12-21-2011

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Recommended Citation

Perceived Support, Belonging, and Possible Selves Strategies Among Incarcerated Juvenile Offenders[1]

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Possible selves theory (Markus & Nurius, 1986) suggests that future-oriented expectations, fears, and strategies are constrained by feedback in one's sociocultural context. The current paper represents a preliminary look into the relationship between support in one's immediate context and the development of strategies for the achievement of desired future selves. Youthful offenders ($N = 543$) were surveyed in secured treatment facilities in Alaska, Idaho, Nevada, and Oregon. Program belonging was a consistent predictor of strategy generation among both males and females, and attributional support from a staff person was significant among males. The findings support further examination of interpersonal interactions as they relate to future-oriented planning and point to a need for further investigation into the development of concrete strategies.

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Developing a functional orientation toward the future is an important task in the transition from childhood to adulthood, one that not all youth master with the same degree of success. Many youth involved with the juvenile justice system have fewer conventional goals (Oyserman & Markus, 1990), less optimistic aspirations (Newberry & Duncan, 2001; Trommsdorff & Lamm, 1980), and less extension into the future (Trommsdorff & Lamm, 1980) than do youth who are not involved in the system. Even when system-involved youth do have hopes and expectations for the future, they do not necessarily have well developed strategies in place to facilitate achievement of those goals (Abrams & Aguilar, 2005; Clinkinbeard & Zohra, in press). Delinquent youth are among those with the most obstacles to over- come in their transition to adulthood (Annie E. Casey Foundation, 2004), yet they are least likely to have effective future-oriented thinking and planning systems in place.

Post-incarceration planning, and the factors that influence it, are important to understand because reports of recidivism among juvenile offenders range anywhere from 12% to 55%[3] (Snyder & Sickmund, 2006). Although there are no magic bullets with regard to reducing recidivism, planning is likely to be a first line of defense (McCamey, 2010; Willis & Grace, 2009). More specifically, strategies that are attached to future-oriented expectations and fears may be the most important piece of future planning and the element that is most closely linked to actual behavior change (Gollwitzer, Fujita, & Oettingen, 2004; Oyserman, Bybee, & Terry, 2006; Oyserman, Bybee, Terry, & Hart-Johnson, 2004). However, empirical research has yet to explore fully the contexts that facilitate strategy development.

In order to understand how to help youth develop effective strategies for behavior change, it is important to appreciate the environmental–contextual factors that contribute to such processes (McCabe, Cunnington, & Brooks- Gunn, 2004).

[3]Recidivism among juvenile offenders is a tricky concept to discuss because there are so many different definitions (e.g., repeat of same crime, repeat of any crime, technical violations) and measures (e.g., re-arrest, re-confinement). There are no good national estimates of recidivism, in part because of the variability in the juvenile justice system from one state to the next. The rates reported here are based on official statistics in multiple states, though single-state reports often document rates even higher than 55%.

Research that illuminates the predictors of effective planning can ultimately guide youth facilities in designing programming that enhances effective future-oriented thinking. The goal of the current study is to explore how experiences with support systems—especially those specific to treatment facilities (e.g., staff support, program belonging)—may be related to strategy development among incarcerated juvenile offenders. A possible selves' frame- work is employed for this investigation.

Literature Review

Possible selves are cognitive structures representing self-knowledge about what a person would like to become, ideally; who he could become; and what he would like to avoid becoming. As opposed to generalized shapeless goals and fears, possible selves are personalized representations that give meaning and form to these broader conceptions (Markus & Nurius, 1986). For example, an incarcerated youth nearing release may have fears about her ability to avoid trouble. These fears are likely to be accompanied by specific images of hanging out with old friends and getting high or thoughts about the specific emotions she might experience as she makes yet another phone call from the police station.

Identifying such expectations and fears for the future is an important step in the development of possible selves. Youth with the most developed possible selves frameworks, however, also understand the necessary relationship between expected and feared selves, and have identified strategies in place to facilitate the achievement–avoidance of those selves (Oyserman et al., 2004; Oyserman & Markus, 1990).

In addition to representing self-relevant hopes, expectations, and fears, possible selves encompass planning and strategy-related cognitions and behaviors. For example, an individual who has a hoped-for employed self may have specific thoughts regarding what that employed self looks like, but may also have thoughts regarding the achievement of that self. An individual with strategies recognizes that he will need to integrate his skills and experience into a résumé, perform job-advertisement searches, write letters, and complete applications. The addition of strategies to the possible selves concept may be especially important in explaining why some individuals successfully achieve desired selves and avoid feared selves,

whereas others with similar hopes, expectations, and fears do not manage the same thing.

Research on strategy elicitation has suggested that strategies may, indeed, be an important link to behavior (Gollwitzer, 1996; Oyserman & James, 2009). In one investigation of inner-city middle school students, surveys were administered and grades were collected at the beginning and the end of students' eighth-grade year. The number of strategies generated by youth was predictive of positive affect toward school and semester grades. Further, the more strategies the youth generated, the less likely they were to be referred to summer school. The more strategies the youth generated, the less likely they were to be referred to summer school (Oyserman et al., 2004). Another study of academic selves reported a positive relationship between plausible strategies and time spent on homework and a negative relationship between strategies and classroom problem behavior. That is, youth who reported a higher number of plausible strategies also reported more time spent on homework, and their teachers reported fewer problem behaviors in the classroom than did youth who reported few plausible strategies (Oyserman et al., 2006).

Possible selves research thus far has suggested that certain constellations of possible selves and strategies are related to a variety of positive results, including academic outcomes (Anderman & Anderman, 1999; Hock, Deshler, Schumaker, Dunkel, & Kerpelman, 2006; Leondari, Syngollitou, & Kiosseoglou, 1998; Oyserman et al., 2006; Oyserman, Gant, & Ager, 1995), self-esteem (Knox, Funk, Elliot, & Bush, 1998; Leondari & Gialamas, 2000), health-promoting behaviors (Ouellette, Hessling, Gibbons, Reis-Bergan, & Gerrard, 2005), motivation (Leondari et al., 1998; Norman & Aron, 2003; Strahan & Wilson, 2006), and identity exploration (Dunkel, 2000; Dunkel & Anthis, 2001). Further, these constructive possible selves have been negatively associated with substance use (Aloise-Young, Hennigan, & Leong, 2001) and delinquency (Oyserman & Markus, 1990; Oyserman & Saltz, 1993) in a number of studies. Few studies have looked beyond general demo- graphics for predictors of possible selves or strategies (for exceptions, see Oyserman, Bybee, & Terry, 2003; Oyserman et al., 1995).

Theory suggests that possible selves are guided by, and restricted to, those categories made salient by an individual's sociocultural and historical con- texts (Markus & Nurius, 1986). Feedback that guides an individual's possible selves is likely to come from several potential sources, including (a) social and religious institutions; (b) media; (c) significant others, including peers, family, and teachers; and (d) from the individual's own interpretation of environ- mental feedback and past experiences. Oyserman and Saltz (1993) suggested that possible selves are likely incorporated into an individual's identity as a result of a series of interactions with agents of socialization. It is not just one event that suggests to youth that a *high school graduate self* is possible, but rather a series of interactions with parents, teachers, and school experiences that help them recognize such a possibility.

Possible selves theory points to the social environment as ultimately responsible for the development of possible selves, though it is not specific in the way that this happens. Any number of relationships, conversations, and relationship qualities in one's environment can predict an individual's possible selves. However, theory does suggest that possible selves represent one element of the self that is likely to change over time and, as such, is a reflection of one's most current and salient environmental structure (Markus & Nurius, 1986). Therefore, any exploration into predictors of possible selves and strategies must focus on salient aspects of the environment. The current study is a preliminary attempt to explore sources of salient environmental support, as related to strategy generation among incarcerated juvenile offenders.

Nurius (1991) suggested that social support may be one element of environmental feedback worth exploring with regard to possible selves. According to Nurius, in order for possible selves to be motivationally effective, they must be elaborated (i.e., connected to means or strategies), and this is not likely to happen without feedback to validate or encourage potential self- conceptions. Specifically, it may not be the social ties per se that contribute to elaboration of the self-concept, but, rather, the reflected or perceived support.

The broader social support literature emphasizes perceived support. Several investigations have reported that perception of support on the part of the receiver is

a better predictor of well-being than is the actual receipt or provision of support (Antonucci & Israel, 1986; Helgeson, 1993; Wething- ton & Kessler, 1986). Consistent with early possible selves theorizing, this study explores social support as it relates to possible self-elaboration and focuses on perceptions of situationally salient feedback.

Study Aims and Questions

The current study explores three measures of support and belonging as they relate to reports of possible selves strategies by incarcerated youth. Consistent with possible selves theory, the measures were chosen to represent the youths' immediate contexts. *Social support* represents acceptance by significant others both inside and outside the facility, while *program belonging* represents the youth's perceived connection to his or her immediate environment, the institution. Finally, *perceived attributional support* from staff is an indicator of feedback from the adults with whom institutionalized youth interact most often. Social support and program belonging represent general feedback about whether or not a youth is worthy and accepted, while attributional support is a more specific indicator of perceived feedback regarding how youth should approach successes and failures.

The current research will explore the following questions: What is the relationship between general social support, program belonging, and attributional support from staff and the number of possible self-associated strategies elicited? Further, in addition to number, do these support variables predict the presence of concrete strategies? Finally, are these relationships similar for males and females?

Method

Participants

Study participants were 543 juvenile offenders (384 males, 159 females) who were residing in five secured juvenile correctional facilities in Alaska ($n = 86$), Idaho ($n = 125$), Nevada ($n = 186$), and Oregon ($n = 146$). Each of the facilities had an average minimum stay of 90 days, and served both male and female offenders.

Following the removal of cases with missing or out- of-range data, the final sample consisted of 409 youth (292 males, 117 females).

Participants' mean age was 16.5 years (SD = 1.4; range = 12–20 years). The most often reported race/ethnicity was White (39.9%); followed by multiracial (20.5%); Latino, Hispanic, or Mexican (16.6%); Native American or Alaskan Native (8.1%); African American or Black (7.8%); other (5.1%); and Asian American or Pacific Islander (2.0%). Males reported being incarcerated as a result of violent crimes (33%), sexual offenses (20%), status offenses (e.g., running away) and drug/alcohol offenses (19%), property offenses (12%), probation violations (9%), and multiple offenses (3%). Females identified primarily status and drug/alcohol offenses (39%); violent offenses (25%); probation violations (11%); property offenses (11%); multiple offenses (5%); and sexual offenses, including prostitution (5%).

Measures

Possible selves strategies. The dependent variable of interest, possible selves strategies, was elicited using the open-ended Possible Selves Questionnaire (Oyserman & Markus, 1990). The PSQ instructs participants to picture themselves 1 year from the present and to imagine who they think they will be and what they will be like, as well as who they hope not to be or be like. Youth are asked to complete three items that begin with the phrase "Next year, I expect to be . . ." After each listing of expected self, youth are prompted to respond to the following: "Am I doing something to be that way?" and "If yes, what am I doing now to be that way next year?" The feared selves follow the same format except that they are prefaced with "Next year, I want to avoid . . .".

All coding of selves and strategies was conducted by two investigators, and interrater reliability was calculated (range = 78%–96%). Following the initial agreement calculation, investigators discussed cases where inconsistencies occurred in order to come to a final agreement on coding. Investigators counted the number of strategies[4] and determined whether the strategies were concrete or

[4]The counting process did involve excluding written statements that were clearly not strategies.

abstract. A *concrete strategy* was defined as any strategy that could be replicated

by a person other than the person who listed the self. For example, "Apply to local colleges" could be easily understood and performed by another person. On the other hand, "Change my ways" would not be concrete enough that another person could readily replicate the strategy without more information. Strategies that did not meet this definition were coded as *abstract*.

Social support. The social support literature includes several different methods for assessing support. Many support measures assess the extent to which specific types of support (e.g., financial, informational, emotional) are offered or available to participants. The measure used in the current study focuses instead on the outcome, or what is communicated through supportive actions. Sarason, Pierce, and Sarason (1990) suggested that general social support can be equated with a sense of acceptance, or feelings that one is loved and accepted. Following Sarason et al.'s definition, social support in the current study is operationalized as the extent to which youth feel generally cared for by others in their lives.

General social support was measured using five items from the National Longitudinal Study of Adolescent Health (Resnick et al., 1997). The items ask youth to report how much they feel teachers, staff, parents, friends, and others care about them. For each relationship, participants choose from responses on a 5-point scale ranging from 1 (*not at all*) to 5 (*very much*). Internal reliability (a = .64) for the social support items was moderate for the current investigation.

Perceived attributional support. We measured perceived attributional support from staff using four items from the 16-item Perceived Attributional Support Questionnaire (PASQ; Clinkinbeard, 2008). The questionnaire gauges perceptions of feedback from significant others (i.e., mother figure, father figure, staff person, self-named important person) regarding the meaning of the youth's successes and failures. For the current study, only the youth's perceptions of the staff person were used in analyses.

The questionnaire asks participants to imagine trying a new activity and succeeding. The participants are then asked to imagine how the staff person who is important to them (of their choice) might respond to this success. Participants choose the most likely of three alternatives that represent the following: (a) entity

feedback; (b) incremental feedback; and (c) feedback neglect (i.e., no feedback provided). Sample responses include "You are good" (entity); "Keep up the hard work" (incremental); or "He is not likely to say anything" (neglect). The response wording varies across the PASQ. However, all responses conform to the entity, incremental, and neglect format described earlier. The same questions are repeated for an imagined failure.

The four questions used for the current study were indicators of youth perceptions of staff responses to successes and failures on a new activity. Scale scores ranged from 0 to 4 (1 point for each incremental response), with higher scores representing higher perceived levels of incremental feedback from staff. Previous empirical research has identified incremental feedback as most effective for encouraging mastery-oriented behavior and coping (Hong, Chiu, Dweck, Lin, & Wan, 1999; Kamins & Dweck, 1999; Mueller & Dweck, 1998).

Program belonging. We measured program belonging by using the five- item Sense of Belonging Scale (Anderson-Butcher & Conroy, 2002). The scale assesses perceptions of support and membership in youth development programs. In this case, the items were used as an indicator of institutional support within the facility. Participants rated their agreement with five statements that assess support, acceptance, comfort, commitment, and being a part of the program on a 5-point scale ranging from 1 (*not at all*) to 5 (*very much*). Sample statements include "I feel I am a part of this program," and "I feel committed to this program." A relatively strong alpha of .88 was obtained with the current population on the Sense of Belonging Scale.

Covariates. In order to control for potential demographic or treatment variation differences, we included available control variables. Participant age and race (0 = non-White, 1 = White) were included in the analysis. Time spent in the facility (measured in months) was also included in several analyses. Finally, although facility designation was not included as a control variable in the regression analyses, we explored facility differences on primary variables of interest.

Procedure

Data for the current study were collected via in-person, self-administered surveys. Male and female investigators visited each of the five facilities (2 in Nevada, and 1 each in Alaska, Idaho, and Oregon) and administered surveys to groups of 10 to 40 youth. The size of the group was a product of facility setup and preference. Surveys were administered in classrooms, lunchrooms, common areas on living units, and in individual living areas of one closed treatment unit. All youth who were present in the facility on the day of administration were invited to participate. The overall response rate was 95.8%.

Results

Descriptive Analyses

Participants generated possible selves and strategies in a variety of domains, although the most commonly reported domains were similar for both males and females. The top three categories within which male youth identified expected selves were lifestyle (61%)[5], school (57%), and job/career (53%). The categories were the same for females, although school (66%) was reported most often, followed by lifestyle (57%) and job/career (43%). Life- style possible selves most often related to a change of living situation (e.g., "living in my own apartment," "out in the community"), while expected selves generated by the youth with regard to categories of school (e.g., "getting my GED," "in college") and job/career (e.g., "working full time," "a mechanic") domains were a little more varied.

In terms of feared selves (i.e., those things that youth were hoping to avoid in the upcoming year), the most commonly reported categories were risky behaviors or the consequences of such behavior (e.g., "jail," "committing crimes"), alcohol and other drugs (AOD; e.g., "drugs and alcohol, cigarettes," "smoking marijuana"), and interpersonal (e.g., "hurting my family," "my gang homies"). For males, risky selves (57%) ranked first, followed by AOD (49%) and interpersonal (43%). AOD (62%) was the most reported feared self category generated by females, followed by risky (58%) and inter- personal (45%) selves.

[5]Percentages reflect the proportion of youth who reported at least one possible self in the identified category.

The number of expected selves reported ranged from 0 to 6 for males (M = 2.92, SD = 1.21) and for females (M = 2.97, SD = 1.21). Feared selves ranged from 0 to 7 for males (M = 2.35, SD = 1.03), and from 0 to 5 for females (M = 2.44, SD = 1.07). Expected strategies, the outcome variable of interest, ranged from 0 to 8 for males (M = 2.48, SD = 1.50), and from 0 to 6 for females (M = 2.39, SD = 1.44); whereas feared strategies ranged from 0 to 5 for males (M = 1.99, SD = 1.31) and for females (M = 1.97, SD = 1.22). Social support was measured on a 5-point scale, with a mean of 3.85 (SD = 0.69) for males, and 3.85 for females (SD = 0.71). Program belonging, also measured on a 5-point scale, had a mean of 3.32 for males (SD = 1.05), and 3.49 for females (SD = 1.08). Attributional support from staff had a possible range of 0 to 4, with reported means of 2.40 (SD = 1.29) for males, and 2.52 (SD = 1.05) for females. Higher scores represent a greater degree of perceived incremental feedback.

Tables 1 and 2 present the zero-order Pearson product-moment correlations among the three control variables, the three feedback variables, and possible selves' strategies, both expected and feared. All three feedback variables (i.e., general social support, program belonging, perceived attributional support) were significantly correlated for both males and females, although the relationships were not strong enough to suggest multicollinearity.[6] Race (i.e., White/non-White) was not significantly correlated to any of the other predictor or outcome variables for either males or females and so was not included in the later regression analysis. Age was positively correlated with all three support variables for females, and all but program belonging among males. Further, age was significantly correlated with feared strategies such that older youth reported more feared strategies. Total time in the facility[7] had a positive relationship with program belonging for males (i.e., more time

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[6]Tolerance statistics and the variance inflation factor (VIF) were also calculated, and neither suggested that multicollinearity was an issue (i.e., tolerance statistics well above .20, and VIF well below 10; Field, 2005, p. 196).

[7]This variable was log-transformed to better approximate a normal distribution.

Table 1

Bivariate Correlations: Males

Variable	1	2	3	4	5	6	7
1. White	—						
2. Age	.08	—					
3. Time	.04	.33**	—				
4. GSS	.08	.12*	.04	—			
5. PAS	.04	.16*	.03	.43**	—		
6. PBS	.00	.10	.12*	.40**	.43**	—	
7. EStrat	.07	.04	.02	.17**	.26**	.22**	—
8. FStrat	.05	.12*	.00	.19**	.30**	.27**	.61**

Note. GSS = general social support; PBS = Program Belonging Scale; PAS- S = perceived attributional support from staff; EStrat = expected strategies; FStrat = feared strategies.
*p < .05. **p < .01.

Table 2

Bivariate Correlations: Females

Variable	1	2	3	4	5	6	7
1. White	—						
2. Age	.06	—					
3. Time	.00	.22**	—				
4. GSS	.01	.09*	.06	—			
5. PAS	.05	.13**	.05	.43**	—		
6. PBS	-.02	.09*	.06	.44**	.43**	—	
7. EStrat	.05	.07	.06	.16**	.19**	.21**	—
8. FStrat	.04	.14**	.05	.14**	.24**	.23**	.61**

Note. GSS = general social support; PBS = Program Belonging Scale; PAS- S = perceived attributional support from staff; EStrat = expected strategies; FStrat = feared strategies.
*p< .05. **p < .01.

in facility was associated with higher levels of program belonging). Finally, correlations between feedback variables and both expected and feared strategies reached conventional levels of significance (*p* < .01) for males and for females.

Support and Strategies

Standard multiple regression was performed to explore the relationship between social feedback variables and youth possible selves' strategies. The first regression models explored social support, program belonging, and attributional support from staff as predictors of expected strategies. Age and time in the program

were included as control variables, and separate models were performed for males and for females.

The overall expected strategy model was significant, both for males (R^2 = .08, $R^2_{adj.}$ = .06), $F(5, 286)$ = 4.96, $p < .001$; and for females (R^2 = .13, $R^2_{adj.}$ = .09), $F(5, 111)$ = 3.33, $p < .01$. The models accounted for approximately 8% and 13% of the variance in expected strategies for males and for females, respectively. The second set of regression models explored the same control and social feedback variables as predictors of feared strategies. The overall feared strategy model was also significant both for males (R^2 = .15, $R^2_{adj.}$ = .14), $F(5, 286)$ = 10.12, $p < .001$; and for females (R = .12, R = .08), $F(5, 111)$ = 3.05, $p < .05$. This model accounted for approximately 15% of the variance in the number of feared strategies among males, and 12% among females.

A summary of regression coefficients (for all models) is presented in Table 3. For males, program belonging and attributional support from staff were significant predictors of both expected and feared strategies. Males reporting greater levels of these support variables also reported more expected and feared strategies. The number of feared strategies generated by males increased with each year of age. Program belonging was also an important predictor for females for both expected and feared strategies. The only other significant relationship for females was between attributional support from staff and expected strategies. Unlike for males, however, there was an inverse relationship for females, with more incremental feedback related to fewer strategies among females.

In addition to the regression analysis, we also explored potential facility differences across the five institutions. We conducted one-way ANOVAs (split by gender) to explore facility differences on primary predictor and outcome variables.[8] We used the Games–Howell post hoc procedure because it is more accurate than other procedures when sample sizes are unequal (Field, 2005). Overall models were significant for all three support variables (i.e., social support, program belonging, attributional support) and both outcome variables (i.e., expected

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[8]The full analyses are not reported here but are available upon request from the authors.

strategies, feared strategies) for males. The only significant difference for females was in the feared strategies model. Follow-up procedures suggest that one facility (Idaho), in particular, was driving these findings. For males, the Idaho facility scored significantly higher on all support and strategy measures than at least two of the four other facilities (and then all four facilities on at least one variable). Differences between the other four facilities did not reach significance. The same facility was also the significant difference in the female model. Although the Idaho facility scored significantly higher on several variables, it does not contradict the aforementioned regression analyses, as the youth in the facility with the highest support ratings also reported the greatest number of strategies.

Table 3

Coefficients for Social Feedback Variables

			Expected strategies			Feared strategies		
	B	SE B	b	t	B	SE B	b	t
Males								
Age	-.00	.07	-.00	-0.12	.12	.06	.12	2.15*
Time in	-.11	.21	-.03	-0.53	-.32	.17	-.10	-1.95
Social support	-.07	.14	-.03	-0.48	-.06	.12	-.03	-0.51
Program belonging	.24	.09	.17	2.84**	.29	.08	.23	3.63**
Attributional support	.21	.08	.19	2.56**	.21	.06	.21	3.30**
Females								
Age	.17	.09	.17	1.88	.14	.08	.16	1.74
Time in	.16	.35	.15	0.48	.52	.29	.17	0.08
Social support	.31	.23	.15	1.34	-.08	.20	-.05	-0.41
Program belonging	.33	.15	.24	2.11*	.36	.13	.32	2.73**
Attributional support	-.32	.15	-.24	-2.24*	-.15	.12	-.13	-1.22

*p < .05. **p < .01.

Finally, we explored the support variables as they were related to the presence or absence of concrete strategies. Specifically, logistic regressions were conducted using the previously mentioned control and support variables to predict concreteness (0 = no concrete strategies, 1 = at least one concrete strategy). The

only significant relationships were between age (b = .29; Wald's statistic = 8.87, $p < .01$), attributional support (b = .28; Wald's statistic = 6.54, $p = .01$), and feared strategies among males. That is, older males and those who reported higher levels of attributional support from staff had increased odds of reporting concrete feared strategies. It should be noted that while 85% of males had at least one feared strategy, just over half (56%) had at least one *concrete* feared strategy.

Discussion

The primary purpose of the current study was to explore the relationship between environmental support and strategies associated with possible selves among incarcerated juvenile offenders. Possible selves' theory suggests that possible selves are an active interpretation of feedback that a person receives about the type of person he or she is, and could be or should be in the future (Markus & Nurius, 1986). As such, it was expected that positive environmental reinforcement in the form of support would be associated with strategy elicitation in the current study.

Overall, the current study suggests that support or attachment within the facility is associated with strategy generation. Specifically, program belong- ing was a consistent predictor of strategy generation among both males and females, and attributional support (incremental) was a significant predictor among males. Although these support variables were related to strategy generation (number), they were not consistently related to the presence of concrete strategies. In other words, youth who reported more of these types of support generated more strategies, but this support did not necessarily increase the odds of having concrete strategies.

Support and Strategy Generation

Multiple regression analyses indicate that program belonging and attributional support from staff were significant predictors of the number of strategies among males, with the overall models accounting for 8% of the variance in expected strategies and 15% of the variance in feared strategies. Age was positively associated with feared strategies among males such that older youth generated more feared strategies. Program belonging was the only consistent

predictor among females, with the overall models accounting for 13% of the variance in expected strategies and 12% of the variance in feared strategies. A somewhat surprising finding among females is the inverse relationship between attributional (incremental) support and strategy generation such that a greater perceived level of incremental feedback was related to fewer strategies generated. General social support, however, was not a significant predictor of strategies for either males or females. Although it was expected that all three indicators of environmental support would be positively associated with the number of strategies generated, the influence of some, but not other, support variables may still be explained by possible selves theory and motivational theory and research.

Markus and Nurius (1986) suggested that possible selves are a result of the most salient messages in one's environment. Further, they recognized possible selves as an element of self-concept that is sensitive to changes in the environmental context, so possible selves reflect the most immediate social context. In this study, the environmental support variables represented different levels of salience and immediacy within the social context. The general social support variable was a measure of support from persons both inside and outside the facility (mostly outside), such as teachers, parents, friends, and family. Program belonging was an indicator specific to the facility in which the youth were incarcerated and dealt with how well youth felt they belonged to the overall program (or immediate social context). Attributional support from staff was an indicator of the types of achievement feedback that youth perceived from a staff person (a specific communicator of feedback within that immediate social context). If possible selves are most sensitive to the immediate social context, then feedback variables specifically related to the facility and persons in the facility would have the most significant influence on possible selves. Further, program-level support variables would be expected to be influential because most of the reported content areas are a direct reflection of issues that are covered in regular interactions through reported treatment programming.

Motivational theory (i.e., social cognitive theory of motivation; Dweck & Leggett, 1988) supports the finding among males that perceived attributional

(incremental) support from staff is associated with the generation of strategies. Such feedback is likely to encourage youth to think about their situation as flexible and, thus, to focus on ways to change that situation or themselves. One way that youth may work to change themselves is through developing strategies for achieving desired outcomes. Although motivational theory does support the finding for males, the inverse association between attributional (incremental) support and expected strategies among females is more difficult to explain. It may be that, in this case, other types of feedback (e.g., entity) are more strongly associated with strategy generation than is incremental feedback.

Although the literature overwhelmingly supports the idea that incremental implicit theories and feedback are more strongly tied to mastery-oriented behavior, there are a few exceptions (Plaks & Stecher, 2007). Specifically, there is some evidence that different patterns may arise when the feedback type (i.e., entity or incremental) contradicts the individual's implicit theory of ability (Plaks & Stecher, 2007). The current investigation did not include a measure of youths' implicit theories of ability, so this could not be tested at the present time.

Concrete Strategy Generation

In addition to strategy count, we also briefly explored the type of strategies generated. Specifically, each strategy generated was coded as either abstract or concrete. A logistic regression investigated whether environmental supports increased an individual's odds of having either expected or feared concrete strategies (i.e., 40% to 45% of youth did not have concrete strategies). The only significant support relationship was for males, and it was between attributional support (incremental) and feared strategies. Overall, these findings do not support a consistent relationship between support and the generation of concrete strategies.

Although the results of this study do suggest a connection between support relationships in the facility and strategy generation, the support variables measured may not be specific enough to facilitate concrete/usable strategies. Support may generate positive affect (Sarason, et al., 1990), which allows youth the confidence to see themselves enacting behaviors to achieve their goals. However, youth may still

need extra instruction on how to ground those strategies realistically in context. Although it is possible that more specific instruction of this type happens in some facilities, it was not measured in the present study and is not reflected in the current support measures.

The lack of concrete strategies, in general, may be partially explained by recent research in adolescent cognitive and brain development. Specifically, a move toward abstract reasoning happens during adolescence, although these skills are not fully developed until late adolescence or early adulthood (Rosso, Young, Femia, & Yurgelun-Todd, 2004; Yurgelun-Todd, 2007). As a result, youth may be prone to highly abstract and unrealistic thinking before they fully develop the ability to temper and ground their abstract reasoning. Further, the prefrontal cortex is now thought to continue development into the second decade of life. Specifically, improved connectivity (i.e., myelination) in this part of the brain is thought to be associated with improved higher order executive functions, such as planning ahead (Casey, Getz, & Galvan, 2008; Steinberg, 2008). Although the development of higher order functioning—including planning and self-regulation—is partly up to the course of natural adolescent development, there is some evidence that there are ways to help youth improve this functioning (e.g., authoritative parenting, improved self-regulation; Purdie, Carroll, & Roche, 2004). More research is needed to understand how contextual factors influence the development of self-regulation, with special attention paid to the neural underpinnings of such processes (Steinberg, 2008).

Content of Possible Selves

Although the content of youth's possible selves was not a primary focus in the current study, descriptive results of possible selves' content do support the premise that possible selves reflect one's immediate environment. One of the most often reported expected selves for both males and females was associated with change in living situation. That is, not surprisingly, youth in this study were very much focused on where they would live in the future; and usually they aspired to live at home, with friends, or anyplace other than an institution. Other common expected

selves were school and job-related, which are both frequent focuses of adolescents. Feared selves also represent strong ties to the youths' current environmental situations, as they included avoiding drugs and alcohol, criminal activity, and delinquent friends. Many of the issues identified in youths' feared selves were directly related to the reasons that youth were incarcerated in the first place. Further, most treatment orientations deal with these issues to at least some extent, thus making them a salient focus of the daily lives of incarcerated youth.[9]

Implications and Future Research

The current research is exploratory in nature. It is an early look at the support contexts in which strategies for goal achievement might develop. Although the findings do provide evidence of an association between support relationships and strategy generation in the context of juvenile facilities, the study raises more questions than it answers. More research is necessary to disentangle the relationship between support relationships and contexts in which self-regulatory cognitions and behaviors develop (Steinberg, 2008), among both incarcerated and non-incarcerated adolescents.

An important first step in future study requires a deeper investigation into the types of support that are particularly important for future planning. The support literature has struggled to find an organizing framework that guides definition and operationalization, though its strength lies in the numerous empirical investigations that have linked it to positive outcomes at all stages of the lifespan. Much of the literature relies on generalized perceived models of support (similar to those studied here) that equate with a sense of acceptance or belonging (Cobb, 1976; Sarason, et al., 1990; Sarason, Sarason, & Pierce, 1994). We suggest that future research should focus on more active types of support, in addition to the generalized

[9]Although none of the facilities had explicit goals related to encouraging specific possible selves or strategies, all of the facilities at least partially endorsed a rehabilitative focus (as stated in their missions and on administrator surveys). Therefore, even if "planning" was not addressed specifically, it can be assumed that a goal of treatment was to prepare youth for re-entry.

acceptance models of support. Although planning requires self-confidence that may be encouraged through belonging, it is also a skill that may require more specific instruction, especially given the developing nature of the adolescent brain.

Attributional support may represent this more active type of support because it communicates information about ability and effort, both of which are important in self-regulation. The current study looked at perceptions of attributional support, a method distinct from the experimentally manipulated types that have been studied previously. It is possible that the current study was tapping youth's own implicit theories of ability, as opposed to active support. More research is needed on the relationship between actual support (e.g., experimental manipulations) and what is being perceived by the youth. Further, given the gender differences in the present study, it makes sense to take a closer look at perceptions and support needs for gender- related information that can better address programming content and emphases.

Further research should also put more emphasis on identifying individual and context-specific characteristics that contribute both to support perceptions and to strategy development. It may be that some youth possess certain skills that help them to build relationships and solicit desired support from those relationships, as well as to assist, directly or indirectly, in eliciting strategies. With regard to institutional design, the current study did find that one facility had significantly higher average ratings of support. Although this facility did not differ significantly with regard to rehabilitative focus or demographic composition, there may be other underlying aspects of the facility that were not tapped by this study. Future evaluations of treatment programming should focus on specific design aspects that promote perceptions of belonging, as well as planning. Such evaluations could also benefit from qualitative observation of staff–youth interactions.

Finally, possible selves may represent a potential framework for re-entry planning. Most of the youth in the current study did have expectations about their futures beyond incarceration, and many also generated strategies intended to help achieve those goals. However, many of the strategies generated by these youth were very abstract in nature and, in reality, may be very difficult to implement.

Youth had real fears about their capacity for avoiding drugs and delinquent behavior upon release, but did not always have many clear strategies for avoiding these outcomes.

The possible selves' framework has been utilized in other areas to help youth set and achieve goals (Oyserman et al., 2006; Oyserman, Terry, & Bybee, 2002). The same framework might be beneficial to help youth with re-entry planning. Special emphasis could be placed on anticipating barriers to success and how to develop strategies to overcome such barriers. A benefit of the possible selves' framework is that it relies on the youth generating goals based on his or her own expectations and fears, therefore contributing to a more personalized re-entry plan.

Study Limitations

Several limitations should be noted with regard to the current study. The first limitation is related to causality. Specifically, the cross-sectional nature of the data-collection effort does not allow for causal inference. Further experimental or longitudinal research is required to support the direction of the findings presented in this article.

Another limitation includes the non-probability sampling design that was used in the current study. Investigators found juvenile justice contacts in each state via the Internet and word of mouth, and they relied on voluntary participation. As such, the results cannot be generalized beyond the youth residing in the facilities at which the data were collected. Further, given the number of predictors used and the small number of females included, statistical power may have been an issue.

A further limitation to this and previous research on attributional support–feedback relates to the valence of the feedback. Although, this and other research intends to measure the impact of the type of feedback (i.e., incremental or entity), the measurement of this construct may be confounded with the positive or negative nature of the feedback. It could be that entity feedback following failure tends to be perceived as more negative or harsher than incremental feedback, and that the effect lies in the negativity, rather than the incremental versus entity nature of the feedback. Further research should focus on the validation of feedback

instruments with an emphasis on determining the specific features of the feedback that contribute to effects.

According to Hirschi (1969), "The mere wish to be 'something or some-body' is not enough to affect behavior seriously . . . the test is not that a man have lofty ambitions, but that he strive mightily" (p. 178). The current paper represents a preliminary look into the relationship between social support in one's immediate context and the development of strategies for the achievement of desired future selves. Although not all of the strategies predicted in this study were concrete or immediately useful, the generation of strategies does represent a move in the direction of striving for success. In addition, previous research has linked strategy generation (i.e., number only) to positive outcomes (Oyserman et al., 2004).

Further, the present findings lend support to Markus and Nurius' (1986) suggestion that possible selves and strategies are a reflection of the immediate social environment such that support relationships within the facility are more influential than those outside. Future research would benefit from the use of more specific measures of support and support relationships at different levels of social context, with a focus on concrete strategy generation. However, the findings do highlight the need to focus on how facility context and staff may contribute to post-incarceration planning among juvenile offenders. From a longitudinal perspective, it raises the question that if planning is strongly connected to context, then what happens to those plans when incarcerated youth move from a structured institutionalized context to a less structured, community context?

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