

Understanding Adolescent Future Expectations: Socioeconomic Status and the mediating role of Just World Beliefs

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Abstract

In 2008, adolescents' expectations for the future were deemed "absurdly ambitious" (Baird et al., 2008). However, recently these seemed to have shifted toward worry and insecurity (NCJ, 2023; SER, 2019). This is concerning given that having positive future expectations is associated with positive health behaviors, high motivation and overall positive youth development (McDade et al., 2011; Oettingen & Mayer, 2002; Schmid et al., 2011). This study is the first western study to investigate how socioeconomic status (SES) relates to future expectations and whether just world beliefs (JWB), someone's personal beliefs in a fair and just world, mediate this relation. Data from self-report questionnaires the YOUth Got Talent (YGT) project collected from 2019 to 2020 was used, of which the sample of the current study included 853 Dutch vocational students from 16 to 29 ($M = 16.14$, $SD = 1.54$). Three linear regressions were done and the mediation analysis that was done revealed a positive but weak relation between SES and future expectations, mediated by JWB. These findings suggest that a higher SES is associated with more JWB, which in turn leads to more positive future expectations. The results of this study aligned with its hypotheses and with existing theoretical perspectives and empiric findings. This study contributes to the understanding of what factors influence future expectations and hints at the potential for promoting JWB to enhance future expectations among low SES youth in intervention programs. However, further research on this topic is needed in order to realize such interventions.

Introduction

Back in 2008, youths' expectations for their futures were described as being "absurdly ambitious" and "on the border of unrealistic" (Baird et al., 2008). However, in more recent attempts of asking youths about their futures, a completely different picture is apparent. Youths today when asked about their futures report worries and insecurities. They mention financial insecurity, feeling insecure about their future living and occupational situations and worries about how the current wars could influence their future (NCJ, 2023; SER, 2019). This is worrying considering that one's future expectations are of great importance. In some cases they can be one of the strongest motives in decision-making and they are vital in shaping one's psychological wellbeing and health related behaviors (McDade et al., 2011; Nurmi, 1991). These future expectations might even be more of importance for adolescents as they are faced with many changes and big decisions regarding their educational, occupational and social future while transitioning into adulthood. This seems evident in the findings that show hopeful adolescent future expectations predicting high motivation, positive health behaviors, educational achievement, success in achieving occupational, romantic, academic and health goals, self-regulation abilities and overall positive youth development (Burger, 2023; McDade et al., 2011; Oettingen & Mayer, 2002; Schmid et al., 2011). The importance of youths' views on their future is also seen in the fact that having a positive future orientation can function as a buffer or protective factors against depression, stress, engaging in problem behavior and supporting violence (Miconi et al., 2020; Ouyang et al., 2022; Zheng et al., 2019).

Knowing these benefits of having positive future expectations, it would be desirable to promote and stimulate their development. But first gaining a comprehensive understanding of the various factors and mechanisms at play is a critical step before intervening or taking action regarding youth's social situations (Wight et al., 2015). One of these factors at play is socioeconomic status (SES), as is shown in research (Beal & Crockett, 2013; Fornell et al.,

2023; Mello, 2009; Ouyang et al., 2022). However, as one's SES is not easily altered and can therefore not be used to promote positive future expectations, it would be beneficial to look for an explanatory factor of this relation that can be altered and maybe help in promoting positive future expectations. Much research on such a possible explanatory factor for this relation does not exist as of yet. Only two Chinese studies were found that used constructs similar to SES and future expectations, both of which found similar mediators. Chen & Guo (2023) found youth's perceived social fairness to explain the relation between their family financial difficulties and their future orientations. Furthermore, Li (2020) found that believing in a just world mediates the relation between social hardship, of which economic hardship is a part, and future orientation. No western research is done yet on such a relation and the current study aims to fill this gap.

Finding out more about SES's association to future expectations and the role of just world beliefs (JWB), would increase the knowledge on what the important factors are behind something as influential as youth's future expectations and gives a more comprehensive view of the mechanisms that are involved in developing future expectations. Lastly, knowing if it is the case that JWB function as an explanatory factor in this relation, could mean that increasing someone's JWB would lead to the increasing of positive future expectations. This would be an interesting opportunity to explore as it is in fact possible to successfully increase someone's beliefs in a just world by letting youth read news stories about justice that affirm their feelings of certainty and security (Igou et al., 2020). This knowledge could be used to create new interventions targeted at increasing the positive future expectations of youth's who might, in part because of their SES, not have positive future expectations and allows them to experience the related benefits. Therefore the research question is: "To what extent does adolescent socioeconomic status relate to the future expectations of Dutch vocational students of age 16 and above and can this relation be explained by their personal just world beliefs?".

Theoretical framework

Future expectations

Future expectations are one's estimations of the likelihood of reaching their future goals (Sharp et al., 2019). These goals often regard education, occupation and health among other things (Sharp et al., 2019). In addition to future expectations, there are other terms commonly used in research when studying someone's view of their future. Whereas focusing solely on someone's expectations for their future is a more narrow and specific way of looking at how someone views their future, these other common concepts are often more broad and general, think of future views, feelings towards the future and future orientation. These broader concepts consist of two ways in which one can look at their future, what someone expects of their future and what their goals or aspirations are (Seginer, 2009). There is a fundamental difference between these two ways of measuring future views: future expectations realistically reflect what one expects to achieve and future aspirations reflect more idealistic hopes of what one wishes to achieve (Khattab, 2015). Additionally, the mechanisms behind the development of these two concepts differ, whereas aspirations seem to be rooted within a society's culture and its shared values, expectations are determined by an individual's perception of opportunity within a society and are formed within the context of their socio-economic background and past experiences (Bohon et al., 2006; Mickelson, 1990).

Socioeconomic status (SES)

There is no singular, universally agreed-upon definition of SES in the field of academics, but it is often defined along the lines of "an indicator that reflects one's access to collectively desired resources" (Oakes and Rossi, 2003). As this definition is quite broad, there could be many ways to interpret and measure it. One can measure subjective SES, "an

individual's perspective of his or her place in the socioeconomic structure" (Singh-Manoux et al., 2003, p. 1322). But more often SES is operationalized objectively with measures of occupation, education or money, like income or wealth (Diemer et al., 2012). However, some suggest that subjective SES offers a more nuanced and precise measure of SES as it includes the cognitive average of the multiple domains of SES (Singh-Manoux et al., 2003).

When measuring the SES of an adolescent, more difficulties appear. Since adolescents usually still live with their parents, adolescent SES is often derived from parental or family SES measures (Quon & McGrath, 2014). This can cause some difficulty in multiple ways. Firstly, since adolescence is a stage between childhood and adulthood, some adolescents may develop a personal SES separate from their parents' (Quon & McGrath, 2014). Secondly, Svedberg et al., (2016) found, when comparing three commonly used measures of SES for adolescents, parental occupational status, family affluence and perceived family SES, low correlations between the three, indicating they measure different reflections of SES. And thirdly, adolescents often have difficulty with reporting objective measures, like specifying their parents' occupational or educational status due to re-call bias (Svedberg et al., 2016). In recognition of these mentioned difficulties, it might be preferable to use a subjective scale of SES that includes both items on the adolescent's personal and family's socioeconomic position.

Socioeconomic status and future expectations

As mentioned earlier, it is suggested that the mechanisms behind the development of future expectations are determined by one's individual's perception of opportunity and are formed within the context of their socio-economic background (Bohon et al., 2006; Mickelson, 1990). This is in line with the Ecological Systems perspective (Bronfenbrenner, 1992). This perspective was first introduced in psychology but also has big influences in sociology, education sciences and social policy (Simply Psychology, 2024). Bronfenbrenner's

theory (1992) emphasizes that development, and consequently the development of future expectations, happens within the context in which individuals are imbedded and therefore is influenced by a large array of both individual and contextual factors. One of these contextual factors that reflects one's opportunity in society and one's socio-economic background is SES. According to the Ecological Systems perspective, such a factor can be placed within one of four different levels: the microsystem, which covers influences from the immediate environment; the mesosystem, which includes the interactions between different microsystems; the exosystem, which encompasses indirect influences and the macrosystem, which consists of broader societal and cultural influences. As Bronfenbrenner (1979) also described the macrosystem as containing forms of influence that create financial contexts, SES can be placed under the macrosystem. Seginer's conceptual framework of future orientation (2009) stresses the impact of characteristics of the youth's environment, of which SES is a part, on the development of future orientation. According to these theories, adolescent's future expectations are influenced by their SES, in the sense that having a low SES would lead to less positive future expectations.

This is reinforced by empirical research as well, since perceived social class and the socioeconomic context in which youth grow up were found to make a substantial contribution to the development of future expectations (Eshelman & Rottinhaus, 2015). Additionally, Beal & Crockett, (2013) found that youths raised in higher socioeconomic positions reported more positive educational and occupational future expectations than youth with lower SES backgrounds. Similarly, it was found that SES positively predicts adolescent's confidence in the future and future expectations and that family financial difficulties negatively predicted future orientation (Chan & Guo, 2023; Mellow, 2009; Ouyang et al., 2022).

Just world beliefs (JWB)

JWB is a concept originating from Lerner's (1980) Just World theory. According to this theory people have a need to believe that the world is just, fair and that people get what they deserve. These beliefs are called just world beliefs. Within the concept of JWB, two forms can be differentiated: general JWB, believing that the world is a just place, and personal JWB, believing that your life is just and fair (Dalbert, 2009). This distinguishment between the two forms of JWB is relevant when aiming to increase one's JWB. When trying to increase JWB, it is important that, in this case, this regards personal JWB and not general ones. This is the case for two reasons. Firstly, research found that in developing countries, general JWB is associated with positive outcomes and psychosocial benefits, whereas in rich western countries this is only the case for personal JWB (Wu et al., 2013). Secondly, increasing ones general JWB can be problematic as high general JWB is associated with multiple anti-social outcomes like prejudices and harsh social attitudes, victim-blaming, desire for revenge, dishonesty and delinquent behavior (Kaiser et al., 2004; Sutton & Douglas, 2005; Sutton & Winnard, 2010; Wenzel et al., 2017). For these reasons the current study will focus on personal JWB and not on general ones. This indicates that any empirical finding reported involving JWB specifically refers to personal ones.

Just world beliefs and Socioeconomic status

Lerner's Just World Theory (1980) describes JWB as an adaptive coping mechanism to deal with adversity, for example, by one justifying injustice in their environment and own life in order to still retain hope and confidence in the future (Lerner, 1980). This theory therefore suggests that, when having a low SES is considered an adversity, having a low SES could lead to the development of JWB as a coping mechanism. But on the other hand it also seems logical that having a low SES would lead to less JWB, as growing up in a low SES environment leads to more experience with injustice and unfairness (Duncan & Murane, 2011). This argumentation is in line with Robinson and Bell's (1978) underdog principle,

according to which high status individuals are more likely to judge inequalities as just than low status individuals are.

Empirical research on how SES relates to JWB is a little more one sided. For example, economic hardship was found to be negatively related to JWB and SES to be positively related to more JWB (Hou et al., 2017; Quan, 2021). Similarly, when compared to adolescents with a low SES, high SES youth scored higher on JWB (Wang et al., 2021). This difference is even noticeable when comparing lower class individuals to middle class ones, who scored significantly higher on JWB (Harding, 2020). Although most studies seem to support the underdog principle, there are some more in line with Lerner's theory and with concept of JWB as an adaptive coping mechanism as well. Hunt (2000) and Umberson (1993) found that persons with a lower SES were more likely to report more JWB. However, these empiric findings that support the Just World theory's line of reasoning are quite dated and are therefore not an accurate reflection of the current situation as these studies regard a wholly different generation. Additionally, much less of them were found. Overall, more support was found for the Underdog principle, resulting in the current study aligning its hypotheses with this principle.

Just world beliefs and future expectations

Lerner's Just World Theory (1980) offers theoretical insight on how one's JWB relate to one's future expectations. According to this theory, believing that the world is just and fair promotes the expectation that their life will be stable and manageable. This allows youth to have hope and confidence in the future, which in turn leads to more positive future expectations.

Although there are not many empiric studies on the relation between personal JWB and future expectations, Sutton and Winnard (2010) did find that JWB predicted confidence in the realization of future goals. Similarly, Xie et al. (2011) found JWB to be positively

related to future orientation. Bal & van den Bos (2012) and Chen & Cho (2023) found similar results, however they looked at victim blaming and perceived social fairness, which both align more with general JWB.

The mediating role of just world beliefs

Only two empirical studies were found that hint at the mediating role of JWB between SES and future expectations. Although these studies focus on general JWB rather than personal ones, they still provide valuable insights. Chen & Guo (2023) found youth's perceived social fairness, which is similar to JWB, to mediate the relation between family financial difficulties and their future orientations. Similarly, Li (2020) found that believing in a just world mediates between social hardship, of which economic hardship is a part, and future orientation. These findings suggest that JWB can explain the relation between SES and future expectations, and this implies that increasing JWB would lead to higher future expectations.

Current study

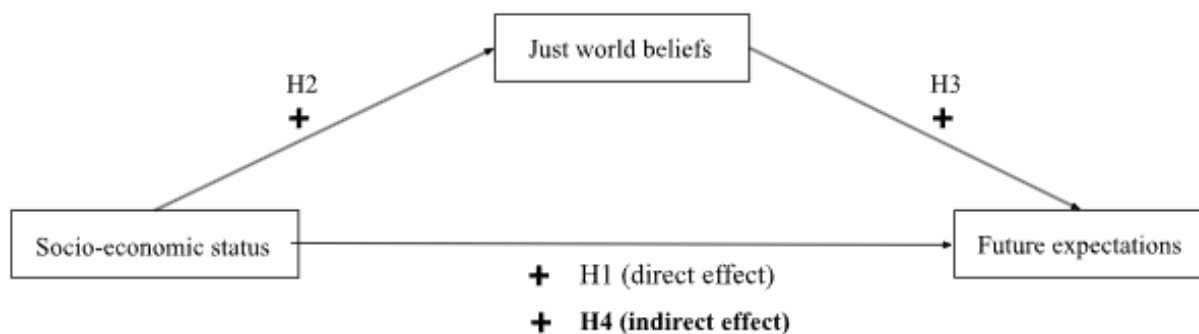
Literature indicates that there could be a relation between SES and future expectations where a higher SES would lead to more positive future expectations. Additionally it seems that JWB could function as a mediator within this relation. Therefore the hypotheses of the current study are:

1. There is a positive relation between socio-economic status and future expectations.
(direct effect)
2. There is a positive relation between socio-economic status and just world beliefs.
3. There is a positive relation between just world beliefs and future expectations
4. There is a positive relation between socio-economic station and future expectation explained by just world beliefs. (indirect effect)

A conceptual model of the hypotheses can be seen in figure 1.

Figure 1

Conceptual Model of the Hypotheses.



Method

Participants and design

In this study, data was used from the longitudinal project YOUth Got Talent (YGT). The sample consists of vocational education (MBO) students from three schools in Utrecht, the Netherlands, aged 16 and up. The respondents were recruited through their school and classes were selected in which all students were approached for participation. Recognizing selection bias, it can be argued that recruiting respondents through vocational schools excludes adolescents who attend other educational paths or are not enrolled in school at all, resulting in an unrepresentative sample. A total of 1602 students participated in the YGT project. However, in the current study only data from the first wave out of four was used, which consisted out of 1280 respondents, with a response rate of 82%. 419 respondents were excluded from the sample as they skipped the entirety of a scale that was essential to this study. 8 more respondents were removed as they had only answered less than half of the scale's items. This resulted in the sample of the current study consisting out of 853 respondents. For the respondents that had less than half of the items in a scale missing, mean imputation was applied. Respondents in the current study were aged between 16 and 29 with a

mean age of 17.14 ($SD = 1.54$). The current sample consisted of 54.0% females ($n = 460$) and 46.0% males ($n = 392$). Most respondents, 81.6% ($n = 696$), reported themselves as Dutch. Out of the 157 respondents that reported having an immigration background, 66.9% ($n = 105$) reported this background to be non-western.

The current study researched how SES relates to future expectations and whether JWB functions as a mediating factor that can explain this relation. As this study aimed to speak on the strength of a relation between variables and on the presence or absence of mediation, a quantitative research design is best suitable. This study's goal of finding out how one variable relates to another is in accordance with a correlational study, therefore a cross-sectional research design is chosen. However, a cross-sectional research design lacks the ability to establish causality. The chosen a research design has the capacity to address associations between variables in a single point in time, but it is important to underscore that it cannot address causation or directionality.

Procedure

The YGT project was a Dutch longitudinal research in which vocational education (MBO) students from age 16 and up, were asked to fill out questionnaires regarding their feelings about the future and factors that could influence these. From the participating three schools, multiple classes were selected of which all students would be approached. All respondents gave active consent by signing an informed consent form and were verbally informed beforehand by a research assistant about how participation is voluntary and that consent or participation can be withdrawn at any time. Data collection for wave one started in September 2019 and ended in February 2020. Self-report questionnaires were administered and filled out at school in a classroom with a research assistant present for asking questions and providing help. Most questionnaires were filled in digitally (95.6%) and it took approximately 40 minutes to fill out.

Ethics

The research design, the collecting and storing of the YGT data and overall performance of the YGT study was in line with the ethical standards of the 1964 Declaration of Helsinki and the study has been assessed and approved by the Ethics Committee of the Faculty of Social Sciences at Utrecht University (FETC18-070). All respondents signed an informed consent form. As all respondents were over the age of 16 and since there was a low level of invasiveness in the study's topic, the YGT researchers decided not to get parental consent as well. To ensure the respondents safety and privacy the data was anonymized and the raw data was separately and safely stored. Furthermore, no risks or harm was connected with participation to the study since there were no unpleasant or invasive topics in the questionnaire. Participation in the study cannot be considered a burden as the participation was during school time and lasted less than an hour at a time. Respondents were not rewarded for their participation as this could cause an increased sense social desirability bias or increased pressure to respond a certain way. The results of the study were anonymously reported back to the school.

Instruments

Future expectations

The adolescent's future expectations were measured using the Future Expectations Scale (Donovan et al., 1990). The adolescents responded to eight items consisting of questions regarding their future (e.g. "You having a good paying job?") that follow the statement: "These questions are about youth future. How high do you imagine the chance of..." with a 5-point Likert scale ranging from "very low" to "very high". This scale can be seen in Appendix 2. This scale was constructed by taking the mean of the scores. A higher score indicated stronger or more positive future expectations. At least four of the items had to

be filled out to be included in the sample. The Cronbach's alpha in the current study was $\alpha = .80$, indicating a high internal consistency.

Socioeconomic status

The adolescent's SES was measured using the Money Worry Scale (Van Dijk et al., 2022). Acknowledging the earlier mentioned difficulties that come with measuring SES, the current measurement of SES, the Money Worry Scale, is a subjective scale that includes both item measuring the adolescent's personal SES and their family's SES. It measures SES in terms of experienced financial scarcity. The adolescents responded to six items consisting of statements regarding one's personal financial situation and worries about money (e.g. "I often worry about money") and their family's financial situation (e.g. "In my family there are often worries about money") with a 6-point Likert scale ranging from "totally disagree" to "totally agree". This scale can be seen in Appendix 3. The scale was constructed by taking the mean of the scores and it was reversed so that a higher score indicated having a high SES. The scale was found to be reliable and valid (Van Dijk et al., 2022). At least three of the items had to be filled out to be included in the sample. The Cronbach's alpha in the current study was $\alpha = .76$, indicating a sufficient internal consistency.

Just world beliefs

The adolescent's personal JWB were measured using the Personal Belief in a Just World Scale (Dalbert, 1999). The adolescents responded to seven items consisting of statements regarding one's JWB (e.g. "I am usually treated fair") with a 7-point Likert scale ranging from "strongly disagree" to "strongly agree". This scale can be seen in Appendix 4. The scale was constructed by taking the mean of the scores. A higher score indicated stronger or more JWB. The scale was found to be valid (Dalbert, 1999). At least four of the items had

to be filled out to be included in the sample. The Cronbach's alpha in the current study was $\alpha = .81$, indicating a high internal consistency.

Analysis

All statistical analyses will be done in the software JASP0.18.3.0. First, the missings were deleted and the mean imputation was applied. The background characteristics age, sex and migration background were examined. After this, the Cronbach's alpha's were calculated to examine the internal consistency of the scales. As these were found to be acceptable no scales needed to be adapted. Then, from the items the three scales (SES, future expectations and JWB) were constructed by taking the mean of the scores. The SES scale was reversed so that a high score on SES would mean having a high SES. Of these newly constructed scales the descriptive statistics: means, standard deviations and range, were examined to gain a clear overview of the data and to better understand the it. Pearson's correlations between the three variables were calculated, these were interpreted using Cohen's (1987) correlation interpretation guidelines for social sciences. These have been empirically evaluated and recommended to use (Gignac & Szodorai, 2016). In these guidelines a correlation of .10 is considered as weak, one of .30 as moderate and .50 as high. After this the assumptions were checked by doing a multiple linear regressions with SES and JWB as predictors and future expectations as an outcome. A residual vs predicted plot was used to check the assumption of linearity and homoscedasticity. A histogram of the standardized residuals and a Q-Q plot were used to check if the residues were normally distributed. By using the Standard residual and Cook's distance it was checked if there were any outliers or influential cases. The Standard residuals needed to be between -3 and 3 and the Cook's distance below 1 to meet the assumption. Five cases were found with standardized residuals below -3, the answers of these respondents were manually inspected for errors or unreliable answer patterns. This included examining for inconsistencies or contradictories within responses to similar questions and

looking for patterns that suggest careless responding. The cases were not deleted as no errors, inconsistencies or careless responding patterns were found. Lastly, it was checked if there was any multicollinearity between the variables SES and JWB. In order to meet this assumption the VIF (variance inflation factor) needed to be below 10. All the assumptions were met.

To account for hypothesis one through three, three separate linear regressions were executed. One from SES to future expectations, one from SES to JWB and one from JWB to future expectations. To test hypothesis four, a mediation analyses was done. In this analysis, SES was the independent variable, future expectations the dependent variable and JWB the mediator. With this analysis the indirect effect was examined. In the current study a significance of .05 was maintained when analysing and interpreting the analysis outcomes.

Results

Descriptives

An overview of the descriptive statistics of the three variables: mean, standard deviation and range can be found in Table 1. The Pearson's correlations (r) between future expectations, SES and JWB were calculated as well, these can also be seen in Table 1. Firstly, SES was found to be significantly and positively correlated with future expectations. This correlation can be interpreted as moderate to strong. Secondly, a moderate significant positive correlation was found between SES and JWB. Lastly, it was found that a significant moderate to strong positive correlation exists between JWB and future expectations.

Table 1*Pearson's Correlation and Descriptive Statistics for Future Expectations, SES and JWB*

Variables	Min	Max	<i>M</i> (<i>SD</i>)	JWB	FE
1. JWB	1.00	7.00	4.64 (0.91)		
2. FE	1.38	5.00	3.78 (0.53)	.35**	
3. SES	2.00	6.00	4.74 (0.77)	.29**	.38**

Note. * $p < .05$. ** $p < .001$

Main analyses

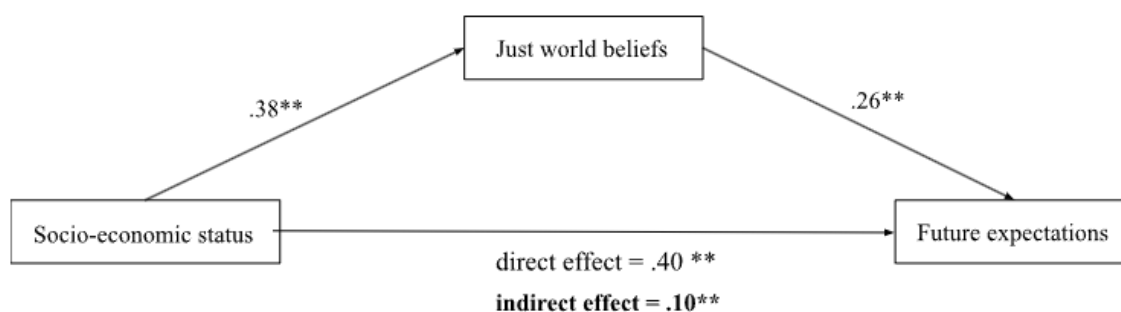
In order to test hypotheses one through three, three linear regression analyses were run. The first hypothesis (H1) predicted that SES would positively relate to future expectations. The outcome of the direct effect of X on Y indicates this to be the case. It was found that the higher one's SES, the higher their future expectations. This effect was significant and can be considered as moderate to strong and 15% of the variance is explained ($\beta = .38$, $SE = .05$, $F = 78.52$, $p < .001$). For the effect of X on M (H2) it was predicted that the higher one's SES, the higher their JWB. In line with this hypothesis, a positive and moderate significant effect was found. 8% of the variance is explained ($\beta = .29$, $SE = .03$, $F = 117.66$, $p < .001$). For the third hypothesis (H3) it was predicted that one's JWB would be positively related to one's future expectations. As this effect of M on Y was found to be positive and significant, this hypothesis was supported. This effect was considered as moderate to strong and 12% of the variance is explained. This means the higher one's JWB, the higher one's future expectations ($\beta = .35$, $SE = .06$, $F = 114.86$, $p < .001$).

To test hypothesis four, a mediation analyses was done with SES as X, future expectations as Y and JWB as M. The results of the mediation analyses can be found in Figure 2. The indirect effect of X on Y explained through M was hypothesised to be positive (H4). In accordance with this hypothesis, a positive but weak significant effect was found.

21% of the variance is explained. This indicates that the relation between SES and future expectations can be explained through JWB and that there is mediation in this model ($\beta = .10$, $SE = .02$, $p < .001$).

Figure 2

Overview Results Mediation Analyses



Note. * $p < .05$. ** $p < .001$

Discussion

As of now, the current study seems to be the first western study to investigate how an adolescents' SES relates to their future expectations and whether this can be explained by their personal JWB. The results showed that there is a positive relation between SES and future expectation. Furthermore, this relation is indeed mediated by JWB.

Consistent with the first hypothesis, the findings indicated, the higher one's SES, the higher their future expectations. This finding aligns with previous research on this relation (Beal & Crockett, 2013; Chan & Guo, 2023; Mello, 2009; Ouyang et al., 2022). However, this study distinguishes its findings from existing research by examining overall future expectations, rather than focusing on occupational or educational ones or on future orientation. This finding is supported by both Bronfenbrenner's (1992) Ecological Systems perspective and Seginer's conceptual framework of future orientation (2009). Bronfenbrenner's theory (1992) suggests that development, and consequently the development of future expectations, happens within context and is therefore influenced by

contextual factors like SES. Similarly, Seginer's theory (2009) highlights the impact of environmental characteristics, like SES, on the development of future orientations.

It was also found that a high SES relates to more JWB, this finding aligns with hypothesis two. This insight is consistent with several empirical findings (Harding, 2020; Hou et al., 2017; Quan, 2021; Wang, 2021). The current research advances these previous studies by adopting a more nuanced approach to measuring SES. Instead of using objective measures of parental SES like income or attained education level, the current study used a subjective scale with items on both family and personal SES. This accounts for the fact that some adolescents have a personal sense of SES separate from their parents and that they often have difficulty in reporting objective measures due to recall bias (Quon & McGrath, 2014; Svedberg et al., 2016). This found result is in support of the underdog principle (Robinson & Bell, 1978), which states that high SES individuals are more likely to see inequalities as just. However, this finding does contrast Lerner's (1980) Just World Theory that claims low SES adolescents would develop JWB as a coping mechanism. A possible reason for the dissimilarity between the current finding and one that would confirm Lerner's claim might be that his theory and the few studies that support it (Hunt, 2000; Umberson 1993) are based on a different generation than the current one. This new generation and these new times are characterized by more openness and conversations about mental health (Hermann et al., 2022), which could have caused low SES adolescents to cope differently.

In accordance with hypothesis three, the results indicated, the more JWB one has, the more positive their future expectations. This finding is in accordance with the Just World Theory (Lerner, 1980), which states that believing that the world is just allows youths to have confidence in their future. This insight also is in accordance with empiric findings on this topic (Sutton & Winnard, 2010; Xie et al., 2011).

Lastly, it was found that JWB do partly explain the relation between SES and future

expectations, a finding that is consistent with hypothesis four. This suggests, that a high SES is associated with more JWB, which are in turn associated with more positive future expectations. This finding is in line with two Chinese studies on similar subjects (Chen & Guo, 2023; Li, 2020). However, the current study sets itself apart from this existing research by being the first to examine this relation within a Western cultural context and by examining personal JWB rather than general ones. JWB have been shown to differ systematically across different cultures (Furnham, 1993). Therefore, the findings of these Chinese studies cannot be directly generalized to a Western context.

Strengths and Limitations

Some strengths of the current study include its large sample size, which enhances the generalizability of the findings by making them more representative of the population and hence ensuring more accurate results. However, despite this advantage, the sample consists of Dutch students that attend vocational education and is therefore not representative for all adolescents. Secondly, this study addresses and accounts for often ignored challenges of operationalizing adolescent SES. By using a scale that is subjective and contains items on both family and personal SES, a more nuanced and accurate way of measurement is employed. Finally, a notable strength is being the first study to focus on the topic of SES, future expectations and JWB within a Western context, hereby filling a gap in the literature and providing new insights within this cultural context. However, several limitations need to be considered when interpreting the findings of this study.

Firstly, not much is known regarding the reliability and validity of the Future Expectations Scale (Donovan et al., 1990). The lack of information on this scale means there is no certainty that it is reliable and valid, and if the results obtained are accurate and trustworthy. Hence, it is recommended that future research measures future expectations using a scale with well-established validity and reliability.

Secondly, this study used correlational data and can therefore not make any causal claims or establish causality. Therefore, when interpreting the results, it is important to understand that although positive correlations were found, they only indicate co-occurrence and not causation. A mediation analysis done with correlational data cannot prove that the mediator actually produces an effect. Additionally, the relations that were examined could theoretically work in reverse, no directionality can be established.

Lastly, this study used self-report methods when collecting data. It is known that this method of data collection can be associated with several limitations like recall bias, misinterpretations and social desirability, possible leading to less accurate results (Chan, 2010). Adolescents, due to their age and cognitive developmental stage, might even be more susceptible to such limitations of self-report. The researchers of the YGT research did attempt to account for this by providing a research assistant to be present to answer questions in order to prevent misinterpretations. However, future research should take more measures to prevent such limitations by, for example, emphasizing that there are no wrong answers to prevent social desirability and by asking minimal objective questions to prevent recall-bias.

Conclusions and implications

The current study provided new insights and more understanding of what factors are of importance in the development of adolescent future expectations. It can be concluded that JWB function as an explanatory and mediating factor between how SES relates to the future expectations of adolescents. This finding hints towards the option that promoting JWB among low SES adolescents could relate to more positive future expectations, which in turn is associated with an array of positive outcomes. This new insight does not only add to the available knowledge on the mechanisms behind adolescent future expectations but could also offer motivation to explore new ways and directions for intervention. For example, since future expectations have been less positive in recent years (NCJ, 2023; SER, 2019),

intervention initiatives targeted at low SES individuals with the goal of increasing future expectations using JWB promotion could be created.

However, when mentioning such practical implications it is very important to keep in mind that this study cannot make causal claims and the effect size was small. Therefore this study should not be used as the sole reference point for developing interventions. Still, its results and provided insights can hopefully function as inspiration for setting up future researches whose findings might be more suitable to base interventions on. Think of, longitudinal studies on this topic that can establish causality, studies that investigate in depth if and how promoting JWB would work and larger studies that do not include solely Dutch adolescents that attend secondary vocational education but a more generalizable sample. However, it is also possible that another factor may serve as a more effective mediator between SES and future expectations. Consequently, further research is needed to explore this relation and identify alternative mediators, which might turn out to be more effective for developing interventions.

Youth, no matter their socioeconomic background, deserve to have hopeful expectations for their futures and experience the positive outcomes associated with such a perspective. Further research on exploring alternative mediators and on promoting JWB can enable low SES youth to feel confident about their futures by being the groundwork for developing interventions that foster positive future expectations among these adolescents.

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Appendices

Appendix 1: Reflection on interdisciplinarity

The disciplinary perspective that was mostly taken in this study, is an interdisciplinary social sciences perspective, this often consists of a mix between the disciplines psychology, sociology, pedagogical sciences and anthropology. This is partly case because this thesis was mostly done and written based on the varied knowledge the researcher had already collected through their bachelor in interdisciplinary social sciences. But also because an interdisciplinary perspective allows research to combine fields of expertise and disciplines to come to a more broad understanding of concepts. It enables to look at things from different angles which could lead to insights one might not have come to when taking just one disciplinary perspective. For this study such a perspective is beneficial due to the multifaceted nature of its main constructs. SES, for example, encompasses economic, social and psychological dimensions that cannot be fully understood through a monodisciplinary lens. Combining perspectives allows for a more comprehensive understanding that captures the complex interactions between the factors SES, future expectations and JWB.

There a couple examples of how multiple disciplines are used throughout this study. First, the meaningful theories in the study of SES, FE and JWB that were highlighted in the current study do not stem from merely one specific domain but from different sub-disciplines withing psychology and sociology. Bronfenbrenner's Ecological Systems perspective (1992) originated in psychology but later had big influences in multiple disciplines like sociology, education sciences and social policy (Guy-Evans, 2024). Seginer's theory (2009) is originally rooted in developmental psychology and the concept of just world beliefs (Lerner, 1980) was introduced in the field social psychology. The underdog theory by Robinson & Bell (1978)

comes from sociology.

Another example of how this study took an interdisciplinary approach is that the search for literature and empirical studies was not limited to sources that fit within a certain discipline. For this study, literature was selected based on topic of research and not based on discipline. The fact that an array of articles from different fields and domains were used in this study can be seen in the variety in scientific journals they were featured in. Articles from interdisciplinary, psychological, environmental, behavioral, sociological, educational and even health and medical journals were used.

Lastly, as mentioned in this study, the results hint towards the potential for intervention opportunities that include promoting just world beliefs among low SES adolescence in order to increase their future expectations. However it was emphasised that more research was needed for this. This is a situation where multiple scientific research methods could be applied in order to gain a deeper understanding of this possible intervention opportunity. Setting up a large research project that includes longitudinal, experimental, qualitative and quantitative methods provide more insight into if and how promoting just world beliefs would work. Furthermore, when a large study as such would produce promising results, this could be an opportunity to also include insights from outside of the academic field in order to actually start developing such an intervention. Think of intervention experts, practitioners, community members or teachers. Such a project that includes multiple research methods and an interdisciplinary team of both researchers with diverse expertise and experts outside of academia could be a great way of crossing boundaries between science and practise.

Appendix 2: Measurement instrument future expectations; Future Expectations Scale

Introduction to questions: ‘De volgende vragen gaan over jouw toekomst. Hoe groot denk jij dat de kans is dat:’

Survey questions:

1. Je een baan hebt die goed betaalt?
2. Je een koophuis kunt betalen?
3. Je een baan hebt die je leuk vindt?
4. Je een gelukkig gezinsleven hebt?
5. Je meestal een goede gezondheid hebt?
6. Je kunt kiezen waar in Nederland je wilt wonen?
7. Je je gerespecteerd voelt in de groep waarvan je deel van uitmaakt?
8. Je goede vrienden hebt waar je op kunt rekenen?

Answer options: ‘Heel klein’, ‘Klein’, ‘Neutraal’, ‘Groot’, ‘Heel groot’

Appendix 3: Measurement instrument SES; Money Worry Scale

Survey questions:

1. Ik heb vaak te weinig geld.
2. Ik vraag me de hele tijd af of ik wel genoeg geld heb.
3. Ik maak me vaak zorgen over geld.
4. Ik ben alleen bezig met wat ik nu moet betalen. De rest zie ik later wel.
5. Ik heb het gevoel dat ik weinig controle heb over mijn geldzaken.
6. In mijn gezin zijn vaak zorgen over geld.

Answer options: ‘Helemaal mee oneens’, ‘Mee oneens’, ‘Niet eens, niet oneens’, ‘Mee eens’, ‘Helemaal mee eens’

Appendix 3: Measurement instrument JWB; Personal Belief in a Just World Scale

Introduction to questions: ‘Lees onderstaande stellingen en klik op het hokje dat het beste bij jou past. ‘

Survey questions:

1. Ik denk dat ik grotendeels verdien wat me overkomt.
2. Ik word meestal eerlijk behandeld.
3. Ik geloof dat ik meestal krijg wat ik verdien.
4. Meestal zijn de gebeurtenissen in mijn leven rechtvaardig.
5. In mijn leven is onrechtvaardigheid een uitzondering, niet de regel.
6. Ik denk dat de meeste dingen die in mijn leven gebeuren, eerlijk zijn.
7. Ik denk dat de belangrijkste beslissingen die over mij genomen worden, meestal eerlijk zijn.

Answer options: box one is labelled as 'Helemaal oneens' and box seven is labelled as 'Helemaal eens'