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When reality bites:
Hopeful thinking mediates the discrimination-life satisfaction relationship

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Abstract

We examine the role of hopeful thinking in enhancing life satisfaction among a minority

group facing pervasive group-based discrimination: country migrant workers' children in

China. Positive psychology reasoning suggests that hopeful thinking can attenuate the

negative impact of perceived discrimination on life satisfaction. This moderation model is

compared to a mediation model, which predicts that reduced hopeful thinking explains the

negative impact of perceived discrimination on life satisfaction. Study 1 showed that hopeful

thinking did not moderate the relationship between discrimination and life satisfaction.

Rather, the negative impact of discrimination on life satisfaction was mediated through

diminished hopeful thinking. Study 2 manipulated perceived discrimination and replicated

Study 1 findings. The results reveal that hopeful thinking can indeed have positive

consequences, but that hopeful thinking is also constrained by perceiving discrimination. This

suggests that there are limits to the extent to which hopeful thinking can be developed when

facing group-based discrimination.

When reality bites:
Hopeful thinking mediates the discrimination-life satisfaction relationship

*"*Mihaly Csikszentmihalyi realized the need for a positive psychology in Europe during World War II: As a child, I witnessed the dissolution of the smug world in which I had been comfortably ensconced. I noticed with surprise how many of the adults I had known as successful and self-confident became helpless and dispirited once the war removed their social supports. Without jobs, money, or status, they were reduced to empty shells. Yet there were a few who kept their integrity and purpose despite the surrounding chaos.*"*

(Seligman & Csikszentmihalyi, 2000, p. 6).

Under the banner of positive psychology, an explosion of research over the past decade has promoted individual character strengths as a way to enhance psychological life satisfaction. Character strengths refer to the positive traits reflected in thoughts, feelings and behavior (Peterson & Seligman, 2004). Hopeful thinking (defined as "expecting the best and working to achieve it"; Seligman, Steen, Park, & Peterson 2005, p. 412) has been identified as a key character strength which can buffer against adversity and contribute to human flourishing (Peterson & Seligman, 2004). Work on emotion and positive psychology defines hopeful thinking as "the process of thinking about one's goals, along with the motivation to move toward those goals (termed agency) and the ways to achieve those goals (termed pathways)" (Snyder, 1995, p. 355). As such, hopeful thinking enables people to set goals, to seek the ways to achieve those goals, and to be motivated to make those goals happen (Snyder, 2002; Snyder, Feldmen, Shorey, & Rand, 2002).

To date, hopeful thinking has been typically conceptualised as an individual difference that captures a person's stable subjective appraisals of his/her goal-related capabilities (e.g., Peterson & Seligman, 2004; Snyder, 2000). This dispositional view notwithstanding, it is also clear that an individual's hopeful thinking is subject to change. For

example, important life events have been found to affect hope (Bailey & Snyder, 2007) and

individuals' propensity for hopeful thinking can be influenced by interventions, counseling,

and education (e.g., Valle, Huebner, & Suldo, 2006). For example, Cheavens and colleagues

found that a hope therapy program significantly enhanced participants' levels of hopeful

thinking, which in turn increased self-esteem (Cheavens, Feldman, Gum, Michael, & Snyder,

2006).

Despite its success, the positive psychology movement has attracted a number of

criticisms. The main concern questions positive psychology's exclusive focus on individual

character strengths (Christopher, Rishardson, & Slife, 2008; Held, 2004; Kristjánsson, 2010;

Lazarus, 2003). For example, the founders of positive psychology have stated that, "It is not

what happens to people that determines how happy they are, but how they interpret what

happens" (Seligman & Csikszentmihalyi, 2000, p. 9). Furthermore, individuals are also seen

as decision makers, who can make "choices, [have] preferences, and the possibility of

becoming masterful, efficacious, or in malignant circumstances, helpless and hopeless"

(Seligman & Csikszentmihalyi, 2000, p. 8). As illustrated by Csikszntmihalyi's observation

quoted above, strong character strengths and the right outlook can protect people from the

adversities they face in life, including the conditions created by war.

Critics have argued that this approach identifies the source of well-being—and life

satisfaction in particular—solely within the individual, thus isolating their life experience

from the broader socio-structural context in which they exist. This suggests that positive

psychology primarily accounts for the experiences of those groups whose ability to engage in

hopeful thinking is not hampered by their socio-structural position (i.e., members of

dominant groups). The approach appears less suited to explain minority group members'

experiences: by definition, low-status groups' ability to engage in hopeful thinking is (to a

greater or lesser degree) constrained by social injustice and structural disadvantage (e.g.,

Bacigalupe, 2001; Kristjánsson, 2010). As such, critics of positive psychology would interpret Csiks}zntmihalyi's observation in a different light. That is, the brutal war would have impeded the possibility of hopeful thinking among those who were caught up in it.

A growing body of empirical work supports this perspective: research has shown that individuals' position in the broader socio-structural system plays an important role in determining their thoughts and life satisfaction (e.g., Jetten, Haslam, & Barlow, 2013; Pearlin, 1989; Tajfel & Turner, 1979; Zhang, Jetten, Iyer, & Cui, 2013). Among minority group members, discrimination is a daily stressor which has been associated with decreased life satisfaction (Badea, Jetten, Iyer, & Er-Rafiy, 2011; Branscombe, Schmitt, & Harvey, 1999). Perceiving discrimination against one's ingroup from a more powerful outgroup diminishes the perceived possibility for improvement in the group's social standing (Tajfel, 1978), which, in turn, is likely to undermine perceived collective power as well as a sense of hope (Doosje, Spears, & Ellemers, 2002; Ellemers, Knippenberg, & Wilke, 1990; Reicher & Haslam, 2006), and self-esteem (Zhang et al., 2013). What is more, facing pervasive discrimination and low group standing within a social hierarchy imposes real constraints on individuals' available strategies to improve their circumstances and, by extension, their life satisfaction (Barreto & Ellemers, 2000).

In the present research, we start from the assumption that the broader socio-structural context must be taken into consideration when addressing the relationship between hopeful thinking and life satisfaction. More specifically, our objective is to examine whether, as suggested by advocates of positive psychology, hopeful thinking enhances life satisfaction over and above the impact of barriers associated with the socio-structural context. According to Seligman and Csikszentmihalyi (2000), individuals with strong character strengths such as strong hopeful thinking can be happier compared to those with weaker character strengths when facing adversity in life. This framework leads to the prediction that the impact of

perceived discrimination on life satisfaction will differ depending on minority group members' level of hopeful thinking. Among those with higher levels of hopeful thinking, perceived discrimination will be unrelated to life satisfaction. In contrast, perceived discrimination will be negatively associated with life satisfaction among those with lower levels of hopeful thinking (a moderation analysis). We also investigate an alternative possibility: whether the challenges posed by pervasive discrimination reduce the extent to which people can, and will, engage in hopeful thinking and this, in turn, will lower life satisfaction for minority group members (a mediation hypothesis, see Figure 1).

Present Research

In the present research, we examine these two alternative models among a particular disadvantaged group: country migrant workers' school children in a large Chinese city. Country workers in China have been moving to cities over the last two decades to seek out better employment opportunities. However, most of them have been employed as low-paid manual laborers and, as a result, country workers remain to live in poverty (China Labour Bulletin, 2012). Moreover, these workers typically face pervasive discrimination that is structurally and legally sanctioned. For example, they have no access to social services such as health care and social security in the city; this is because China's Household Registration (hukou) system provides services to citizens at their primary place of registered residence (Wong, Chang, & He, 2009).

Hence, country migrant workers' children have restricted access to education compared to city children (i.e., the privileged group) (Wong et al., 2009). This inequality has generated wide debate, as well as a push by the public and media for the government to rectify the inequality (Zhao, 2008). These efforts have led to some improvement in country workers' conditions, but progress is slow and limited. Research also indicates that country workers' children face group-based discrimination and have lower self-esteem compared to

city children (Zhang et al., 2013). In this context, the exclusion and discrimination faced by migrant workers' children are still largely justified, and reinforced, by law and social policy. This systemic inequality exerts real constraints on the aspirations and goals of country children.

Study 1

Method

      Participants. Participants were 138 country workers' children from three primary schools in Shanghai, China. The sample was comprised of 47 girls (36%) and 89 boys (64%; two participants did not report their gender), with an average age of 13.50 years (SD = 1.19; two did not report age). All participants were born in rural areas and moved to the city with their migrant worker parents.

      Measures. Participants indicated their agreement on all measures using a 7-point scale unless stated otherwise. The questionnaire was translated and back-translated respectively by two people fluent in both Chinese and English. Any discrepancy in the translation was discussed and agreement was reached between the two translators.

      Perceived group-based discrimination from city children were measured by averaging responses to three items adapted from Schmitt, Spears, and Branscombe (2003). A sample item includes "City children look down on country workers' children." Higher scores indicate higher perceived group-based discrimination (α = .90).

      Hopeful thinking was measured by participants indicating how well each item described them with the six-item Children's Hope Scale (Snyder et al., 1997; 1 = none of the time, 6 = all of the time, α = .83). Three items tap agency thinking (e.g., "I think I am doing pretty well"). The other three items measure pathway thinking (e.g., "I can think of many ways to get the things in life that are most important to me"). The scores on the six items were averaged with higher scores indicting higher level of hopeful thinking.

Life satisfaction was measured with four items of the five-item Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). A fifth item ("If I could live my life over, I would change almost nothing") was excluded because it did not seem appropriate for our young participants: as minors, many aspects of their lives, including their family's move to the city, would be determined by their parents' choices rather than their own. The scores on the four items were averaged with higher scores indicting higher level of life satisfaction (α = .71).

In order to support the conceptual distinction between hopeful thinking and life satisfaction, we conducted an exploratory factor analysis (using Maximum Likelihood extraction and Varimax rotation) on all of the hopeful thinking and life satisfaction items. Two distinct factors were extracted which together explained 44.79% of the variance. The six hopeful thinking items loaded primarily onto the first factor (34.29% of variance explained, with loadings ranging from .60 to .85) and the four life satisfaction items loaded primarily onto the second factor (10.50% of variance explained, with loadings ranging from .48 to .79). This suggests that hopeful thinking and life satisfaction indeed represent two distinct constructs.

Results and Discussion

Preliminary analysis revealed no differences either between the three schools, or between gender groups, on the measured variables. However, age was significantly associated with perceived discrimination. Hence, only age was controlled in the following analysis. Table 1 shows the means, standard deviations and correlations between age, perceived discrimination, hopeful thinking and life satisfaction.

The two dimensions (agency thinking and pathway thinking) of the hopeful thinking scale were highly correlated, $r = .79$, $p < .001$. Thus we conducted three sets of analyses using different measures of hopeful thinking: agency thinking only, pathway thinking only,

and a composite aggregating the two subscales. Results for these analyses were identical;

hence, we report the findings using the total aggregated scale in the following section.

Model 1: Hopeful thinking as a moderator of the negative effect of discrimination on life satisfaction

Using hierarchical multiple regression analysis, we examined whether perceived discrimination moderated the relationship between hopeful thinking and life satisfaction. Age as a control variable was entered in the first step; mean-centered perceived discrimination and hopeful thinking were entered in the second step; and the interaction between discrimination and hopeful thinking was entered in the third step (Aiken & West, 1991).

Age was not significantly associated with life satisfaction, $\beta = .11$, $t(132) = 1.35$, $p = .181$. Hopeful thinking had a direct effect on life satisfaction, $\beta = .39$, $t(132) = 4.83$, $p < .001$, such that higher levels of hopeful thinking were associated with better life satisfaction. However, when hopeful thinking, discrimination and their interaction were examined simultaneously as the predictors of life satisfaction, discrimination did not predict life satisfaction, $\beta = -.12$, $t(132) = -1.49$, $p = .139$. Moreover, there was no interaction effect between hopeful thinking and discrimination, $\beta = -.04$, $t(132) = -.46$, $p = .650$. Thus, Model 1 was not supported: Hopeful thinking did not moderate the negative effect of perceived discrimination on life satisfaction.

Model 2: Hopeful thinking as a mediator of the negative effect of discrimination on life satisfaction

Another set of regression analyses was conducted to test whether hopeful thinking would mediate the negative effect of perceived discrimination on life satisfaction (Baron & Kenny, 1986). The results indicated that discrimination was negatively associated with life satisfaction, $\beta = -.19$, $t(134) = -2.14$, $p = .034$, and hopeful thinking, $\beta = -.17$, $t(134) = -1.98$, $p = .050$. When discrimination and hopeful thinking were entered as simultaneous

predictors of life satisfaction, only hopeful thinking emerged as a significant predictor, β = .39, t(133) = 4.82, p < .001, whereas discrimination was no longer significantly associated with life satisfaction, β = - .12, t(133) = - 1.46, p = .146 (see Figure 2).

Using estimates based on 5,000 bootstrap samples (Preacher & Hayes, 2008), the 95% Bias Corrected confidence intervals for the indirect (mediated) effect did not include zero (lower bound = - .1053, upper bound = - .0029). This indicates that the indirect effect is significantly different from 0 at p < .05. As such, we can conclude that the effect of discrimination on life satisfaction is mediated by hopeful thinking.

In sum, we found no evidence that the association between discrimination and life satisfaction is moderated by hopeful thinking. This suggests that hopeful thinking does not buffer the negative impact of discrimination on life satisfaction. However, results from the mediation analysis revealed that hopeful thinking mediates the negative effect of discrimination on life satisfaction. This finding indicates that, for minority group members, hopeful thinking cannot be developed completely independently of societal characteristics such as intergroup status hierarchy: participants' levels of hopeful thinking were negatively associated with their perceptions of discrimination against their group. It appears that discrimination faced by migrant workers' children can partially deflate their hopeful thinking, which in turn is associated with lower life satisfaction.

Study 2

The cross-sectional design used in Study 1 does not allow us to infer causality. Thus, Study 2 manipulated perceived group-based discrimination and examined its impact on life satisfaction. Given the results from Study 1 indicating that there was no moderation effect of hopeful thinking on the relationship between discrimination and life satisfaction, Study 2 was designed first and foremost to optimally test the role of hopeful thinking in mediating this relationship.

Method

  Participants. We recruited 105 country workers' children from two public schools in Shanghai (M_{age} = 13.64 years, SD = .94, 61 girls and 44 boys). As in Study 1, all participants were born in rural areas and came to the city with their migrant worker parents.

  Procedure. Participants were randomly assigned to either a high discrimination or low discrimination condition, and read an ostensible summary of research regarding country worker children's experience in the city. In the high discrimination condition, participants read that 76% of country workers' children have experienced discrimination by city children due to their group membership (This information corresponds with large-scale survey results; see Fang, Fan, & Liu, 2008). In the low discrimination condition, participants read that only 25% of country workers' children experienced discrimination and the majority found themselves being treated fairly by city children.

  Measures. The discrimination manipulation was checked with the discrimination scale used in Study 1 (α = .92). Hopeful thinking (α = .74) and life satisfaction (α = .72) were measured as in Study 1.

Results and Discussion

  As participants came from two separate schools, we included school as a second factor when assessing the discrimination manipulation. Hence, we conducted a 2 (condition: high vs. low perceived discrimination) × 2 (participating school: A vs. B) between-subjects analysis of variance for the manipulation check.

  Manipulation check. The manipulation significantly affected perceptions of discrimination, $F(1, 101) = 9.80$, $p = .002$, $\eta^2_p = .088$. Participants in the high discrimination condition reported higher perceived discrimination ($M = 3.82$, $SD = 1.69$; scores ranged from 1 to 6.33) than did participants in the low discrimination condition ($M = 2.86$, $SD = 1.28$; scores ranged from 1 to 6). There was no effect of school, $F(1, 101) = .00$, $p = .948$, η^2_p

= .000, and the interaction between condition and school was also not significant, $F(1, 101) = 1.12$, $p = .292$, $\eta^2_p = .011$. These results indicate that the discrimination manipulation was successful, and that it did not differentially affect perceived discrimination in the two schools. Thus, there is no need to control for the different schools in the main analyses.

As in Study 1, the two dimensions (agency thinking and pathway thinking) of the hopeful thinking scale were highly correlated, $r = .56$, $p < .001$. The results of the analyses using individual subscales and the total aggregated scale were identical. Hence, we report the findings using the total aggregated scale in the following section.

Model 1: Hopeful thinking as a moderator of the negative effect of group-based discrimination on life satisfaction

Because the discrimination manipulation affected participants' reported level of hopeful thinking, $F(1, 101) = 4.64$, $p = .034$, $\eta^2_p = .044$, caution is required when assessing support for the role of hopeful thinking as a moderator operating independently of the discrimination manipulation. However, we decided to proceed with the test of moderation for two reasons. First, the correlation between discrimination manipulation and hopeful thinking was sufficiently low ($r = -.21$, $p = .034$). Second, preliminary analyses suggested little evidence for multicollinearity: The tolerance value (1- squared multiple correlations [SMC]) was .942, which is much higher than the acceptable value of .50 or above (Tabachnick & Fidell, 2001). SMC was calculated using centred hopeful thinking as the dependent variable, the discrimination manipulation and the interaction between hopeful thinking and the discrimination manipulation as the independent variables.

We examined whether hopeful thinking moderated the relationship between discrimination manipulation (1 = high discrimination condition, -1 = low discrimination condition) and life satisfaction. In line with the findings of Study 1, there was no interaction effect between discrimination manipulation and hopeful thinking on life satisfaction, $\beta = .10$,

t(102) = 1.05, p = .297. Thus, hopeful thinking did not moderate the effect of discrimination on life satisfaction.

Model 2: Hopeful thinking as a mediator of the negative effect of discrimination on life satisfaction

Following the same procedure as in Study 1, we conducted regression analyses to determine whether hopeful thinking would mediate the effect of discrimination manipulation on life satisfaction. Consistent with the first study, the discrimination manipulation was negatively associated with life satisfaction, β = - .20, t(104) = - 2.10, p = .039, and hopeful thinking, β = - .21, t(104) = - 2.15, p = .034. When the discrimination manipulation and hopeful thinking were entered simultaneously as predictors of life satisfaction, only hopeful thinking emerged as a significant predictor, β = .37, t(103) = 4.05, p < .001, whereas the effect of discrimination manipulation on life satisfaction was no longer significant, β = - .13, t(103) = - 1.36, p = .177 (see Figure 2).

Using estimates based on 5,000 bootstrap samples, the 95% Bias Corrected confidence intervals for the indirect (mediated) effect did not include zero (lower bound = - .1932, upper bound = - .0097). This indicates that the indirect effect is significantly different from 0 at p < .05, suggesting mediation.

In summary, the results corroborated the findings of Study 1 that hopeful thinking does not protect minority group members' life satisfaction from the negative impact of discrimination. Instead, hopeful thinking mediates the negative effect of discrimination on life satisfaction. In particular, compared to low perceived discrimination, high perceived discrimination led to lower hopeful thinking, which in turn hampered life satisfaction.

General Discussion

Results from correlational (Study 1) and experimental (Study 2) studies converged to show that the broader socio-structural context should be taken into consideration when

examining the relationship between hopeful thinking and life satisfaction among minority group members. In line with an extensive literature on life satisfaction (e.g., Branscombe et al., 1999; Cheavens et al., 2006; Vacek et al., 2010), the present research shows that life satisfaction was negatively associated with discrimination and positively linked with hopeful thinking.

We found no evidence across the two studies for the proposition that hope might moderate the relationship between perceived discrimination and life satisfaction. More specifically, hopeful thinking failed to buffer against the negative psychological impact of discrimination faced by minority group members. Instead, our results support the role of hopeful thinking in mediating the relationship between discrimination and life satisfaction. Among minority group members, discrimination was associated with lower life satisfaction through its negative impact on hopeful thinking. This finding illustrates the importance of the socio-structural context when examining how hopeful thinking affects life satisfaction among disadvantaged minorities.

Our results speak to the critique that the positive thinking movement tends to identify the sources of life satisfaction solely within the individual, without taking account of people's circumstances within the broader socio-structural context (Christopher et al., 2008; Held, 2002; Kristjánsson, 2010). For minority group members, discrimination poses a real barrier to their flourishing and success. This harsh reality imposes constraints on what minority group members can expect or hope for. Although hope is associated with life satisfaction (a finding consistent with previous studies), hopeful thinking itself is partially predicted by perceived discrimination. This suggests that discrimination and the ability to engage in hopeful thinking are, to some degree, intertwined. By extension, then life satisfaction cannot be significantly improved by promoting hopeful thinking independently of addressing (perceived) discrimination. Therefore, interventions aimed at enhancing minority group members' life

satisfaction merely by changing their thinking styles (i.e., as cultivating and building hopeful thinking) will have limited utility. This is because the existing social reality poses limits on individuals' capacity for such hopeful thinking. Precisely as illustrated by Csikszntmihalyi's observation, the brutal war severely diminished people's hope. In this extreme circumstance, boosting individual character strength would have limited capacity in increasing life satisfaction. The fundamental way to enhance life satisfaction would be to stop the war. Then hopeful thinking can follow and be developed.

It is noteworthy that the reported levels of discrimination in both studies are relatively low. This observation is consistent with findings obtained from other disadvantaged minority groups (e.g., for a longitudinal study, see Pahl & Way, 2006; for experimental studies, see Ramos et al., 2013). Various reasons have been offered to explain the reluctance among minority group members to claim they face discrimination (Crosby, 1984; Postmes, Branscombe, Spears, & Young, 1999; Taylor, Wright, & Porter, 1994). For example, Crosby (1984) argued that minority members underreport personal levels of discrimination so that they can protect themselves from the painful emotional consequences that result from such admissions. A growing body of work also indicates that minority group members are less likely to appraise negative events as resulting from group-based discrimination when such differential treatment is condoned and legitimized by society (see Jetten, Iyer, Branscombe, & Zhang, in press). Given this, the low discrimination levels may be more indicative of various processes at play that lead to underreporting of discrimination than that it suggests that actual discrimination levels are low.

The design of the present research does not allow us to conclude that hopeful thinking causally affects life satisfaction. Future research should use longitudinal and experimental designs to provide direct evidence for the causal relationships between hope and life satisfaction. Moreover, the samples used in the present studies consisted of school children.

The factors that shape children's and adults' hopeful thinking are likely to differ, given that children have fewer life experiences and less exposure to pervasive discrimination. As such, our results may not be easily generalized to older populations. Further research is needed to examine whether we would find similar results in older samples. Finally, how the length of time migrant workers' children have stayed in cities affects their perceived discrimination, hopeful thinking, and life satisfaction should be examined in the future research.

In conclusion, the findings of the present studies provide empirical evidence for the limitations of hopeful thinking in enhancing life satisfaction among minority group members. We highlight the important role of the socio-structural context in determining individual functioning and life satisfaction. Hopeful thinking can indeed have positive consequences, but it is also clear that there are limits in the extent to which hopeful thinking is a solution when facing group-based discrimination.

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Table 1: Means and correlations between age, discrimination, hopeful thinking and life satisfaction

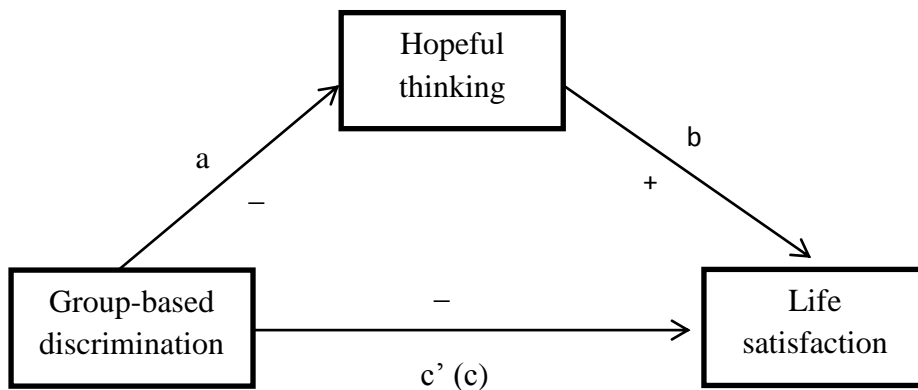| Measure	1	2	3	4
1. Age	-			
2. Discrimination	.20*	-		
3. Hopeful thinking	-.16	-.19*	-	
4. Life satisfaction	.02	-.17*	.40***	-
Mean (integrated sample)	13.50	3.69	4.04	4.83
Scores range	11-17	1 - 7	2.17 - 6	1 - 7
Standard Deviation	1.19	1.72	.95	1.18

Note: *p < .05, *** p < .001.

Figure 1: Hypothesized mediation model showing that hopeful thinking mediates the negative effect of group-based discrimination on life satisfaction.
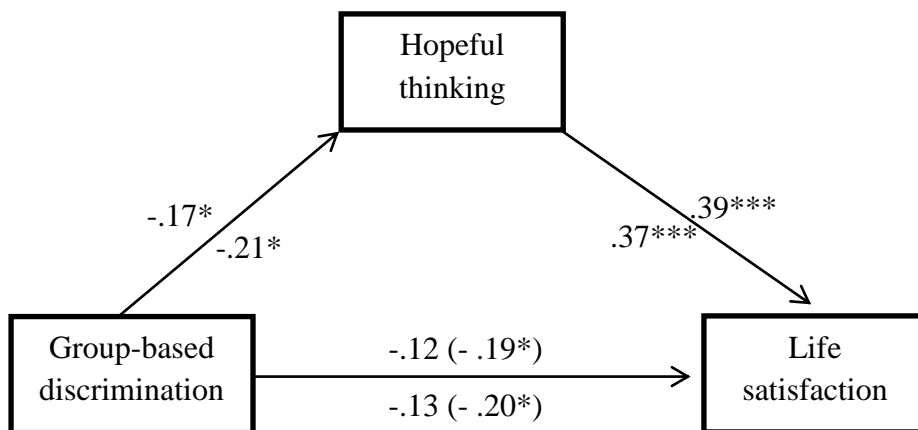

Figure 2: Hopeful thinking mediates the negative effect of perceived discrimination on life satisfaction. Cross sectional results (Study 1, N=138) are given above the paths and the experimental results (Study 2, N=105) are given below the paths.