021. "In Their Own Words: The Meaning of the Strong Black Woman Schema Among Black U.S. College Women." *Sex roles* 84(5-6):347–359.
- Judge, Timothy A. and Charlice Hurst. 2007. "Capitalizing on One's Advantages: Role of Core Self-Evaluations." *Journal of Applied Psychology* 92(5):1212–1227.
- Kamas, Linda and Anne Preston. 2012. "The importance of being confident; gender, career choice, and willingness to compete." *Journal of Economic Behavior & Organization* 83(1):82–97.
- Kay, Katty and Claire Shipman. 2014. "The Confidence Gap." *The Atlantic*. Retrieved December 29, 2021 (<https://www.theatlantic.com/magazine/archive/2014/05/the-confidence-gap/359815/>).
- Keane, Lisa and Maria Loades. 2017. "Review: Low self-esteem and internalizing disorders in young people – a systematic review." *Child and Adolescent Mental Health* 22(1):4–15.
- Keller, Tamás. "Self-Confidence and Earning Inequalities: A Test on Hungarian Data." *Czech*

- Sociological Review* 46(3):401–425.
- Kira, Ibrahim A., Hanaa Shuwiekh, Justyna Kucharska, Wahiba Abu-Ras, and Mireille Bujold-Bugeaud. 2017. “The dynamics underlying the negative mental health effects of gender discrimination in two samples: Poland and Egypt.” *Current Psychology* 39(1):74–88.
- Kucharska. 2018. “Cumulative trauma, gender discrimination and mental health in women: mediating role of self-esteem.” *Journal of Mental Health (Abingdon, England)* 27(5):416–423.
- Kushlev, Kostadin, Elizabeth Dunn, and Richard Lucas. 2015. Higher Income Is Associated With Less Daily Sadness but not More Daily Happiness. *Social Psychological & Personality Science* 6(5):483–489.
- Kyler-Yano, Jason and Eric Mankowski. 2020. “What Does It Mean to Be a Real Man? Asian American College Men’s Masculinity Ideology.” *Psychology of Men & Masculinity* 21(4):643–654.
- Lindeman, Meghan, Amanda Durik, and Maura Dooley. 2019. “Women and Self-Promotion: A Test of Three Theories.” *Psychological reports* 122(1):219–230.
- Lindqvist, Erik and Roine Vestman. 2011. “The Labor Market Returns to Cognitive and Noncognitive Ability: Evidence from the Swedish Enlistment.” *American Economic Journal. Applied Economics* 3(1):101–128.
- Livingston, Robert W., Ashleigh Shelby Rosette, and Ella F. Washington. 2012. “Can Agentic Black Woman Get Ahead? The Impact of Race and Interpersonal Dominance on Perceptions of Female Leaders.” *Psychological science* 23(4):354–358.
- Lu, Alexander and Joel Wong. 2013. “STRESSFUL EXPERIENCES OF MASCULINITY AMONG U.S.-BORN AND IMMIGRANT ASIAN AMERICAN MEN.” *Gender & Society* 27(3): 345–371.
- Matud, Pilar. 2004. “Gender differences in stress and coping styles.” *Personality and Individual Differences* 37(7):1401–1415.
- McGlone, Matthew and Abigail Pfister. 2015. “Stereotype Threat and the Evaluative Context of Communication.” *Journal of language and social psychology* 34(2):111–137.
- McLean, Carmen P. and Emily R. Anderson. 2009. “Brave men and timid women? A review of the gender differences in fear and anxiety.” *Clinical Psychology Review* 29(6):496–505.
- Martin, Ashley E. and Katherine W. Phillips. 2017. “What “blindness” to gender differences

- helps women see and do: Implications for confidence, agency, and action in male dominated environments.” *Organizational Behavior and Human Decision Processes* 142:28–44.
- Mead, G. H. 1934. *Mind, Self, and Society*. Chicago: University of Chicago Press.
- Mendez, Beatriz, Melanie Bozzay, and Edelyn Verona. 2021. “Internalizing and externalizing symptoms and aggression and violence in men and women.” *Aggressive Behavior* 47(4):439–452.
- Moakler Jr, Martin and Mikyong Minsun Kim. 2014. “College Major Choice in STEM: Revisiting Confidence and Demographic Factors.” *The Career development quarterly* 62(2):128–142.
- Neblett, Enrique. 2019. “Diversity (psychological) science training: Challenges, tensions, and a call to action.” *Journal of Social Issues* 75(4):1216–1239.
- Niederle, Muriel and Lise Vesterlund. 2007. “Do Women Shy Away From Competition? Do Men Compete Too Much?” *The Quarterly Journal of Economics* 122(3):1067–1101.
- O’Neal Parker, Loanne. 2012. “Black Women Heavier and Happier with their Bodies than White Women, Poll Finds.” *The Washington Post*. Retrieved September 21, 2022 (https://www.washingtonpost.com/lifestyle/style/black-women-heavier-and-happier-with-their-bodies-than-white-women-poll-finds/2012/02/22/gIQAPmcHeR_story.html)
- Patock-Peckham, Julie A, and Antonio Morgan-Lopez. 2009. “Mediational Links Among Parenting Styles, Perceptions of Parental Confidence, Self-Esteem, and Depression on Alcohol-Related Problems in Emerging Adulthood.” *Journal of studies on alcohol and drugs* 70(2):215–226.
- Povey, Jenny, Paul Boreham and Wojtek Tomaszewski. 2016. “The development of a new multi-faceted model of social wellbeing: Does income level make a difference?” *Journal of Sociology* 52(2):155–172.
- Puhl, Andreyeva and K.D. Brownell. 2008. “Perceptions of weight discrimination: prevalence and comparison to race and gender discrimination in America.” *International Journal of Obesity* 32(6):992–1000.
- Pyke, Karen and Denise Johnson. 2003. “Asian American women and racialized femininities: “Doing” gender across cultural worlds.” *Gender & Society* 17(1):33–53.
- Ridgeway, Cecilia L. 2001. “Gender, Status, and Leadership.” *Journal of social issues* 57(4):

637–655.

- Risse, Leonara, Lisa Farrell, and Tim R. L. Fry. 2018. “Personality and pay: do gender gaps in confidence explain gender gaps in wages?” *Oxford Economic Papers* 70(4):919–949.
- Rosenberg, Morris, Carmi Schooler, and Carrie Schoenbach. 1989. “Self-Esteem and Adolescent Problems: Modeling Reciprocal Effects.” *American Sociological Review* 54(6):1004–1018.
- Rosenfield, Sarah, Mary Clare Lennon, and Helene Raskin White. 2005. “The Self and Mental Health: Self-Salience and the Emergence of Internalizing and Externalizing Problems.” *Journal of health and social behavior* 46(4):323–340.
- Rudman, Laurie. 1998. “Self-promotion as a risk factor for women : The costs and benefits of counterstereotypical impression management.” *Journal of Personality and Social Psychology* 74(3):629–645.
- Salavera, Carlos, Pablo Usán, and Pilar Teruel. 2019. “The Relationship of Internalizing Problems with Emotional Intelligence and Social Skills in Secondary Education Students: Gender Differences.” *Psicologia, reflexão e crítica* 32(1):4–9.
- Schneider, Simone. 2016. “Income Inequality and Subjective Wellbeing: Trends, Challenges, and Research Directions.” *Journal of Happiness Studies* 17(4):1719–1739.
- Seitchik, Michael. 2020. “Confidence and Gender: Few Differences, but Gender Stereotypes Impact Perceptions of Confidence.” *The psychologist manager journal*. 23(3-4):194–205.
- Settersten, Richard. 2003. *Invitation to the life course: toward new understandings of later life* Amityville, NY: Baywood Pub. Co.
- Shek, Yen Ling. 2007. “Asian American Masculinity: A Review of the Literature.” *The Journal of Men’s Studies* 14(3):379–391.
- Smith, Jessi L., and Meghan Huntoon. 2014. “Women’s Bragging Rights: Overcoming Modesty Norms to Facilitate Women’s Self-Promotion.” *Psychology of Women Quarterly* 38(4):447–459.
- Stamarski, Cailin S, and Leanne S Son Hing. 2015. “Gender Inequalities in the Workplace: The Effects of Organizational Structures, Processes, Practices, and Decision Makers’ Sexism.” *Frontiers in Psychology* 6:1400–1400.
- Sterling, Adina D., Marissa E. Thompson, Shiya Wang, Abisola Kusimo, Shannon Gilmartin, and Sheri Sheppard. 2020. “The confidence gap predicts the gender pay gap among

- STEM graduates.” *Proceedings of the National Academy of Sciences*, 117(48):30303–30308.
- Thomson, Stephanie. 2018. “A Lack of Confidence Isn't What's Holding Back Working Women.” *The Atlantic*. Retrieved December 29, 2021 (<https://www.theatlantic.com/family/archive/2018/09/women-workplace-confidence-gap/570772/>)
- Toosi, Negin R., Shira Mor, Zhaleh Semnani-Azad, Katherine W. Phillips, Emily T. Amanatullah. 2019. “Who Can Lean In? The Intersecting Role of Race and Gender in Negotiations.” *Psychology of Women Quarterly* 43(1):7–21.
- Visser, Beth A., Michael C. Ashton, Philip A. Vernon. 2008. “What Makes You Think You're so Smart?: Measured Abilities, Personality, and Sex Differences in Relation to Self-Estimates of Multiple Intelligences”. *Journal of Individual Differences*. 29(1):35-44.
- Watson, Natalie N., and Carla D. Hunter. 2016. “I Had To Be Strong: Tensions in the Strong Black Woman Schema.” *Journal of black psychology* 42(5):424-452.
- Wolak, Jennifer. 2020. “Self-Confidence and Gender Gaps in Political Interest, Attention, and Efficacy.” *The Journal of Politics* 82(4):1490–1501.
- Woods-Giscombé, Cheryl L. 2010. “Superwoman Schema: African American Women's Views on Stress, Strength, and Health”. *Qualitative Health Research* 20(5):668-683.
- Young, Jennifer L., HaeDong Kim, and Laura Golojuch. 2021. “Race was something we didn't talk about”: Racial Socialization in Asian American Families. *Family Relations* 70(4): 1027-1039.
- Yu, Zonghuo, and Li Chen. 2016. “Income and Well-Being: Relative Income and Absolute Income Weaken Negative Emotion, but Only Relative Income Improves Positive Emotion”. *Frontiers in Psychology* 7:2012–2012.
- Zou, Linda, and Sapna Cheryan. 2017. “Two Axes of Subordination: A New Model of Racial Position”. *Journal of Personality and Social Psychology* 112(5):696–717.