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CHAPTER 4: PSYCHOLOGICAL WELL-BEING

Our measures of psychological well-being reflect positive indicators, including Self-Esteem and Resiliency, as well as negative aspects of functioning, including Depressive Affect, Anger, Eating Disorders, and Negative Life Chances. Results are shown in Tables 7 and 8 and Figure 1.

Self-Esteem

Although we expected self-esteem to increase from early to late adolescence based on previous studies (Galambos et al., 2006; Erol & Orth, 2011; Orth & Robins, 2014), we found both a significant linear increase and negative quadratic trend in our sample (see Table 7). On average, these adolescents' self-esteem increased from 12 to 15 years, then decreased from 16 to 20 years (see Figure 1). Why was there an average decrease in self-esteem from ages 16 to 20? Perhaps the reason is because the late-adolescent transition for this group at this historical point is linked to a reassessment of one's general state of being. The slight decline indicates a slight increase in how often youth wished they were somewhat different than they currently are. The transitions that 16 to 20 year-olds in this culture, at this historical time point, are experiencing should increase the average levels of competence of the people with whom they interact and thus to whom they can compare themselves. For example, if they move to college after graduation from high school, they will find themselves in a more academically select group

of peers. Those who move into the work force may also find this period particularly stressful: They will either have a hard time getting a job with a living wage, or they will find themselves in a job with many more competent peers. As Ruble and Seidman (1996) argued, these are the kinds of transitions that should lead to reevaluating the self and perhaps wishing one were somewhat different than one is currently. It is important to note, however, that the declines after age 16 are quite small, and the average levels remain quite high.

In contrast to previous findings (Baldwin & Hoffmann, 2002; Block & Robins, 1993; Zimmerman et al., 1992), but in support of Erol and Orth (2011), we found no gender differences in trajectories of self-esteem in this sample. However, unlike Erol and Orth (2011), we also found no evidence of R/E differences in the trajectories. The slopes were also not modified by parents' marital status or family SES, indicating that the pattern of decline in self-esteem in later adolescence is equally characteristic of youth moving into residential colleges, the labor market, or more local tertiary educational settings.

At age 14 (the intercept), there was a significant gender by race/ethnicity interaction, indicating that the mean-level gender difference in self-esteem was higher for European American than for African American adolescents, with European American females having the lowest self-esteem of the three gender by R/E groups (see Table 7). This finding is consistent with previous studies showing that gender differences are more evident in European American than in African American youth, with European American but not African American females having lower self-esteem compared to their male peers (Kling, Hyde, Showers, & Buswell, 1999; Major, Barr, Zubek, & Babey, 1999).

Adjusted for the covariates, the mean levels were above the midpoint on this scale and hovered between 3.5 ("sometimes") and 4 ("often"), suggesting that these adolescents in

general were satisfied with themselves. All of these youth had just made the transition into junior high school at Wave 1, suggesting an increase in their self-esteem following this transition.

Resiliency

In contrast to our expectations based on previous studies indicating stability in resiliency (Vecchione et al., 2010), both the linear and quadratic trends were significant (see Table 7). As shown in Figure 1, on average these adolescents showed a slight increase in resiliency from the ages of 12 to 16 years and then a slight decrease from 17 to 20 years. It is a welcome sign that these adolescents' resiliency improved over their high school years. However, consistent with the findings for self-esteem, their sense of resiliency decreased on average as they made the transition from high school into either some form of tertiary education or the work force. This decline was evident for all of the gender by R/E groups.

The rate of change in resiliency also varied across SES groups. As shown in Figure 1, higher-SES adolescents experienced a greater increase in resiliency from 12 to 16 years than did lower-SES adolescents. Higher-SES adolescents also experienced a decrease from age 17 to 20, whereas lower-SES adolescents showed no such decrease during this same period. As a result, higher-SES adolescents reported higher levels of resiliency than did lower-SES adolescents from 12 to 18 years, but this advantage disappeared by age 18.

At age 14, higher-SES youth reported more resiliency than did lower-SES youth, and there were no significant differences associated with race/ethnicity, gender, the race/ethnicity interaction, or parents' marital status (see Table 7). As was true for adolescents' self-esteem, the mean levels were well above the midpoint of this scale (3), taking into account the demographic covariates. Specifically, the average youth reported feeling ego-resilient between "sometimes" (3.5) and "often" (4).

It is interesting that family SES was linked to adolescents' resiliency, particularly during the high school years. Family wealth likely influences the neighborhood in which one lives as

well as the resources one has had access to throughout one's development. Both of these contextual characteristics are likely to result in having had to confront fewer major challenges to one's agency. If so, adolescents growing up in higher-SES families may have had fewer opportunities to have their resiliency challenged, leading to greater confidence in their ability to cope with life's challenges. They may also have been exposed to parents who had more effective coping skills and strategies and thus acquired greater confidence through role modeling.

Anger

Contrary to previous research (Galambos et al., 2006; Galambos & Krahn, 2008), there were no significant changes in anger from early to late adolescence (see Figure 1). Neither the linear nor quadratic slopes were significant, where $p < .01$ (see Table 7). There also were no significant modifications in the slopes by SES, gender, race/ethnicity, the gender by race/ethnicity interaction, or parents' marital status. These findings suggest that adolescents, regardless of their demographic characteristics, experience an overall stable trajectory of their angry feelings from early to late adolescence.

At age 14, adolescents who were lower SES and African American reported having angrier feelings than did adolescents who were higher SES and European American. The SES difference could well reflect differences in what the youth experienced as a result of where they lived and the extra stresses with which they had to deal as a result of their lower-SES status. The R/E group difference, given that family SES is taken into account, may reflect differences in the frequency with which African American and European American youth were confronted with day-to-day R/E-related stigma and discrimination as well as their increasing awareness of institutional and structural racism (Cross, 1991; Wong et al., 2003). Thus, both of these slight

differences could reflect the greater likelihood of these youth having been confronted with situations to which anger is an appropriate response. There was no significant gender difference in anger at age 14 where $p < .01$. This finding is consistent with Archer's (2004) meta-analysis of anger and aggression in adolescence, in which he concluded that males display more physical aggression compared to females but report similar levels of angry feelings.

It is important to note that the mean levels of anger being expressed were quite low. As expected, given the relatively high levels of adolescents' self-esteem and resiliency, the mean levels were below the midpoint of the scale. Adjusted for the covariates, mean levels ranged between 1.5 and 2.5 (with 2 equal to "once in awhile" and 3 equal to "sometimes"). Clearly, these frequencies are not consistent with the general stereotype of adolescence being a time of anger. Although the fact that they were experiencing any anger at all might reflect hormonal changes associated with puberty, it seems just as likely that they reflect reasonable responses to the world in which these adolescents lived (Eccles et al., 1993). One could argue that these levels of anger accurately reveal the number of times they would be expected to be confronted by a situation that justifiably elicited angry feelings. The fact that the levels were highest for African American and low-SES students is consistent with this interpretation.

Depressive Affect

Both the linear and the quadratic trends were significant (see Table 7). Consistent with our expectations from previous research (Cole et al., 2002; Garber, Keiley, & Martin, 2002; Galambos et al., 2006), the average adolescent experienced an increase in the frequency of depressive affect from ages 14 to 16 and then reported a decrease from 17 to 20 years (see Figure 1). Thus, unlike self-esteem and resiliency, which increased over the high school years, suggesting increasingly positive development during the high school years followed by a

decrease, reports of depressive affect increased until age 16 to 17 and then decreased. Both positive feelings about the self and feelings of depression are consistent with the notion of early to middle adolescence as a period of increased moodiness (Steinberg & Morris, 1991), but it is important to note that feelings of depression were much less frequent compared to feelings of satisfaction with oneself (depressive affect occurring on average “once in a while” versus feeling satisfied with oneself “sometimes” to “often”).

There was also a significant but slight difference in the quadratic trend of depressive affect according to SES. As shown in Figure 1, higher-SES adolescents experienced a slightly greater rate of decrease from 18 to 20 years than did lower-SES adolescents. As a result of these very small changes, on average and controlling for all other demographic characteristics, lower-SES youth reported more frequent rates of depressive affect at age 20 than did higher-SES youth. This difference is inconsistent with the SES differences in resiliency at age 20 where, if anything, high-SES youth reported lower feelings of resiliency than did low-SES youth.

At age 14, there was a significant gender difference but no other significant demographic effects. As one would expect (Angold, Erkanli, Silberg, Eaves, & Costello, 2002; Ge, Conger, & Elder, 2001; Ge, Lorenz, Conger, Elder, & Simons, 1994; Twenge & Nolen-Hoeksema, 2002), females reported slightly more frequent feelings of depression than did males.

Consistent with the findings for self-esteem, resiliency, and anger, the frequencies with which these young people reported feeling depressed were quite low, particularly given the cultural stereotype of adolescents being moody and depressed. Taking into account the covariates, adolescents reported such feelings slightly more than “once in a while” – scores ranged from 1 to 1.5 on a 3-point scale, with 2 as the midpoint. Furthermore, although statistically significant, the group differences were quite small.

Eating Disorders

Although other studies have shown increases in eating disorders during adolescence (Hudson et al., 2007; Measelle et al., 2006), in this sample the linear and quadratic slopes of eating disorders were non-significant, indicating that the incidence of eating disorders remained stable from 14 to 20 years (see Figure 1, Table 7). Furthermore, neither of the slopes were moderated by SES, gender, race/ethnicity, the interaction of gender by race/ethnicity, or parents' marital status.

There were clear differences in the levels of eating disorders at the intercept, however. At 14 years, there was a significant gender by race/ethnicity interaction showing that the gender difference in eating behavior was much more marked among European American than African American youth and that the R/E difference was much more marked among the females. As other researchers have found (Hoek, 2006), there was a much higher incidence of eating disorders for European American than African American female adolescents. These findings are consistent with evidence that (a) European American females are more aware of a thinness standard compared to African American females (Abrams & Stormer, 2002), (b) African American females have more positive body images compared to European American females (Molloy & Herzberger, 1998), and (c) a broader range of female body types are considered attractive in the African American community (Parker et al., 1995).

The mean levels, however, indicate that eating disorders were quite rare for all groups when taking into account the covariates, with the exception of European American females, whose reported rates vary between "less than rarely" (1.5) to "rarely" (2) on a 6-point scale (with 3.5 as the midpoint). However, even though the mean level was quite low (averaging near 2.5, between "rarely" and "sometimes"), the rates for European American females are

troubling and consistent with public health data suggesting that we should be concerned about the implications of such behaviors for young women's long-term health trajectories. Some of these eating-disorder behaviors are sufficiently risky to jeopardize future health, even if done only occasionally.

Expected Negative Life Chances

There has been increasing discussion about the role that expectations about one's future options and risks can play in shaping individuals' developmental trajectories (e.g., McDade, Chyu, Duncan, Hoyt, Doane, & Adam, 2011; Schulenberg & Maggs, 2002; Stoddard, Zimmerman, & Bauermeister, 2011). Research has demonstrated that holding high educational expectations predicts an increased likelihood of completing high school and attending tertiary education (e.g., Beal & Crockett, 2010; Eccles, Vida, & Barber, 2004; Mello, 2008). But what about such expectations as becoming unemployed or involved in risky or delinquent behaviors? Do such expectations also become self-fulfilling prophecies? Little research has addressed this question, but the work on negative neighborhood effects suggests that the presence of large numbers of adult role models who engage in risky or illegal behaviors can lead adolescents living in these neighborhoods to develop high expectations that they will become involved in these behaviors as well (Elliot et al., 1996); these expectations, in turn, may increase the likelihood that they actually follow these risky pathways. Few studies have looked at the developmental trajectories or consequences of such negative life expectations, but one could argue that such beliefs might influence optimism and investment in one's future.

In this sample, we found a significant increasing linear slope (see Table 7) in the youths' reports of the likelihood that they will become engaged in risky and delinquent behaviors, even death, from early to late adolescence. Thus, on average, expectations of negative life chances

increased for these adolescents as they grew older (see Figure 1). There were no significant differences in the slopes according to SES, gender, race/ethnicity, the gender by race/ethnicity interaction, or parents' marital status (where $p < .01$).

At the intercept (age 14), as expected, males reported higher expectations for negative life chances than females. However, there were no other significant differences at the intercept after accounting for our other demographic variables. In terms of the mean level, adolescents' expectations of negative outcomes started quite low, varying between a score of 1 and 1.5, which corresponds to adolescents saying that the average likelihood of these negative life experiences occurring was "very low" to "low" (controlling for the covariates). By age 18, the average mean level increased to above 1.5. Part of the increase in these negative expectations could reflect the fact that a score of 6 was given if the events had already happened. Because several of these events increase in frequency with age, the odds that one of them has already happened increases with age as well. In fact, some of these acts become almost normative by age 16 and 17, like skipping school or having sex. Thus, although it is worrisome that some of these youth believed that such negative life experiences were likely in their future, this was not true for most of the youth in this sample. The contrast of these findings with expectations for positive educational outcomes presented in the next section reinforces this point. Most of the youth in this sample, in the late 1990s, were quite optimistic about their future lives, and this optimism did not depend on their SES or race/ethnicity.

Summary of Psychological Well-Being

Developmental trajectories showed a convex curvature with a slight increase in early adolescence followed by a slight decrease in late adolescence for many of our measures of psychological well-being, including feelings of self-esteem, resiliency, anger, and depression,

although the trends for anger were not statistically significant (where $p < .01$). The prevalence of eating disorders remained stable while expectations of negative life chances increased from early to late adolescence. This was somewhat in line with our predictions, although we expected that resiliency would remain stable and eating disorders would increase throughout adolescence.

This convex pattern was consistent across both positive and negative indicators of psychological well-being, suggesting that mental health-related changes are tied to the normative events of this age period in interesting but possibly contradictory ways. The highest levels of both positive and negative indicators of emotional functioning occurred in middle adolescence, around ages 16 and 17, a time of relative stability in these adolescents' lives. They were in the final years of high school but were not yet involved in the transition out of high school. Many would have either gained confidence in their abilities to thrive in the high school context or reconciled themselves to a non-academic life track and thus reduced the importance they attached to doing well academically. Many would also have found their social niche in this setting, as well as in settings outside of school, leading to increases in self-esteem and confidence in one's resiliency.

So why, although absolutely low, were the levels of anger and depressive affect highest at these ages? The most likely explanation is that different parts of the population were contributing to these means, with those who were doing the best at the tasks and settings of middle adolescence accounting for the higher levels of the positive emotional characteristics and those who were not doing as well in these settings accounting for the higher levels of the negative emotional characteristics. The relatively small changes across time in all of these indicators could well result from small shifts in which parts of the larger population were selecting the more extreme scores. It could also be that this is a period of great moodiness so that many adolescents showed more extreme forms of both positive and negative self-appraisals and emotions and, thus, gave equally

extreme responses to both positive and negative indicators of mental health (Buchanan, Eccles, & Becker, 1992; Graber, 2004). Both explanations may be equally true with small segments of adolescents reacting more strongly to their moods due to biological and experiential dispositions (Davidson, Jackson, & Kalin, 2000) and features of their environment (Eccles et al., 1993; Powers, 2011). What is most interesting is that none of our other demographic categories showed consistent associations with these patterns during the middle adolescent years, providing support for the idea that major challenges faced by adolescents in the United States are fairly consistent across demographic groups (Buchanan et al., 1992).

As expected, the lowest levels of these self-appraisal and emotional reactions occurred both (a) during the early adolescent transitional period, right after these children moved into junior high school and while they were in the midst of pubertal development, particularly for males (Baumrind, 1991; Eccles et al., 1993; Simmons & Byth, 1987), and (b) during the transition out of high school when these youth faced a variety of major new challenges (Ruble & Seidman, 1996) likely to make them question themselves and their relative competencies. These findings are in keeping with the idea that school transitions may be times of increased risk for adolescents due to stage-environment misfit, eliciting self-reappraisal leading to lower satisfaction with the self and the self's coping abilities (Eccles et al., 1993). But why the lower levels of depressive affect in early than middle adolescence? One might expect that depressive affect would also be highest at these times, particularly if adolescents doubted their coping abilities more and were feeling less satisfied with themselves. Instead, consistent with other studies (Cole et al., 2002; Garber et al., 2002), we found the opposite pattern for both average levels of reported depressive affect and within each of our subpopulations, suggesting that this pattern of change is normative in American samples during this period.

Although we expected that females would show lower and worsening trajectories for self-esteem, depressive affect, and eating disorders, we found significant gender differences in the mean levels only, rather than in the shape of the adolescents' trajectories. In support of previous research (Hankin et al., 1998; Kling et al., 1999; Zahn-Waxler, Shirtcliff, & Marceau, 2008), females at age 14 were more at risk of experiencing internalizing mental health problems compared to males. Female adolescents reported a higher prevalence of eating disorders, greater feelings of depression and lower levels of self-esteem than did the males. As we expected, males reported higher expectations of becoming involved in risky and illegal behaviors than did females at age 14.

We also predicted that African American adolescents would have more positive trajectories of self-esteem compared to European-American adolescents, but there were no R/E differences in any of the slopes. There was only one significant R/E difference, which occurred at the intercept: African American adolescents reported more anger than did European American adolescents at age 14, understandably, as they are just learning of the injustices perpetrated on their race. There were, however, several gender by R/E interactions, again at the mean level only with European Americans showing greater gender differences compared to African Americans. As a result, and consistent with previous findings (Hoek, 2006), these European American females reported a greater incidence of eating disorders and lower self-esteem than did both African American females and European American males (Richman, Clark & Brown, 1985), highlighting their uniquely heightened vulnerability to mental health difficulties during the adolescent years. These gender by race/ethnicity interactions emphasize the importance of an intersectionality perspective where considering the potential impact of these two very powerful demographic characteristics.

SES was a significant factor in both the mean levels and trajectories of our mental health-related characteristics. Lower-SES adolescents reported more frequent feelings of anger and less frequent feelings of resiliency than did higher-SES adolescents. However, there were also differences in the trajectories of psychological well-being, such that differences associated with SES decreased in late adolescence. For example, higher-SES adolescents experienced a greater increase in resiliency from 12 to 16 years than did lower-SES adolescents, but their trajectories converged in later adolescence. Similarly, lower-SES adolescents experienced more frequent feelings of depression in early adolescence than did higher-SES adolescents, but again their trajectories converged as they approached the transition to adulthood. Apparently, in this sample, SES differences in our indicators of psychological well-being narrowed as the adolescents matured into young adults. In the case of adolescents' depressive affect, this shift reflects the movement of both groups towards better mental health. In contrast, this shift also reflects the downward movement of both groups toward a more moderate level of confidence in their resiliency, perhaps due to the challenging nature of the transition out of high school for all youth.

Contrary to studies finding more internalizing problems for adolescents from single families versus those from intact families (e.g., Lansford, Malone, Castellino, Dodge, Pettit, & Bates, 2006), we found no significant differences (where $p < .01$) in psychological well-being on our six measures according to parents' marital status, suggesting that living in an always-single home does not have significant or necessarily negative consequences for adolescent psychological well-being. However, it must be kept in mind that we only included parents' marital status when the adolescent was 12 years old. As a result, we do not know how changes in parents' marital status reflect changes in mental health across the adolescent years.

Overall, most of the variation in psychological well-being was attributable to differences within adolescents, with the exception of Eating Disorders. Between 9% (Eating Disorders) and 40% (Depressive Affect) of the within-person variation was associated with age. Demographic characteristics accounted for between 3% and 14% of the variance in the intercept (see Table 8), with the greatest amount of variance being accounted for in Eating Disorders and the least amount of reliable variance accounted for in Depressive Affect. The amount of reliable variance accounted for in slopes also varied across our six indicators, with the most being explained for Eating Disorders (17%), followed by Resiliency (6%). Finally, covariates explained little of the variation in the other slopes, including Self-Esteem, Anger, Depressive Affect, and Expected Negative Life Chances. Clearly, there is a great deal of intra-individual variance left to be explained. Both age and classic demographic characteristics explained relatively little of the inter-individual and intra-individual differences in psychological well-being. On the whole, the psychological well-being of these young people looked very good, and what changes there were do not suggest a great deal of risk despite the major social and biological changes that these youth experience as they pass through this developmental period. One is not left with the impression that our young people were at high risk of negative life events or negative life outcomes. Rather, they showed positive psychological functioning, more generally.

Table 7

Growth Models for Psychological Well-Being

	Self-Esteem	Resiliency	Anger	Depressive Affect	Eating Disorders	Expected Negative Life Chances
For Intercept						
Intercept	3.81***	3.77***	2.29***	1.32***	1.99***	1.44***
SES	-.00	.09***	-.12***	-.02	-.04	-.04
Gender	-.28***	-.05	-.11*	.11***	.55***	-.11**
Ethnicity	-.07	.07	-.18**	-.00	.10	-.00
GXE	-.27**	-.02	-.09	.06	.57***	.06
Single	.04	.08	.09	-.05	-.23	-.37
Intact	.05	.03	.00	-.02	-.09	-.06
Age	-.03	-.07	.00	-.03	.02	.02
Age ²	-.00	.01	-.01	.01	-.00	-.01
For Linear slope						
Intercept	.08***	.10***	.01	.18***	-.08	.05***
SES	-.01	.02	-.01	.03*	.03	-.02
Gender	.00	.01	-.02	-.05*	.02	.03*
Ethnicity	-.02	-.03	.00	.03	.05	-.01
GXE	.01	.05	.01	-.03	-.06	.00
Single	.06	.04	.03	.01	.20	-.03
Intact	.00	-.01	.02	-.01	.06	-.01
For Quadratic slope						
Intercept	-.02***	-.02***	-.01*	-.04***	.00	.01*
SES	.00	-.01**	.00	-.01**	-.01	.00
Gender	.00	-.00	.00	.01	-.00	-.02*
Ethnicity	-.00	-.00	.00	-.01	-.00	.02*
GXE	.00	-.01	.00	.01	.01	-.00
Single	-.02*	-.01	-.00	.01	-.03	.04*
Intact	.00	.00	-.01	-.00	-.01	.00

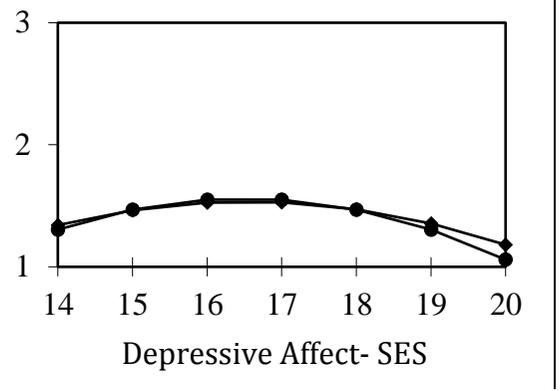
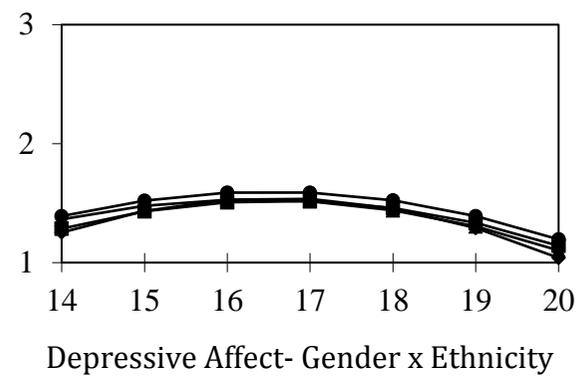
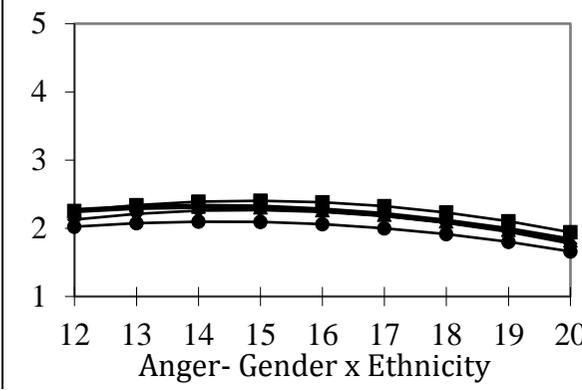
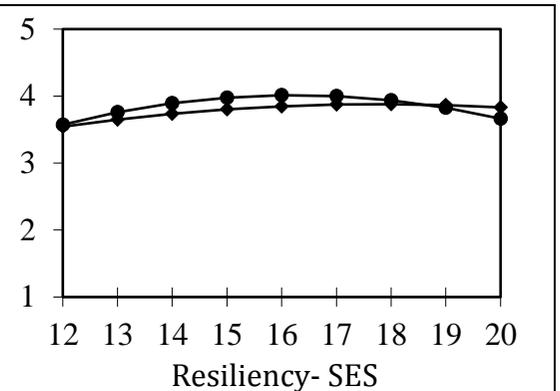
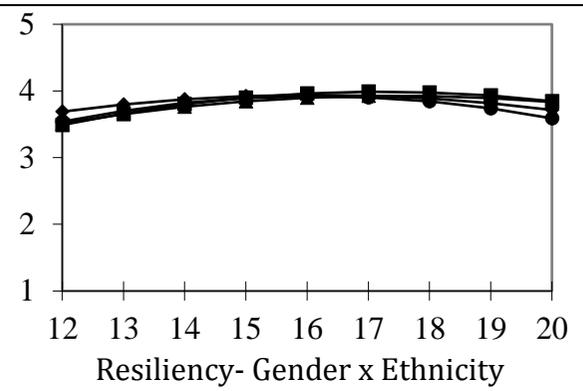
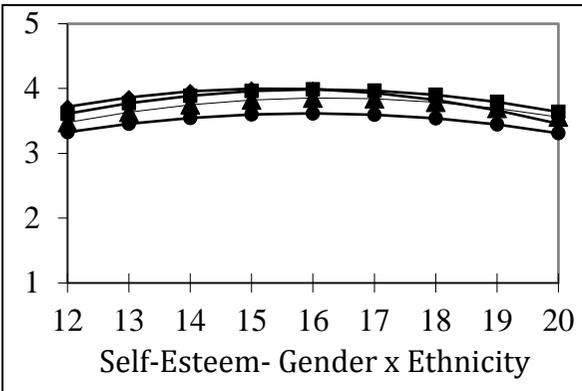
Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

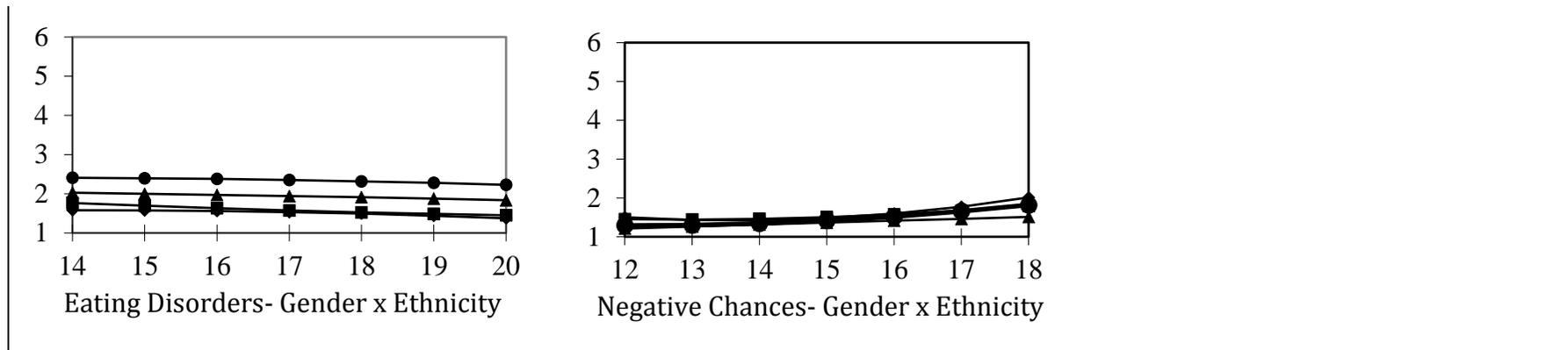
Table 8

Residual Variance for Psychological Well-Being

Level 1 Variable	Unconditional Means Model	ICC	Unconditional Growth Model	Level 1 R ²	With Level 2 Predictors	% Explained
Self Esteem		.41		.24		
Level 1	.532		.406			
Intercept	.364***		.409***		.388***	5%
Linear Slope			.017***		.017***	<1%
Quad Slope			.000		.000	<1%
Resiliency		.27		.30		
Level 1	.381		.268			
Intercept	.142***		.189***		.181***	4%
Linear Slope			.017***		.016***	6%
Quad Slope			.000		.000	<1%
Anger		.35		.12		
Level 1	.647		.571			
Intercept	.343***		.452***		.427***	6%
Linear Slope			.008		.008	<1%
Quad Slope			.000		.000	<1%
Depressive Affect		.22		.40		
Level 1	.107		.064			
Intercept	.031***		.073***		.071***	3%
Linear Slope			.004***		.004***	<1%
Eating Disorders		.52		.09		
Level 1	.468		.424			
Intercept	.503***		.595***		.514***	14%
Linear Slope			.006***		.005***	17%
Expected Negative Life Chances		.32		.36		
Level 1	.270		.174			
Intercept	.127***		.136***		.127***	7%
Linear Slope			.015***		.015***	<1%

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.





Note. The x-axis represents age in years, whereas the y-axis represents the mean of the scale, controlling for the covariates. For the gender and race/ethnicity growth curves, European-American females are represented by the circle, European American males are represented by the diamond, African American females are represented by the triangle, and African American males are represented by the square. For the SES growth curves, high-SES adolescents are represented by the circle, whereas low-SES adolescents are represented by the diamond.

Figure 1. Growth Curves for Psychological Well-Being.