

**Women's Tomorrow: Examining Sex-based Discrimination,  
Future Expectations and System Justification Beliefs**

Kirsten Wildschut (6802435)

Dr. Loïs Schenk

Youth Development and Social Change, Utrecht University

202300008 Master Project: Thesis

June 2024

Word count: 5990

*Disclaimer: This thesis has been written as a study assignment under the supervision of an Utrecht University teacher. Ethical permission has been granted for this thesis project by the ethics board of the Faculty of Social and Behavioral Sciences, Utrecht University, and the thesis has been assessed by two university teachers. However, the thesis has not undergone a thorough peer-review process so conclusions and findings should be read as such.*

## **Abstract**

This study examines the association between discrimination due to sex and future expectations among female secondary vocational education students in the Netherlands while focusing on the influence of system justification beliefs (SJB) on this association – the belief that society treats everyone equally. Positive future expectations are crucial for mental wellbeing, as they positively influence adolescent development, resilience, and goal-setting. It was hypothesized that sex-based discrimination negatively impacts female students' future expectations and that this association is negatively influenced by SJB. This cross-sectional study, including 653 Dutch female vocational students ( $M_{\text{age}} = 17.2$ ), used validated self-report measures to assess sex-based discrimination, future expectations, and SJB while controlling for age via multiple linear regression analyses. Results showed a small significant negative association between sex-based discrimination and future expectations, indicating that women who experience sex-based discrimination have less positive expectations for their future. However, this association was not dependent on SJB. SJB were a significant predictor of future expectations themselves, indicating that women who believe society to be equal have more positive expectations for the future. These findings contribute to the scientific knowledge of these constructs and have important implications for policymakers.

Interventions that reduce sex-based discrimination and support an equal society can improve future expectations among women. Future research should use a longitudinal design to establish causal relationships between the constructs and should use a heterogeneous sample for better generalizability. This study highlights the importance of creating an equal society where everyone, regardless of gender, can look forward to a brighter future.

*Keywords:* sex-based discrimination, future expectations, gender equality, system justification, mental health, youth

## **Introduction**

Being treated differently because of your sex can be part of the contemporary reality for women in the Netherlands. This different treatment is defined as sex-based discrimination and unfolds itself in various contexts, for example in health care, sports, academics, working environments, and also through sexual intimidation (Ramiro-Sánchez et al., 2018). CBS (2022) shows that Dutch women experience three times as much discrimination as Dutch men do. The Netherlands is improving on gender equality, which entails that both women and men are treated equally in society, but there is still much room for improvement. The Dutch rank 28th place on the Global Gender Gap Index, whereas neighboring countries perform better, with Belgium in 10th place and Germany in 6th (Global Gender Gap Report, 2023). Gender inequality and sex-based discrimination are strongly associated, which is problematic because sex-based discrimination is proven to be a predictor of various mental health issues among women (Hackett et al., 2019; Shastri, 2014). Additionally, sex-based discrimination leads to unequal chances in society for women (Ansari & Shahid, 2022). It is associated with increased levels of depression, psychological distress, and feelings of unfairness; as well as worse mental functioning, reduced trust in people, and lower life satisfaction because of diminished opportunities in life (Bell & Juvonen, 2020; Vigod & Rochon, 2020).

Most research concerning sex-based discrimination focuses on mental health effects experienced in the present (Bell & Juvonen, 2020; Hackett et al., 2019; Lewis, 2017; Ramiro-Sánchez et al., 2018; Vigod & Rochon, 2020). However, future expectations (beliefs or expectancies about the likelihood of a specific event occurring in the future) are an important part of (mental) wellbeing, especially for youth (Oettingen & Mayer, 2002). Having positive expectations for the future in adolescence predicts better health and wellbeing in adulthood (Kim & Kim, 2020). Future expectations influence both planning and goal setting, which makes them an important predictor of adolescent development and behavior, and therefore,

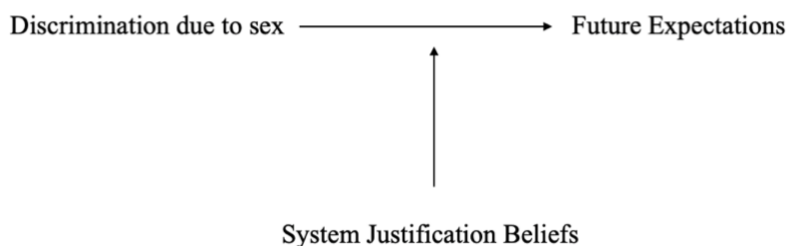
crucial to investigate among youth (Bandura, 2001; Seginer, 2008; Sipsma et al., 2011). Positive expectations of the future during adolescence are associated with higher levels of resilience in youth, facilitating a smoother transition into adulthood (Aronowitz, 2005; Stoddard & Pierce, 2015). Negative future expectations are associated with higher perceived stress, risk behavior, and lower life satisfaction (Park & Suh, 2023). Although the focus of sex-based discrimination research remains predominantly on immediate mental health effects, some exploration of future expectations has been done, which will be discussed in the theoretical framework. Investigating future expectations among youth is crucial as adolescents are on the verge of joining and contributing to adult society. Understanding more about future expectations regarding sex-based discrimination is important, as sex-based discrimination is known to (negatively) influence present well-being. Additionally, looking at future expectations instead is crucial because they influence adolescent development (Aronowitz, 2005; Kim & Kim, 2020; Stoddard & Pierce, 2015). This deepened understanding of the effects of sex-based discrimination on future expectations can inform evidence-based policies and interventions to help move toward a fair society that women can benefit from mentally.

Secondary vocational education students are the youngest group of Dutch youth to pursue further education after graduating high school. Therefore, compared to students in higher education, they will also be the first to graduate and participate in society as functional working adults (Ministerie van Onderwijs, Cultuur en Wetenschap, 2021). Because ‘adult future’ will start the earliest for these students, this study focuses on this group’s female future expectations, resulting in the first research question: “*Is there a relationship between Discrimination due to Sex and Future Expectations among Dutch female secondary vocational education students?*”

Considering System Justification Beliefs (SJB) alongside sex-based discrimination and future expectations is crucial, as SJB offer insight into how people perceive and justify societal norms, including discrimination. SJB represent the cognitive framework through which an individual (un)consciously justifies the current status quo of society (Jost & Hunyady, 2003; Van Der Toorn & Jost, 2014). Having high SJB entails being convinced that society is fair and offers equal opportunities to everyone in it (Jost et al., 2007; Jost, 2018). Haack & Sieweke (2017) found that SJB can serve as a coping mechanism to help individuals feel better in difficult times by either deliberately closing their eyes to injustice or by simply justifying it. Research shows that SJB can buffer the adverse effects of societal inequalities and perceived discrimination on various mental health outcomes, even if this person is part of the discriminated group (Bahamondes et al., 2019; Häßler et al., 2018). Individuals from marginalized groups with strong SJB tend to experience better mental health and less stress, despite being discriminated against (Napier et al., 2020). However, no research has been done about the role of these SJB regarding the association between sex-based discrimination and future expectations, resulting in the second research question of this thesis: *“To what extent is the relationship between Discrimination due to Sex and Future Expectations dependent on System Justification Beliefs?”*

**Figure 1**

*Visual Model of the Research Questions*



## **Theoretical Framework**

### **Sex-based Discrimination and Future Expectations**

Perceiving different treatment because of your sex can be a stressor affecting various mental health indications among women, including their future expectations, which play a crucial role in healthy adolescent behavior and development (Kim & Kim, 2020; Seginer, 2008; Sipsma et al., 2011). Tajfel et al. (1971) proposed the socio-psychological Social Identity Theory, which argues that identifying with a group similar to yourself (the ‘in-group’) is an important source of pride, self-esteem, and a sense of belonging. However, it can also lead to competition and discrimination toward people who are not part of this ‘in-group’, the so-called ‘out-group’ (Tajfel et al., 1971). Our patriarchic society is rooted in a system that historically prioritizes men as the standard, meaning that the ‘in-group’ consists of men, and the ‘out-group’ consists of women (Hegarty & Parr, 2023; Sultana, 2010). Even though Western societies strive for gender equality, modern-day society still (un)consciously favors men because of its history where women’s rights were non-existent (Lewis, 2017). As the ‘out-group’, women can face discrimination based on gender stereotypes that undermine their intelligence and capabilities (Flax, 2018). Discrimination increases the probability of individuals from marginalized groups internalizing negative beliefs about their abilities, especially when they face reduced opportunities in life (Sosoo et al., 2020; Quinn et al., 2015; Walch et al., 2016). This risk exists among all groups that encounter discrimination, including women who internalize the belief that they are the inferior sex (Hammond et al., 2016). These findings can be explained by the Social Comparison Theory by Festinger (1957), stating that individuals tend to look to outside images to evaluate their own possibilities and abilities. In other words: people tend to compare themselves to other people in their surroundings. Being part of a marginalized group, such as women, automatically means taking part in upward social comparison: they compare themselves with people from a higher societal rank, in this

case, men. Upward social comparison negatively impacts self-esteem, self-evaluations, and motivation, all influencing future expectations (Aspinwall, 2013; Festinger, 1957; Reh et al., 2018; Van de Ven, 2015). The process of internalizing reduced capacities can lead to women lowering their expectations for both professional and personal achievements (Fisk & Overton, 2019). Research shows that the conviction that you are less capable or deserving is associated with adjusting and lowering your future expectations (Azizli et al., 2015). It is empirically proven that being part of the 'out-group' and internalizing the inferiority surrounding your group can also result in self-doubt and low self-esteem, both concepts associated with negative future expectations (Caprara et al., 2010; Rivera et al., 2024). Kaiser et al. (2004) found that the emotional impact of perceived sex-based discrimination is dependent on future expectations; women with a pessimistic outlook on life perceive discrimination as more stressful and they feel like they have fewer resources to cope with their shortcomings in the future. Believing you have few resources to cope with adversity is also associated with lower future expectations (Lent et al., 2017; Schwarzer & Renner, 2000). Barreto et al. (2009) state that sexism is a self-fulfilling prophecy, meaning that sex-based discrimination influences women's behavior: women who perceive more sexism lower the future goals they set for themselves. Fernández et al. (2006) also found that the vocational goals of women are influenced by perceived sexist attitudes; women often choose more 'feminine' career paths, such as nursing or teaching, because of external motivations (even if those contradict their internal motivations) and a lack of sense of belonging (Good et al., 2012). This implies that women's future orientation and performance are influenced by external influences of sexist beliefs and the fact that women do not feel like they belong in more male-dominated fields. This can be theoretically explained by the Pygmalion Effect from Rosenthal (2010). This effect entails that high expectations lead to improved performance, whereas low expectations lead to worsened performance. So, being a woman and being part of the 'out-group' means

societal expectations of you are lower, resulting in worsened performance and eventually starting this downward spiral of self-fulfilling sexism (Bullough et al., 2021; Ellemers, 2018; Good et al., 2012). In conclusion, the acceptance of women being the ‘out-group’ by upward comparing themselves and experiencing low societal expectations leads to stress, self-doubt, lower self-esteem, and the idea of having fewer resources to cope in future situations, all associated with negative future expectations. Therefore, it is hypothesized that discrimination due to sex is negatively associated with future expectations among Dutch female vocational education students (H<sub>1</sub>).

### **System Justification Beliefs**

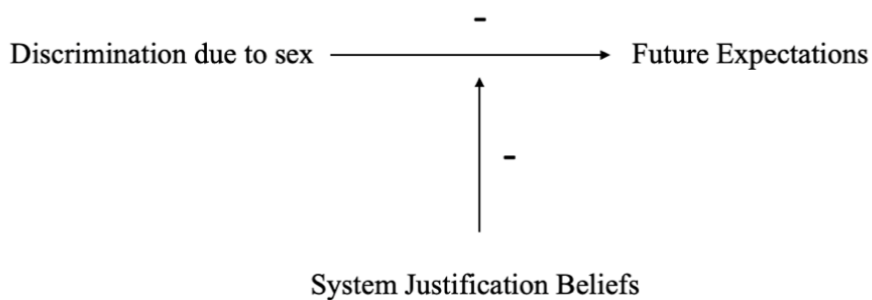
Building upon the effect of (the internalization of) sex-based discrimination on future expectations, it is crucial to consider the role of SJB in forming women’s perceptions of opportunity and inequality within society. As mentioned, SJB represent the (un)conscious acceptance of the existing social order and the conviction that our society is fair and offers equal opportunities to everyone in it (Jost et al., 2007; Van Der Toorn & Jost, 2014). The System Justification Theory states that individuals tend to be positive toward the societal status quo, even if that includes rationalizing and/or downplaying inequalities (Jost & Van Der Toorn, 2012). In the context of sex-based discrimination, women with strong SJB are more likely to justify the existing gender hierarchy and the fact that they are part of the ‘out-group’ of patriarchic society (Sultana, 2010). As a result of this, they may interpret perceived sex-based discrimination differently than women who have low SJB (Mouafo & Nzekaih, 2021). Women with low SJB (who do not believe society is fair and equal for everyone) often perceive sex-based discrimination to be a systematic societal issue of inequality, however, women with high SJB (who do believe that society is fair and equal for everyone) disagree (Napier et al., 2020). The difference between both groups of women is feelings of injustice.



Women who lack SJB are more attuned to inequalities in the system, which could result in less positive future expectations due to feelings of hopelessness (Jost, 2018; Van Der Toorn & Jost, 2014). In contrast, women with high SJB could look away, rationalize, or downplay sex-based discrimination because they believe in a fair system, which buffers its influence on future expectations (Mouafo & Nzekaih, 2021). The conviction that everyone in society has equal opportunities can buffer the (hypothesized negative) association between sex-based discrimination and future expectations. Ollroge et al. (2022) found that among college students, women who perceived sexist attitudes toward them had lower expectations that they would succeed in their future jobs. However, this relationship between perceived sexist attitudes and future expectations of success was moderated by rejection sensitivity, meaning that among women who are more sensitive toward sexist attitudes, their future expectations will be lower when they experience sex-based discrimination than less sensitive women. Women with low SJB are more attuned and sensitive to sex-based discrimination, whereas high SJB women are less (Van der Toorn & Jost, 2014). Therefore, it is hypothesized that women with strong SJB show weaker negative associations between discrimination due to sex and their expectations of the future (H<sub>2</sub>). Their beliefs in a fair society buffer against the psychological effects of sex-based discrimination.

**Figure 2**

*Visual Model of the Hypotheses*



## **Methods**

### **Methodological design**

Data from the YOUth Got Talent project was used, a longitudinal study on adolescent (16+) wellbeing among students in three secondary vocational schools in Utrecht, the Netherlands. A total of 1280 adolescents ( $M_{\text{age}} = 17.4$ ,  $SD = 1.89$ ) participated in this project, with ages ranging from 16 to 29 years old with 55% being female and 46% being male. The data was collected during three different waves, the first wave starting in September 2019 and the last wave ending in January 2021. This study will use only the first wave as not all variables were measured during all three waves. Since discrimination due to sex was only measured during the first wave, the decision was made to exclusively use data from this initial wave, making this research cross-sectional. The response rate of adolescents was 81% during the first wave. The study consisted of a voluntary self-report questionnaire conducted both physically (during the first wave) and online (during the second and third wave due to the global pandemic COVID-19). No reward was given to the participants afterward.

### **Sample**

Because this thesis focuses on sex-based discrimination among women, only female participants were selected for analysis. This sample consisted of 705 students ( $M_{\text{age}} = 17.3$ ,  $SD = 1.78$ ), 52 of them were extracted due to missing variable scores on the used variables. Finally, the sample that the analysis was conducted on consisted of 653 female students ( $M_{\text{age}} = 17.2$ ,  $SD = 1.60$ ). Since the sample only consisted of secondary vocational education students, the results of this study suffered from selection bias, meaning that the generalization of the findings to populations with different educational backgrounds is limited (Deschacht & Goeman, 2015). Additionally, measurement bias should also be considered, as all variables

are self-reported and thus at risk for the influence of social desirability (Brenner & Delamater, 2016).

## **Procedure**

Three secondary vocational schools in Utrecht, the Netherlands participated. These schools teach students in creative, technical, and health educational fields, thereby preparing adolescents for a specific and practical vocation. The schools were divided into four levels (entry, basic, professional, middle-management). Participants were recruited via their schools that chose to participate in the YOUth Got Talent study. The participants were informed of the purpose of the study and gave active consent. Self-report questionnaires were administered in the physical classroom during the first wave. During the second and third wave, data was obtained online due to lockdown measures because of COVID-19. A quarter of the participants dropped out after the first wave. The survey took 20-30 minutes to complete and data was obtained by trained researchers of the project. The entire questionnaire was in Dutch.

## **Ethics**

Participants gave active consent and were informed that all data would be anonymized. Participating was voluntary and participants could withdraw at any time or leave any questions unanswered if they did not want to answer. Ethical approval for the project was granted by the Ethics Assessment Committee of the Faculty of Social Sciences at Utrecht University in 2018. UU-SER, the Student Ethics Review & Registration Site at Utrecht University, obtained ethical approval for using the YOUth Got Talent dataset for this thesis. All responses were anonymous.

## **Measurements**

In Appendix II. all questions, measurements, and scales are shown.

### ***Future expectations***

Future expectations were measured using eight different statements on adulthood goals (e.g. ‘How big do you think the chance is that you get a well-paying job, own a house, have a happy family life?’) that were answered on a 5-point Likert scale (1 – very small to 5 – very big). The mean score was calculated for each participant, with a higher score indicating more positive future expectations. 25 cases were deleted due to missing data. The internal consistency of this scale is high, as Cronbach’s  $\alpha = .806$ , in line with previous research about its validity (Jessor et al., 1990).

### ***Discrimination due to sex***

Discrimination due to sex was measured using one question concerning sex-based discrimination (‘How often do the following people treat you unfairly or badly because you are a boy/a girl?’) within three different contexts (teachers at school, other adults outside of school, and peers within school). These were answered using a 5-point Likert scale (1 – never to 5 – very often). All missing data (N = 37) was deleted. The mean score was calculated, with higher scores indicating more perceived sex-based discrimination. The internal consistency of the scale was high with  $\alpha = .844$ .

### ***System Justification Beliefs***

SJB were measured using eleven different statements about how fair and equal Dutch society is according to the participant (e.g. ‘In the Netherlands, there are equal opportunities for everyone, regardless of where you come from and who you are.’). These statements were

answered using a 7-point Likert scale (1 – totally disagree, 7 – totally agree). The mean score was calculated, with higher scores indicating higher SJB, meaning that the participant is more convinced that our society is fair and equal. 48 cases were deleted due to missing data. The internal consistency of this scale is high, with  $\alpha = .912$ , in line with Godfrey et al. (2019).

### ***Control variables***

This study wanted to control for both age and migration background. Age is an important factor that influences both perceived discrimination and future expectations. Younger individuals just started to form their own identities, which could make them more sensitive to discrimination because they have a less secure sense of self (Sharp & Wall, 2018). However, some research contradicts this by arguing younger adolescents perceive less sex-based discrimination because of lower feminist knowledge and awareness (Borrell et al., 2011; Leaper & Brown, 2008). Either way, age can influence the perception of discrimination. Age can also influence future expectations, as future planning and thinking increase as adolescents get older. Younger adolescents often think less about the future compared to older adolescents because their prefrontal cortex is less developed (Dumontheil, 2014). Also, older adolescents have more adult responsibilities, so they are forced to think about their futures more than their younger peers (Wehmeyer & Shrogren, 2017). Age was measured by the birth year of the participant. Missing data (N = 2) was deleted.

A recent and representative Dutch study (HBSC, 2021) shows that adolescents with a migration background experience more sex-based discrimination compared to adolescents without a migration background, in line with previous research by McMahon & Kahn (2017). A migration background also influences future expectations, both positively and negatively. Feliciano & Lanuza (2016) show that immigrant adolescents have more positive expectations for their future because of comparison to their (parents') birth country. The Nationale

Jeugdgraad (2020) also found this in their recent study among Dutch adolescents. Migration background was measured by three response options: Dutch, other western, and non-western. To use this variable in the multiple linear regression analysis, a new variable was created, which divided the sample into two categories: having no migration background (Dutch) or having a migration background (other western and non-western). This way the variable can be included in the multiple linear regression analysis. Of the final sample, 72% had no migration background and 28% did. Missing data (N = 2) was deleted.

### **Analyses strategy**

For the analyses, the program JASP with version 0.18.3 was used. First, the data was prepared. The mean scores of variables consisting of multiple statements were computed into the mean variables used in the analyses. It was checked whether all these variables were normally distributed. The assumptions of multicollinearity and homoscedasticity were checked using the VIF score and a scatterplot. Participants with missing data on the variables were deleted from the set. For all scales, the internal reliability was tested using Cronbach's alpha ( $\alpha$ ).

Next, descriptive statistics and bivariate correlations were requested for all used variables (Tables 1 and 2). To test the first hypothesis, a multiple linear regression analysis was conducted that included the independent variable discrimination due to sex, the dependent variable future expectations, and the covariate age. Migration background was left out of the analysis because of the lack of correlation with the (in)dependent variable among the sample (Table 2).

To test the second hypothesis, the interaction term testing the moderation was computed by multiplying the variable discrimination due to sex with the variable system justification beliefs. A multiple linear regression was conducted including the variables future

expectations, discrimination due to sex, system justification beliefs, and the interaction term calculating for a possible moderation effect of system justification beliefs on the main association between discrimination due to and future expectations. Age was included as a covariate.

## **Results**

### **Descriptive results**

Tables 1 and 2 show the means, standard deviations, and correlations between all variables. The mean of future expectations was above average with a mean of 3.724 on a 1-5 scale. Indicating that participants think the chance of achieving various indicators of a positive future (having a house, a job that pays well, a happy family life, etc.) lies between neutral (3) and big (4). Scores on perceived discrimination due to sex were low with a mean of 1.343 on a 1-5 scale, indicating that most participants do not (1) or seldom (2) feel like they are treated differently based on their sex. System justification beliefs scores were slightly above average with a mean of 4.336 on a 1-7 scale. The standard deviation was higher than that of both the dependent and independent variables, indicating more variance in how fair and equal participants perceive society. Future expectations had significant correlations with all variables except for migration background, indicating no association between having a migration background and future expectations. The correlations between future expectations and SJB, discrimination due to sex, and age are considered weak correlations (Schober et al., 2018). In conclusion, having positive future expectations is associated with lower discrimination due to sex, higher SJB, and being younger. Because the variable migration background only significantly correlates with age and not with the (in)dependent variable, the choice was made to leave this covariate out of the analyses.

Additionally, discrimination due to sex has a weak but significant negative correlation with SJB, meaning that the more a participant experiences sex-based discrimination, the less they believe that society treats everyone equally. Sex-based discrimination is weakly positively correlated with age, indicating that discrimination due to sex occurs more often among older participants.

**Table 1**

*Descriptive Statistics*

	Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
Future Expectations	682	25	3.724	0.518	1.000	5.000
Discrimination due to Sex	670	37	1.343	0.647	1.000	5.000
System Justification Beliefs	659	48	4.336	1.009	1.000	7.000
Age	705	2	17.335	1.782	16.000	29.000
Migration background	703	4	0.280	0.453	0.000	1.000

**Table 2**

*Pearson's Correlations*

Variable	1	2	3	4	5
1. Future Expectations	-	-0.215**	0.370**	-0.113*	0.069
2. Discrimination due to sex	-0.215**	-	-0.124*	0.116*	0.064
3. System Justification Beliefs	0.370**	-0.124*	-	-0.055	0.067
4. Age	-0.113*	0.116*	-0.055	-	0.125**
5. Migration background	0.069	0.064	0.067	0.125**	-

*Note.* \* $p < 0.5$ , \*\* $p < 0.001$



## Main analyses

### *Hypothesis 1: the association between Discrimination due to Sex & Future Expectations*

Table 3 shows the results of the analysis of the first hypothesis, testing whether there is a relationship between discrimination due to sex and future expectations. The association between discrimination due to sex and future expectations was found to be negative and significant ( $B = -0.161$ ,  $SE = 0.030$ ,  $p < .001$ ), indicating that girls who perceive more discrimination due to sex have less positive expectations for the future. Age was also negatively and significantly associated with future expectations ( $B = -0.032$ ,  $SE = 0.012$ ,  $p = 0.006$ ), indicating that older participants have less positive expectations for their future. Age and discrimination due to sex explain 5,7% of the variance in future expectations, which is a low but significant fit for predictors (Rights & Sterba, 2019). With this, the first hypothesis is accepted: discrimination due to sex is negatively associated with future expectations, indicating that being discriminated against because of your female sex predicts having less positive expectations for the future.

**Table 3**

*Multiple Linear Regression predicting Future Expectations*

Variable	B	SE	95% CI	$\beta$	p
Constant	4.494	0.204	[3.68, 3.76]	-	< .001
Discrimination due to sex	-0.161	0.030	[-0.22, -0.10]	-0.202	< .001
Age	-0.032	0.012	[-0.05, -0.01]	-0.104	0.006

*Note.*  $R^2 = .057$ ,  $F(1.666) = 19.938$ ,  $p < 0.001$

### ***Hypothesis 2: Testing for the influence of SJB***

Consequently, another multiple regression analysis was conducted to test the second hypothesis (SJB have a negative influence on the association between discrimination due to sex and future expectations) while still controlling for age. The model included the dependent variable future expectations, the independent variable discrimination due to sex, the covariate age, the variable system justification beliefs, and also the newly computed variable system justification beliefs\*discrimination due to sex, the interaction term testing for possible moderation. Table 4 shows that this hypothesis is rejected, as the interaction term was not significant ( $B = 0.024$ ,  $SE = 0.026$ ,  $p = .362$ ), indicating that SJB do not influence the association between discrimination due to sex and future expectations. In this model, discrimination due to sex stayed negatively and significantly associated with future expectations ( $B = -0.233$ ,  $SE = 0.115$ ,  $p < .05$ ), meaning that a higher degree of sex-based discrimination is associated with less positive expectations for the future. System justification beliefs were positively associated with future expectations ( $B = 0.143$ ,  $SE = 0.041$ ,  $p < .001$ ), meaning that if participants were more convinced that society is fair and equal to everyone in it (high SJB) they also had more positive expectations for their future. Additionally, age remained a significant predictor of future expectations, even after controlling for SJB, ( $B = -0.029$ ,  $SE = 0.012$ ,  $p = .012$ ). On average, older participants have less positive expectations for their future compared to younger participants. The entire model explained 17% of variance in future expectations ( $R^2 = .170$ ), which is a medium fit (Rights & Sterba, 2019). The combined influence of discrimination due to sex, age, and system justification beliefs were all significant in predicting future expectations. The interaction term was not significant, resulting in the rejection of the second hypothesis: the association between discrimination due to sex and future expectations is not dependent on system justification beliefs.

**Table 4***Multiple Linear Regression predicting Future Expectations*

Variable	B	SE	95% CI	$\beta$	p
Constant	3.785	0.280	[3.24, 4.34]	-	< .001
Discrimination due to sex	-0.233	0.115	[-0.46, -0.01]	-0.289	.044
System Justification Beliefs	0.143	0.041	[0.06, 0.22]	0.275	< .001
System Justification Beliefs*Discrimination due to sex	0.024	0.026	[-0.03, 0.08]	0.138	.362
Age	-0.029	0.012	[-0.05, -0.01]	-0.090	.012

*Note.*  $R^2 = .170$ ,  $F(1.648) = 33.124$ ,  $p < 0.001$ 

## Discussion

### Discussion

Patriarchic society challenges women in various ways. Being discriminated against due to your sex may impact future expectations negatively by internalizing this inferiority (Hammond et al., 2016; Lewis, 2017; Sultana, 2010). Having high SJB implies believing that society treats everyone equally, so men and women as well (Jost, 2018). This belief could potentially buffer the negative impact of being discriminated against on your future expectations. This study examined the association between discrimination due to sex and future expectations among females, including the potential influence of SJB on this association.

In line with expectations, a small negative effect of discrimination due to sex on future expectations was found, indicating that women who perceive more sex-based discrimination, have less positive future expectations. This is in line with Barreto et al. (2009), Fernández et al. (2006), and Rivera et al. (2024), stating that being discriminated against due to your sex results in altering your behavior based on how society views and treats you. The Social

Identity Theory by Festinger (1957) and the Social Comparison Theory by Tajfel et al. (1971) explain that women alter their behavior based on low external beliefs and expectations about their abilities. As the 'out-group' in patriarchal society, women can internalize the idea that they are less capable, and by altering their behavior based on this idea, they will potentially lower their future expectations. Additionally, research shows that both gender and education influence the effect that discrimination due to sex can have. Dambrun (2007) emphasizes the gender differences in subjective distress by stating that women score higher on both mental distress and perceived discrimination. Andersson & Harnois (2020) found that higher education predicts a woman's odds of being discriminated against due to their sex, however, they show less sensitivity to it. Contrary to these women, women in lower education are less likely to be exposed to sex-based discrimination while they are more sensitive to it. So, the effects of discrimination due to sex will be greater for females from low education levels, just like the female vocational students from this study's sample.

Contrary to expectations, there was no influence of SJB on this association; the existing negative association between discrimination due to sex and future expectations is not dependent on SJB. SJB can be used in different ways to justify existing inequality. Landry & Mercurio (2009) found that the association between sex-based discrimination and psychological distress is mediated by a sense of control: women who perceive more discrimination due to their sex experience less control, which results in more psychological distress. SJB do not tell us whether the participant feels in control or not, just how they view society in general (Jost, & Van der Toorn, 2012). SJB can act as a buffer as they can be used as both a coping mechanism and a blindfold. They can buffer the association by justifying existing patriarchy or by making discrimination less apparent. However, having high SJB and believing that society is fair while experiencing the opposite (because you are discriminated

against) can lead to frustration and contradiction, which could negatively impact expectations for the future.

Although it was not a research question in itself, this study revealed that SJB were a significant predictor of future expectations: believing that society is fair and treats everyone equally is associated with having more positive expectations for the future. This is in line with Owuamalam et al. (2021) and Caricati et al. (2024), who found that women who believe that (patriarchic) society is fair, even though they are treated unequally compared to men, experience less distress and are more hopeful toward their future. Women who conform to patriarchy by showing desired and ‘gender-appropriate’ behavior, will be rewarded by living a more comfortable life without being criticized or judged for their deviant behavior (Heise et al., 2019). Research shows that it is easier for marginalized groups to conform to the existing hierarchy, as people who challenge the status quo often will be punished for doing so (Burriss, 2012; Mikolajczak et al., 2022). Subsequently, gender-conforming behavior and acceptance of the status quo provide an easier way of life for women as well. For example, Bahamondes et al. (2021) found that, among marginalized groups, SJB are surprisingly high. People who experience discrimination more often are convinced that society is fair, which positively impacts their future expectations and mental health. This could be argued to be coping, however, only qualitative research can provide an answer to that question.

## **Limitations**

The sample of this study consisted solely of Dutch female secondary vocational students, which means selection bias occurred. Because the sample is homogeneous, the results are not generalizable to other groups with different characteristics, such as a different gender, age, or educational level (Hernán et al., 2004). This study provides insight into these variables among young female vocational students in the Netherlands, not among the whole

population. Additionally, measurement validity threats also play a role. Even though the measures are validated and internally consistent, discrimination and future expectations are sensitive to subjectivity so results must be interpreted with care. Some participants might not perceive something as discrimination, whereas others would (Elasz & Gaddy, 1998).

Furthermore, with self-report measurements, there is a risk of measurement bias due to social desirability, which influences outcomes (Brenner & Delamater, 2016). Lastly, not all variables were measured during all three waves. Since the variable discrimination due to sex was only measured during wave 1, the decision was made to only use data from wave 1, making this study cross-sectional. This is important to keep in mind when interpreting the results, as a disadvantage of cross-sectional research is that it is difficult to identify causal relationships between variables. Since data is collected at one specific point in time, it is difficult to determine whether less positive future expectations are the result of increased exposure to sex-based discrimination. We can only speak of associations rather than causal relationships (Morrow, 2010).

## **Strengths**

This study contributes to existing literature by examining the association between sex-based discrimination and future expectations, rather than immediate mental health effects. This study is also valuable to the existing literature about system justification, as it is an upcoming topic in scientific research. It adds more insight into how this emerging construct relates to both discrimination due to sex and future expectations while exploring the potential influence of SJB on the main association. Additionally, this study stresses the importance of addressing the inequalities that patriarchic society can create for women, as sex-based discrimination negatively impacts both system justification and future expectations, while system justification is proven to be positively associated with future expectations.

## **Future research**

Future research can further investigate the association between both discrimination due to sex, SJB, and future expectations. By adding psychological mechanisms into the analyses, for example, self-esteem, coping, or resilience, a more comprehensive view can be gained of all dynamics that play a role in the association between sex-based discrimination and future expectations and in justifying inequality. To do this, qualitative research can provide more in-depth answers as to why and how women use SJB to justify inequalities they encounter in life and also how they perceive sex-based discrimination. It also provides an opportunity to talk more in-depth about how and why women may justify that they are being treated differently based on their sex and whether this influences their view on society in general. Additionally, it allows for an opportunity for women to become aware of how they may unintentionally justify inequality. The findings of qualitative research can identify variables that can be tested quantitatively, ensuring a more comprehensive analysis.

Moreover, this study could be replicated with a larger and more diverse sample, as this study's sample consisted of a homogeneous group, to make the results more generalizable to the whole population. For example, male participants, different generations, educational levels, and sexualities could be included. It would also be of value to conduct this research longitudinally, to be able to make statements about how these constructs relate to each other over time and make more causal statements. This study could also be partially replicated by looking at other forms of discrimination, such as racism, ageism, or homophobia.

## **Implications**

This study emphasizes the negative impact that discrimination due to sex can have on women's future expectations and the importance of addressing these inequalities, as having positive future expectations is crucial for positive mental health, especially for youth (Kim &

Kim, 2020; Oettingen & Mayer, 2002). This study also provides new insights that can contribute to existing literature and future interventions or policies. It emphasizes the importance of an equal society that everyone can benefit from since positive future expectations are associated with experiencing less sex-based discrimination and also with the belief in a fair and equal society (SJB). Policymakers can use these results to develop interventions focused on reducing the prevalence of sex-based discrimination. Additionally, it is important to raise awareness on this topic by talking about it. Many marginalized groups may not realize they are oppressed or being discriminated against, just because they are used to their inferior position and how they are treated; they simply do not know any better (Becker & Swim, 2011; West & Eaton, 2019). More research is needed to be able to fully understand the relationship between discrimination due to sex, future expectations, the influence of SJB, and also the role that other important factors may play in this. For example, the extent to which individuals believe they can influence their current situation, also known as the sense of control (Landry & Mercurio, 2009).

## **Conclusion**

Positive future expectations are crucial for the mental health of youth. This current study examined the influence of discrimination due to sex on future expectations among Dutch female secondary vocational students while examining whether this association is dependent on their personal belief that society is equal and fair to everyone (SJB). Results show that sex-based discrimination negatively impacts future expectations, however, SJB do not influence this association.

Based on this study's results, it is important to strive for an equal society where sex-based discrimination has no place. This study contributes valuable insights that can inform future policies and interventions aimed at reducing discrimination and raising awareness of



gender inequality. This way, future expectations of young women can be impacted positively. Creating an equal society for all will also naturally increase the conviction among people that the system is in fact fair and offers equal opportunities for everyone in it (SJB), which this study also found to positively impact future expectations and thus contribute to a mentally happy and healthy society. In short, realizing and acknowledging equality in society is crucial for women stuck in patriarchal systems to look forward to brighter futures.

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## **Appendix I. Reflection on Interdisciplinarity**

To fully understand the interrelatedness of discrimination due to sex, future expectations, and system justification, it is necessary to combine multiple disciplines to get a holistic view of the matter. This study combines psychology, sociology, and politics by comparing personal experiences to societal issues and studying their overlap. The theory behind the influence of discrimination on marginalized groups is rooted in social psychology by addressing upward social comparison and social identity (Festinger, 1957; Tajfel et al., 1971). The experience of marginalized groups is dependent on their experience of how they compare to patriarchal society in general and with that, to men. However, to know where you stand as a woman in society, it is important to have a clear understanding of how this society operates. This entails awareness and (un)acceptance of perceived (in)equality, personal experiences of discrimination but also the personal conviction of how fair it is that you are being treated differently.

### **Psychology**

Psychology provides insights into an individual's perception and awareness of inequality or unfair treatment they encounter in their personal lives. Psychology provides theories (social identity, social comparison) that explain why and how women deal with external beliefs about their capabilities and how this could influence their personal expectations for their future and view of self. Internalizing stereotypes is a psychological process that has to do with one's social identity compared to others. For women in a society made for men, comparing themselves to men automatically means upward social comparison, a threat to women's self-esteem and sense of self.

## **Sociology**

This study does not only depend on how an individual perceives and gives meaning to society (psychological), but also how society is structured in itself. Sociology is needed to provide a panoramic view by looking at society and how it functions. While gender equality is improving, western society is still (un)consciously designed for men because patriarchal society has been the standard for years. Because of this, male dominance is the standard, which also influences how women look at themselves. A society that favors men results in having certain stereotypes about women: about their capabilities, jobs that are 'feminine', what correct female behavior is, and also the purpose that women (should) have in life. These stereotypes derive from a system that historically favors men. Luckily, in Western society, we have become more aware of these inequalities and try to fight this. However, gender inequality still exists and has been worsening in the Netherlands over the last couple of years. It is a fight that has not yet been won and because we have improved over the last decades, people tend to deny that any gender inequality still exists.

## **Structure-agency debate**

While writing this study, I was reminded of the structure-agency debate. The influence that society (structure) has on individuals (agency) becomes apparent in the prevalence of discrimination. How an individual gives meaning to this, will influence the structure again. System Justification Beliefs cover this personal experience of how society is structured: an individual perceives (in)equality and then justifies it or not. Comparing your personal experience as a woman to a system that was designed for men is a complex issue that can be experienced in a lot of different ways. Some women who encounter discrimination will not be aware of this, while others are more attuned to inequalities in the system so they will not experience more discrimination compared to other women but will experience the socio-

emotional consequences of unequal treatment. The combination and comparison of psychology and sociology can provide a holistic view of the influence of sex-based discrimination, as it is both crucial to look at how the system influences individuals (and in particular marginalized groups) but also how the system is influenced by individuals and their behavior concerning gender equality.

### **Crossing boundaries: politics**

This study stresses the importance of an equal society, as having positive future expectations is associated with less sex-based discrimination and with the belief that society treats everyone equally (SJB). In an equal society, people actually will be treated the same and naturally, people will believe in a more equal society (SJB), which positively influences future expectations. To create this fair society where men and women are treated equally (without unconscious bias that still favors men) it is necessary to involve politics. Parties that strive for gender equality are more important now than ever. Sexism is often overlooked as it happens more implicitly than explicitly (e.g. microaggressions). The Netherlands is a fortunate country that does well on gender equality (as there are still countries where women are actively oppressed), however, compared to similar European neighbors we can do a lot better. To realize this equal society, it is important to keep the conversation on gender equality going and politics is the best way to achieve that.

## Appendix II. Measurement Instruments

### Discrimination due to sex

How often do the following people treat you unfairly or badly because you are a boy or a girl?

*Select the box that describes your situation best.*

Question	Variable name	Label	Value
Teachers at school	dsex1	Never Seldom Sometimes Often Very often	1 2 3 4 5
Other adults outside of school	dsex2	IDEM	IDEM
Peers at school	dsex3	IDEM	IDEM

Constructed variables	Variable name	Construction	No. of items
Discrimination due to Sex scale (discrimination)	DSEX	MEAN.3(dsex1 TO dsex3)	3

### Future Expectations

The following questions concern your future. How big do you think the chance is that:

Question	Variable name	Label	Value
You have a job that pays well?	expect1	Very small Small Neutral Big Very big	1 2 3 4 5
You can afford to buy a home?	expect2	IDEM	IDEM
You have a job that you like?	expect3	IDEM	IDEM
You have a happy family life?	expect4	IDEM	IDEM
You mostly have good health?	expect5	IDEM	IDEM
You can choose where to live in the Netherlands?	expect6	IDEM	IDEM



You feel respected in the group that you are a part of?	expect7	IDEM	IDEM
You have good friends that you can count on?	expect8	IDEM	IDEM

Constructed variables	Variable name	Construction	No. of items
Future Expectations scale	FEXP	MEAN.5(expect1 TO expect8)	8

### Source

Jessor, R., Donovan, J. & Costa, C. Personality, perceived life chances, and adolescent health behavior. In K Hurrelmann, F Losel (Eds.), *Health Hazards in Adolescence*, Walter de Gruyter, New York (1990), pp. 25-42

### **System Justification**

Read the statements below and select the box that fits you best.

Question	Variable name	Label	Value
In general, Dutch society is fair.	sysjust1	1. Completely disagree 7. Completely agree	1-7
The Netherlands is a country where everyone that works hard, everyone can get ahead.	sysjust2	IDEM	IDEM
The Dutch government mostly works the way that it should.	sysjust3	IDEM	IDEM
In the Netherlands there are equal opportunities, no matter where you are from or who you are.	sysjust4	IDEM	IDEM
The Netherlands is the best country to live in.	sysjust5	IDEM	IDEM
Most laws and policies in the Netherlands are good for the most people.	sysjust6	IDEM	IDEM
In the Netherlands, everyone has an equal opportunity to get sufficient money.	sysjust7	IDEM	IDEM
In the Netherlands, everyone has an equal opportunity to become happy.	Sysjust8	IDEM	IDEM
In the Netherlands, society is arranged in a way that people get what they deserve most of the time.	Sysjust9	IDEM	IDEM
People in the Netherlands are being treated fairly, no matter who they are.	Sysjust10	IDEM	IDEM

It's not good that there are very rich and very poor people in the Netherlands.	Sysjust11(_r)	IDEM	IDEM
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Constructed variables	Variable name	Construction	No. of items
System Justification scale	SYSJ	MEAN.6(sysjust1 TO sysjust10, sysjust11_r)	11

Source

Godfrey, E.B., Santos, C.E., & Burson, E. (2019). For Better or Worse? System-Justifying Beliefs in Sixth-Grade Predict Trajectories of Self-Esteem and Behavior Across Early Adolescence. *Child Development*, 90(1), 180-195.