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Identity Status, Achievement Goal Orientation, and Academic Engagement

by

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Honours Thesis

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Abstract

Research has found that a person's identity status and achievement goals are correlated (identity achieved with mastery goals, and foreclosure with performance goals; Chorba, Was, & Isaacson, 2012; Was et al., 2009). The present study examined these associations and how they, in turn, predict academic engagement and self-efficacy. Autonomy was included as a possible mediator. 75 participants (76.9% females, 23.1% males) ages 18 to 39 ($M= 19.79$, $SD= 4.01$), were recruited from King's University College psychology classes. Online, participants completed a demographic questionnaire, followed by seven questionnaires measuring these variables. Results showed that achieved academic identity status was positively related to academic self-efficacy, and that foreclosed academic identity status was negatively related to mastery goal orientation, academic engagement, and intrinsic motivation. This suggests that identity issues should be considered when seeking to understand young adults' academic issues, and that working through identity issues before making a commitment is beneficial.

Identity Status, Achievement Goal Orientation, and Academic Engagement

The purpose of this study was to investigate the relationship between identity status and achievement goal orientations, and the effect of these on outcome variables such as academic engagement, academic self-efficacy, and life satisfaction. Past research found that achievement goal orientations reflect different strategies that have consequences in both academic and general life spheres (Fan, Meng, Billings, Litchfield, & Kaplan, 2008; Flum & Kaplan, 2006; Sideridis & Kaplan, 2011). This research is generally conducted on samples of adolescents and early adults who are likely to be dealing with issues of identity (Erikson, 1984). The present study therefore examined identity status as it relates to achievement goal orientations, as well as academic and life outcomes.

Investigation into how an individual's identity status relates to the achievement goal orientation they adopt is relatively new (Was, Al-Harthy, Stack-Oden, & Isaacson, 2009). The present study combined this with the earlier research on achievement goals, examining identity status, achievement goals, and academic outcomes in the same study. The present study also examined the role of autonomy as a possible link between identity status and achievement goals. Finally, given the potential importance of these issues for students, a measure of general psychological well-being was included to investigate how these issues impact on student's overall psychological health.

Achievement Goal Orientation

Achievement goal theory has been widely investigated as an important topic in motivation and achievement research. It proposes that individuals adopt a goal orientation which in turn provides a framework for interpreting task information, and determines a pattern of strategies used to pursue tasks (Elliot & Church, 1997). The goal orientations have been divided

into a mastery orientation, and two performance orientations, approach and avoid. Individuals with a mastery goal orientation attempt to master tasks and develop competence, with task completion being more intrinsically motivated and enjoyable (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). Mastery goals are associated with deeper learning, increased effort in task completion, and seeking out more challenging tasks (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Hejazi, Lavasani, Amani, & Was, 2012). As such, individuals with a mastery goal orientation use cognitive and behavioural strategies to promote success and are not hindered by a fear of failure.

In contrast, individuals with a performance goal orientation are largely concerned with demonstrating their ability in comparison to others. The performance goal orientation has been further divided into a performance-approach orientation and a performance-avoid orientation (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). Individuals with a performance-approach orientation aim to demonstrate high ability and competence relative to others, whereas those with a performance-avoid orientation wish to avoid demonstrating lower ability than others. In other words, those with a performance-approach orientation want to look good, while those with a performance-avoid orientation want to avoid looking bad (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Was et al., 2009). In addition, performance-avoidance goals are associated with decreased engagement, increased anxiety, and low self-efficacy, while performance-approach goals are associated with some positive outcomes, including increased self-efficacy and higher grades (Sideridis & Kaplan, 2011). As a result, mastery goals are consistently expected to be associated with better achievement outcomes than performance-avoid goals, but do not always predict better outcomes than performance-approach goals.

Due to the associated cognitive and behavioural strategies, a mastery goal orientation has been linked to many positive outcomes in previous research. Sideridis and Kaplan (2011) investigated the effects of achievement goal orientations on a behavioural measure of academic engagement and found that students with a mastery goal orientation showed significantly more persistence and engagement in academic tasks than those with a performance goal orientation. In addition, they found that students with a mastery goal orientation showed positive emotional affect towards the task, whereas those with a performance goal orientation showed more negative affect and frustration (Sideridis & Kaplan, 2001).

Further research has confirmed the positive associations between mastery goal orientations and student engagement, such that when students aim to master tasks in an area they find challenging and enjoyable, they become more deeply engaged in the task (Flum & Kaplan, 2006). Mastery goal orientation has been associated with additional positive outcomes, such as student self-efficacy, and improved performance on midterm grades (Fan et al., 2008).

Overall, research has suggested that the mastery goal orientation is associated with positive outcomes in academic contexts. However, more research is needed to determine factors that promote a mastery goal orientation in students, and thus, increase the positive outcomes associated with the goal orientation. Given the age group of emerging adults, one plausible factor is how they are dealing with issues of identity development.

Identity Status

The study of identity status is dominated by Marcia's (1987) identity status theory, developed to clarify and validate Erikson's (1984) fifth stage of psychosocial development. Erikson predicted that many face a crisis of identity vs. confusion during adolescence. While Erikson's (1984) theory of development provided an important base for future research, the

concepts remained difficult to test empirically. As a result, Marcia (1966; 1987) developed the identity status theory to allow for direct measurement of these concepts.

According to Marcia (1966; 1987), an individual has one of four identity statuses based on the combination of two factors: identity exploration and commitment. Identity exploration, also known as a crisis, refers to the degree to which an individual has explored possible options and alternatives for their values, beliefs, and other identity aspects. Commitment refers to how much an individual has settled on a specific identity, such as a career choice (Marcia, 1966; Was et al., 2009). The four identity status groups are identity achieved, foreclosed, moratorium, and diffused. Identity achievement occurs when an individual has experienced a crisis and freely explored alternatives prior to commitment. Identity foreclosure occurs when an individual has committed to life choices without experiencing a crisis or exploring possible alternatives, effectively being assigned an identity by others. Identity moratorium occurs when an individual is currently experiencing a crisis and exploring options, but has not yet made any commitments. Identity diffusion occurs when an individual has not experienced a crisis or explored any options, and has not made a commitment to any options (Marcia, 1966; Marcia, 1987).

Given the psychological distress that can be associated with uncertainty, particularly regarding one's identity, the model predicts some negative emotional consequences associated with being in crisis (identity moratorium). An interesting hypothesis following from Erikson's theory is that facing and resolving various crises that arise at different life stages creates a stronger and better developed "ego". It therefore follows that people who experience an identity crisis prior to commitment (identity achieved) will be better off psychologically than those who attained commitment without experiencing the "identity crisis" (foreclosed). A number of studies

have found support for these predictions with respect to emotion and well-being (Schwartz et al., 2011; Waterman, 2007).

A few studies have examined identity status specifically in relation to academic achievement. Cross and Allen (1970) conducted early research in this area and found that identity achieved students had a higher GPA than students with the other identity statuses. More broadly, they concluded that individuals with a strongly developed identity performed better in school. Consistent with these findings, Streitmatter (1989) found that in comparison to the other identity statuses, individuals with an achieved identity had higher math scores.

In addition to higher academic performance, identity achieved individuals have been found to be more engaged in academic tasks and activities. Waterman and Waterman (1972) discovered that identity achieved students were less likely to drop out of college than students of other identity statuses. Furthermore, the identity achieved students who did withdraw from school did so in good academic standing. This demonstrates that they left the program for reasons other than poor performance, perhaps a misalignment between their identity and school program (Waterman & Waterman, 1972). More recently, to investigate why identity status is associated with academic outcomes, research has also examined the achievement goals described above.

Identity Status and Achievement Goal Orientation

Recently some research proposed a link between an individual's identity status and the achievement goal orientation they adopt (Chorba, Was, & Isaacson, 2012; Was et al., 2009). These researchers suggest that identity achieved individuals are more likely to adopt successful strategies for completing achievement tasks, rather than using handicapping behaviours, because their sense of self is more firmly in place (Chorba et al., 2012). Secure in their identity, the

possibility of failure is not a threat, and the identity achieved do not feel the need to protect their identity and self-worth. These characteristics are representative of a mastery goal orientation, as identity achieved students pursue tasks with determination and a desire to master, rather than focusing defensively on how their performance might make them look to others. Research has found that identity achieved individuals employ successful strategies consistent with a mastery goal orientation when faced with achievement tasks, rather than using protective self-handicapping strategies (Chorba et al., 2012; Was et al., 2009).

While the behaviour and strategies used by identity achieved individuals are associated with a mastery goal orientation, a link has also been found between the foreclosed identity status and the performance goal orientations (Chorba et al., 2012; Was et al., 2009). This commitment without crisis and exploration implies that an identity has been assigned to the individual by an important life figure, as opposed to being chosen by the individual (Was et al., 2009). As such, the authors suggested that an individual with a foreclosed identity status aims to succeed at achievement tasks to demonstrate their ability, and thus, protect their assigned identity. Consequently, these individuals adopt performance goal orientations aimed at demonstrating their ability, or at avoiding demonstrating inability. By using strategies such as self-handicapping, individuals with a foreclosed identity status could attribute poor performance to aspects other than incompetence, thereby protecting their assigned identity. This was supported in recent research findings (Chorba et al., 2012; Was et al., 2009). Overall, then, the few studies that have been completed suggest advantages associated with being identity achieved (adopting mastery goals and the associated constructive achievement strategies), while other statuses, including foreclosure, are associated with potentially less positive achievement patterns (performance goals and ego-defensive strategies).

Self-Determination Theory and Identity Status Theory

Given that a major difference between identity achieved and identity foreclosed individuals is whether their identity was worked through themselves, or assigned by others, Self-determination Theory (SDT) would seem to be relevant. Self-determination Theory is a framework for understanding human motivation and personality, making a distinction between intrinsic and extrinsic motivation. Intrinsic motivation refers to a human tendency toward growth, challenge seeking, exploration, and enjoyment in tasks. In contrast, extrinsic motivation refers to performing tasks for an external reason or reward, rather than the inherent satisfaction of the task (Ryan & Deci, 2000). Most relevant for the present research is the concept of autonomy, which refers to an individual's agency and freedom of choice, and feelings of being in control (Ryan & Deci, 2000).

As discussed above, identity achieved individuals are relatively secure in their identity after experiencing a crisis and making a commitment. This would be consistent with high levels of autonomy, as the individual has freely explored identity options and made a commitment of their own volition rather than due to the influence of external factors. As high levels of autonomy are associated with increased intrinsic motivation, it would follow that an achieved identity status would be associated with intrinsic motivation. In academics, for example, individuals with an achieved identity status would likely choose courses and programs that contribute to an identity to which they feel personally committed. These predictions have been supported by previous research (Faye & Sharpe, 2008; Luyckx, Vansteenkiste, Goossens, & Duriez, 2009).

Identity foreclosed individuals, however, have not experienced a crisis and have had an identity chosen for them. This indicates low levels of autonomy. The individual adopts strategies to demonstrate ability or avoid demonstrating inability to protect their assigned identity. As such,

foreclosed individuals are motivated by external factors rather than completing tasks for the inherent satisfaction. It would follow that a foreclosed identity status would be associated with extrinsic motivation, and in academics, the person would be more likely to choose courses and programs that reflect these external influences (Faye & Sharpe, 2008; Luyckx et al., 2009).

Based on this previous research, it is expected that achieved identity status will be associated with autonomous intrinsic motivation, while foreclosed identity status will be associated with extrinsic motivation.

The Present Study

While identity status theory, goal orientations, and self-determination theory have been separately investigated in regard to positive outcomes, there is a lack of research analyzing these concepts in combination. As such, these variables need to be further investigated to gain a better understanding of the relationships among them, as well as their relative effect on outcome variables. These concepts are important to investigate, as they are associated with many outcome variables that impact the lives of students.

Within the four identity statuses, the diffused and moratorium statuses may reflect an individual's indifference at this point in their lives, or negative emotions associated with identity confusion rather than styles of identity attainment; as such, the present study focused on the achieved and foreclosed identity statuses to allow for a clearer distinction between the styles of identity attainment rather than a lack of identity attainment. In addition, the study focused specifically on academic identity status, as this domain is most relevant for the student population being studied.

Using self-report questionnaires to measure each variable among undergraduate psychology students, the present study explored the relationship between an individual's identity

status and the achievement goal orientation they adopt, as well as the effect on outcome variables. A possible mediating role of autonomous/controlled motivation was also examined.

Based on previous research, the current study predicted the following:

H₁: There will be a positive relationship between academic achieved identity status and mastery goal orientation.

H₂: There will be a positive relationship between academic foreclosed identity status and both performance goal orientations.

H₃: Academic achieved identity status will be associated with higher levels of academic engagement, academic self-efficacy, and life satisfaction, and this relationship will be mediated by mastery goal orientation.

H₄: Academic foreclosed identity status will be associated with lower levels of academic engagement, academic self-efficacy, and life satisfaction, and this relationship will be mediated by the performance goal orientations.

H₅: Autonomy will mediate the links from academic identity achievement to mastery goals and, subsequently, positive achievement outcomes. Controlled motivation will mediate the links from academic identity foreclosure to performance goals, and poorer achievement outcomes.

Method

Participants

In total, 75 participants were included in the study (76.9% females, 23.1% males) with ages ranging from 18 to 39 ($M= 19.79$, $SD= 4.01$). Participants were recruited for the study from Psychology classes. Introductory Psychology students could volunteer to participate in the study, and received up to 2.5% bonus marks for completing a related assignment. Participants from

upper year Psychology courses were also recruited, and given thirty-dollar gift certificates to the King's Connection as compensation. The final sample included 71 Introductory Psychology students, and 4 participants from upper-level classes.

Materials

The current study used a demographics information page, followed by 7 questionnaires presented in the order in which they are described below. The response to each item was indicated on a 7 point Likert scale (totally disagree = 1, neither agree nor disagree = 4, totally agree = 7) by clicking the corresponding number on the item. Only the Academic Goal Questionnaire – Specific used different measurement scales (see below).

Demographics Information Questionnaire. The questionnaire was developed for this study to record participants' age (open ended), as well as gender, enrollment as a full or part-time student, and current year of study. Please refer to Appendix A for the questionnaire

Identity Status Questionnaire. This questionnaire was adapted from the Extended Objective Measure of Ego Identity Status- - Revised Version (Bennion & Adams, 1986), which was developed to use for late adolescents. The original questionnaire consisted of 64 items corresponding to several domain areas (occupation, religion, politics, philosophical life style, friendship, dating, sex roles, and recreation) and four ego identity statuses within each domain (identity achievement, moratorium, diffusion, or foreclosure). The 40-item modified version in this study used 5 of the domains (occupation, politics, philosophical life style, friendship, and recreation) and rephrased the occupation domain to reflect academics, as it more accurately represented the participants' student occupation. Each item also corresponds to an ego identity status (identity achievement, moratorium, diffusion, or foreclosure). A sample question is, "I sometimes join in recreational activities when asked, but I rarely try anything on my own" which

reflects foreclosure in the recreation domain. Another sample question is, “There’s no single life style which appeals to me more than another” which reflects diffusion in the philosophical life style domain. The question, “It took me a long time to decide but now I know for sure what direction to go in for school” reflects achievement in the occupation/academic domain. By averaging responses, these items can be used to calculate identity status scores separately within domains (with the occupation/academic domain being most important for this study), and also to compute an overall identity status score summing over all domains. As discussed previously, the present study used the academic achieved identity status and the academic foreclosed identity status in the primary analyses, while data in the additional domains and identity statuses was collected for exploratory purposes. Reliability analyses were conducted for the academic achieved identity status ($\alpha = .84$) and the academic foreclosed identity status ($\alpha = .79$) subscales and both were found to be reliable. Please refer to Appendix B for the questionnaire.

Achievement Goal Questionnaire. This 18-item questionnaire was originally developed by Elliot and Church (1997) to examine student achievement goals, including mastery, performance-approach, and performance-avoidance goal orientation. A sample question is, “I desire to completely master the material presented in class” which reflects mastery goal orientation. Another question, “My goal in this class is to get a better grade than most of the students”, reflects performance-approach orientation. “My fear of performing poorly in this class is often what motivates me” is an example of a question reflecting performance-avoidance goal orientation. Responses were averaged to compute a score for each of the three achievement goal orientations. Reliability analyses were conducted for each subscale, and mastery ($\alpha = .79$) and performance-approach ($\alpha = .81$) were found to be reliable while performance-avoid ($\alpha = .63$) was less reliable.

Academic Engagement Questionnaire. This questionnaire was originally developed by Chen (2005) to assess the academic engagement of adolescents using 27 items. The modified version used in the present study removed 7 items that appeared less relevant to university students. Responses were averaged to compute a score of academic engagement. A sample question is, “I take careful notes in class”. A reliability analysis was conducted and the questionnaire was found to be reliable ($\alpha = .90$). Please refer to Appendix C for the questionnaire.

Academic Self-efficacy. The original questionnaire was a Survey of Academic Orientations (Davidson, Beck, & Silver, 1999), which included 36 items in 7 subscales. For the current study, only the 6-item academic self-efficacy subscale was used, and slightly modified to use the word “university” instead of “college” in some items. A sample question is, “Anytime that I really need a good grade on a test, I can get it”. Responses were averaged to compute an overall score of academic self-efficacy. A reliability analysis was conducted and the questionnaire was found to be reliable ($\alpha = .71$). Please refer to Appendix D for the questionnaire.

Satisfaction with Life Scale. This questionnaire was developed by Diener (1985) to measure general feelings of life satisfaction using 5 broad items. A sample question is, “In most ways my life is close to my ideal”. Responses were averaged to compute an overall score of satisfaction with life. A reliability analysis was conducted and the questionnaire was found to be reliable ($\alpha = .85$).

Academic Goal Questionnaire- Specific. This 9-item questionnaire was developed by Roney and O’Connor (2008) to examine the relationship between specific target goals and academic performance. The questionnaire was included in the present study for exploratory purposes. The questionnaire asks the participant to state the grade percentage they would set as

their goal from 50% to 95%, followed by how likely they feel it is that they will reach the goal, how important it is, and what emotions they would feel if they did or did not reach that goal. It then asks about reasons for pursuing goals. A sample question is, “Are you pursuing this academic goal because somebody else wants you to?” Items were scored using a 5 point Likert Scale with 1 indicating extremely and 7 indicating not at all.

Academic Motivation Scale. This 28-item questionnaire was developed to measure motivations for pursuing academic tasks (Vallerand et al., 1992). It asks participants to rate their agreement with statements about why they pursued university, and includes items to measure intrinsic motivation, extrinsic motivation, and amotivation. The items are further divided into subscales for both the intrinsic motivation (to know, toward accomplishment, and to experience stimulation) and the extrinsic motivation (identified, introjected, and external regulation). The present study used the subscales “intrinsic motivation- toward accomplishment”, and “extrinsic motivation- external regulation”, as the items were more relevant for the purposes of the study. The item, “For the pleasure I experience while surpassing myself in my studies” reflects intrinsic motivation- toward accomplishment. Another sample question is, “Because with only a high-school degree I would not find a high-paying job later on”, which reflects extrinsic motivation- external regulation. An example of an item measuring amotivation is, “Honestly, I don’t know; I really feel that I am wasting my time in school”. For the purposes of this study, the intrinsic items represent autonomous motivations in academics, and the extrinsic items represent controlled motivations in academics. Responses were averaged to compute separate scores for each of the three subscales. Reliability analyses were conducted and the extrinsic motivation- external regulation subscale ($\alpha = .80$) was found to be reliable, while the intrinsic motivation- toward accomplishment subscale ($\alpha = .67$) was less reliable.

Procedure

Participants were informed about this study (among others) by course instructors and directed online to SONA, a secured web browser, where they could view the sign-up poster briefly describing the study. Participants could then click a link to be directed to Qualtrics, a survey site, where an information page was displayed with a more detailed description of the study. Participants indicated consent by clicking a specified button at the bottom of the page, and continued on to complete a demographic information page and seven questionnaires in the order described above. After completing all measures, a debriefing page was presented to provide more detail about the purpose of the study. Introductory Psychology students could receive up to 2.5% bonus marks for completing a related assignment. Less than an hour was needed to complete the questionnaires.

Design

In this study, identity status and achievement goal orientation were used as predictor variables. The outcome variables were academic engagement, academic self-efficacy, and life satisfaction. Autonomy was used as mediator variable to investigate its role in explaining why identity status and achievement goals predict specific outcomes. Also, in some analyses achievement goals were included as a possible mediator to see if they link identity status to achievement outcomes. All variables were continuous, with the exception of gender, full- or part-time student status, and year of study (demographic information), which were categorical.

Results

Table 1 presents the correlations among the predictor variables used in the following analyses, and Table 2 presents correlations among the criterion variables used.

Table 1

Correlations Among Predictor Variables

	1)	2)	3)	4)	5)	6)	7)	8)	9)
1) Aca. Achieved	--								
2) Aca. Foreclosed	-.21	--							
3) Aca. Moratorium	-.55**	.21	--						
4) Aca. Diffused	-.38**	.24*	.46**	--					
5) Mastery	.24*	-.42**	-.41**	-.32**	--				
6) Perf-Approach	.17	-.01	-.01	-.08	.30*	--			
7) Perf-Avoid	.02	-.03	.01	-.22	.25*	.06	--		
8) Int. Acc. Motiv.	.20	-.46**	-.33**	-.35**	.54**	.14	.25*	--	
9) Ext. Ext. Motiv.	-.04	-.07	.01	-.20	.31**	.27*	.58**	.33**	--

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 2

Correlations Among Criterion Variables

	1)	2)	3)	4)	5)	6)	7)
1) Aca. Achieved	--						
2) Aca. Foreclosed	-.21	--					
3) Aca. Moratorium	-.55**	.21	--				
4) Aca. Diffused	-.38**	.24*	.46**	--			
5) Aca. Engaged	.25*	-.47**	-.44**	-.38**	--		
6) Aca. Self-Efficacy	.34**	.09	-.32**	-.07	.06	--	
7) Life Satisfaction	.25*	-.15	-.16	.03	.17	.22	--

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Identity Status and Goal Orientation

It was predicted that a positive relationship would exist between achieved identity status and mastery goal orientation. Results showed that academic achieved identity status was positively and significantly correlated with mastery goal orientation ($r(72) = .24, p < .05$), however, when regression analyses were conducted with academic achieved identity status and academic foreclosed identity status independently predicting mastery goal orientation, only foreclosed status was a significant predictor ($\beta(69) = -.39, p < .01$). Contrary to the hypothesis, it was primarily foreclosed status that predicted mastery goals in a negative direction.

It was predicted that a positive relationship would exist between foreclosed identity status and both performance goal orientations. This hypothesis was not supported, as performance goals were not significantly correlated with either identity status measure.

Identity Status and Outcome Variables

It was predicted that achieved identity status would be associated with higher levels of academic engagement, academic self-efficacy, and life satisfaction, and that this relationship would be mediated by mastery goal orientation. It was also predicted that foreclosed identity status would be associated with lower levels of these outcomes, mediated by performance goals. Results showed that academic achieved identity status was positively correlated with academic engagement ($r(72) = .25, p < .05$), academic self-efficacy ($r(72) = .34, p < .01$), and life satisfaction ($r(73) = .25, p < .05$). Results showed that academic foreclosed identity status was negatively correlated with academic engagement ($r(72) = -.47, p < .001$), but it was not significantly related to either academic self-efficacy or life satisfaction. Three regression analyses were conducted using academic achieved identity status and academic foreclosed identity status entered together as predictor variables, predicting each of the three outcome

variables. When entered together, only academic foreclosed identity status was a significant predictor of academic engagement ($\beta(69) = -.43, p < .001$), such that foreclosed status negatively predicted academic engagement. When predicting academic self-efficacy, only academic achieved identity status was a significant predictor ($\beta(69) = .38, p < .01$), such that achieved status positively predicted academic self-efficacy. Academic achieved identity status was also found to be a marginally significant predictor of life satisfaction, ($\beta(70) = .23, p < .06$).

Mediation analyses were not conducted for academic achieved identity as the earlier regression predicting a relationship between academic achieved identity status and mastery goal orientation was not significant. As foreclosed identity was a significant predictor of lower mastery goals and academic engagement, this mediated path was tested rather than the one originally hypothesized involving performance goals. Regression analyses were conducted with foreclosed identity status and mastery goal orientation independently predicting academic engagement, and it was found that foreclosed status negatively predicted academic engagement ($\beta(68) = -.24, p < .05$), and mastery goal orientation positively predicted academic engagement ($\beta(68) = .54, p < .001$). It was also found that foreclosed status negatively predicted mastery goal orientation ($\beta(70) = -.42, p < .001$). These results suggest that mastery goal orientation mediates the negative relationship between academic foreclosed identity status and academic engagement, but it is only partial mediation because foreclosed identity is still a significant predictor when entered with mastery goals.

Autonomy as a Mediator

It was predicted that autonomy would mediate the link from achieved identity status to mastery goal orientation. However, in addition to the finding that achieved identity status was

not a significant independent predictor of mastery goal, there was also no significant correlation between achieved identity and either the autonomy measure or the extrinsic control measure.

It was also predicted that controlled motivation would mediate the relationship between foreclosed identity status and the performance goal orientations however, as noted earlier, regression analyses predicting performance goal orientations from foreclosed identity were not significant. Also, foreclosed identity was not significantly correlated with controlled motivation, but a negative correlation was found between academic foreclosed identity status and intrinsic motivation ($r(73) = -.46, p < .001$). Given the results for foreclosed identity, analyses were conducted testing whether low intrinsic motivation mediates the association between foreclosed identity and mastery goals. Regression analyses simultaneously entering academic foreclosed identity status and intrinsic motivation as predictor variables and mastery goal orientation as the dependent variable, found that foreclosed status independently negatively predicts mastery goals ($\beta(69) = -.22, p < .05$), and intrinsic motivation positively independently predicts mastery goals ($\beta(69) = .44, p < .001$). Foreclosed status also negatively predicts intrinsic motivation ($\beta(71) = -.46, p < .001$). These results suggest that intrinsic motivation partially mediates the negative relationship between academic foreclosed identity status and mastery goal orientation.

Additional Analyses

In the present study, only the achieved and foreclosed identity statuses were included in the primary predictions, as the diffused and moratorium identity statuses may involve more than styles of identity attainment; these statuses may reflect an individual's indifference at this point in their lives, or negative emotions associated with identity confusion. Regression analyses were conducted with all four academic identity statuses entered simultaneously as predictor variables, predicting each of the three achievement goal orientations, each of the three outcome variables,

and both the autonomous and controlled motivation variables. The significant findings previously reported for the achieved and foreclosed identity statuses remained significant. Academic moratorium identity status was found to significantly negatively predict mastery goal orientation ($\beta(67) = -.30, p < .05$), and academic engagement ($\beta(66) = -.33, p < .05$), while academic diffused identity status was found to significantly negatively predict performance-avoid orientation ($\beta(67) = -.28, p < .05$). Neither the moratorium or diffused identity statuses significantly predicted performance-approach orientation, academic self-efficacy, intrinsic motivation, or extrinsic motivation.

Discussion

The present study examined the association between identity status and achievement goal orientations, and how these predicted academic engagement, academic self-efficacy, and life satisfaction. The results did find evidence that identity status is related to achievement goals and outcomes, however as will be discussed, it was primarily a foreclosed identity status that was relevant.

Following previous research (Chorba, Was, & Isaacson, 2012; Was et al., 2009) it was predicted that a positive relationship would exist between achieved identity status and mastery goal orientation. The results showed that academic achieved identity status was positively correlated with mastery goal orientation, but it did not significantly predict mastery goals when foreclosed identity status was also entered as a predictor. Foreclosed status significantly predicted lower mastery goals, and plays a larger role in the relationship between identity status and achievement goals than expected. It was also predicted that a positive relationship would exist between foreclosed identity status and the performance goal orientations, however, no significant results were observed between identity status and either type of performance goal.

These findings indicate that the relationship between the identity statuses and achievement goal orientations may be slightly different from that suggested by past research. It is possible that the difference in results is due to the measures used to assess academic identity status, as the measure used in the present study was adapted from an overall measure of identity status (Bennion & Adams, 1986), while the measure used in the previous study was created by the researchers (Was et al., 2009). Also, in one of the previous studies (Chorba, Was, & Isaacson, 2012), the size of the achieved group was much larger than the other identity statuses, so the researchers randomly selected a similar sized group of participants for the analysis; this may have also affected the results of the study.

It was also predicted that achieved identity status would be associated with higher levels of academic engagement, academic self-efficacy, and life satisfaction, and that this relationship would be mediated by mastery goal orientation. The results showed that academic achieved identity status was indeed positively correlated with the proposed outcome variables, however, when both achieved and foreclosed identity statuses were entered together as predictor variables, only academic self-efficacy remained significant. Again, these results suggest that the foreclosed identity status plays a larger role in the relationships than previously predicted. Foreclosed identity status was predicted to be associated with lower levels of the outcome variables, with the performance goal orientations mediating this relationship. The results showed that foreclosed identity status was negatively related to academic engagement, but the correlations with academic self-efficacy and life satisfaction were not significant. The mediation prediction was also not supported, as the relationship between foreclosed status and the performance goal orientations was not significant. It was found, however, that lower mastery goal orientation partially mediated the relationship between foreclosure and academic engagement.

It was predicted that autonomy would mediate the link from achieved identity status to mastery goal orientation, while controlled motivation would mediate the link from foreclosed identity status to the performance goal orientations. Since neither of the identity to achievement goal links were found, these mediation tests were not done. Instead, analyses examined whether low feelings of autonomy mediate the significant link between foreclosed identity and low academic engagement, and partial mediation was found.

Based on previous research (Chorba, Was, & Isaacson, 2012; Was et al., 2009), it was expected that identity achieved individuals would be more secure in their identity after having worked through a crisis and committed to an identity, and that this would result in successful task strategies consistent with a mastery goal orientation, which would then lead to positive academic and psychological outcomes. Having autonomously chosen their own identity, it was predicted that autonomous intrinsic motivation would link achieved status to mastery goal orientation. Identity foreclosed individuals were expected to be less secure in their identity after committing to an identity without working through a crisis and exploring options, thus resulting in protective strategies consistent with the performance goal orientations, and leading to the negative outcome variables. As they had not chosen their own identity, it was predicted that extrinsic motivation would link foreclosed status to the performance goal orientations. Results of this study were not consistent with this specific line of logic.

Although not predicted, in retrospect it is logical that foreclosed status is associated with lower intrinsic motivation, lower mastery goal orientation, and lower academic engagement. As the foreclosed individuals likely did not autonomously choose their identity, it is sensible that they would have lower intrinsic motivation towards academics. Similarly, they may not feel as dedicated to mastering academic tasks (mastery goals), and would be less engaged with

academics, as it may not accurately represent who they are and what they view as important. Although the results of this study differ from the previous research on identity status and achievement goals, they are consistent with self-determination theory (Ryan & Deci, 2000) in that the individual's lack of autonomy results in less inherent and internal motivation generally, which is reflected in a lack of mastery goals and low engagement with academics.

It is also interesting to note the similarity between the results of the foreclosed and moratorium identity statuses. In general, both a "non-exploring" identity attainment (foreclosed) and a crisis phase (moratorium) seem to independently predict low mastery goals and low academic engagement. Developmentally, these results suggest that during the phase of questioning their identity (moratorium status), individuals may not be positively motivated to master tasks or be engaged; however, these negative outcomes change and improve as the individual resolves the identity crisis (achieved status).

Overall, there was little evidence of positive academic motivations and outcomes being associated with an achieved identity resulting from an individual's struggle through uncertainty. The negative academic engagement associated with foreclosed status appears to be due to a lack of positive, constructive factors (intrinsic motivation and mastery goals), rather than the presence of negative factors (extrinsic motivation and the performance goals). While the results did not follow some of the logic behind our hypotheses, the overall findings support the argument presented by the study; in the academic realm, it is beneficial for individuals to have an achieved identity status rather than a foreclosed identity status.

One limitation of this study is that it was correlational. Although significant correlations were found, it is difficult to determine causal relationships between the variables. In addition, it is difficult to determine if developmental factors were responsible for the results of the study, or

if personality factors played a role. In regard to developmental factors, the way in which an individual deals with issues of identity could affect their achievement goals and, consequently, the associated academic outcomes; for example, foreclosed individuals having not worked through an identity crisis may feel less intrinsically motivated to pursue a task, be less likely to adopt mastery goals, and be less engaged in academics as it does not reflect what they view as important. However, the results of the study may also be explained by differences in personality. For example, an individual may have a personality in which they do not enjoy exploration; in this case, the individual would be more likely to commit to an identity without exploring options (foreclosed identity status), less likely to explore ways to master tasks (low mastery goals), and may not enjoy being engaged in a university environment. Although it is difficult to disentangle the developmental and personality factors, this is a possible direction for future research.

The second limitation of the study is the limited participant sample. In addition to being a somewhat small sample for a study with many variables, all participants were psychology students at King's University College, so the generalizability of the results may be limited. Furthermore, a difference may exist between the students who chose to participate or not participate in the study, as most participants were compensated with credit in the psychology class. Although a larger and more diverse participant pool would be desirable, the sample used in this study was representative of the samples used in past research (Chorba, Was, & Isaacson, 2012; Was et al., 2009), being undergraduate psychology students with a female majority participating for class credit.

The present study has practical implications for young adolescents and students. The results suggest that individuals should be encouraged to explore aspects of their identity and work through an identity crisis before making a commitment, as being foreclosed leads to a lack

of positive factors such as intrinsic motivation and mastery goals. In the case of students, the first year of post-secondary education is often a time of exploration. As suggested by previous research (Chorba et al., 2012), academic institutions have a unique opportunity to create an experience that will encourage students to explore aspects of their identity and consider alternatives. This may be achieved by facilitating groups that will promote students to network with a diverse group of peers, and by hosting activities that will allow them to discover new interests and passions. In addition, the results suggest that parents should refrain from pressuring adolescents into choosing an identity or career path before they are ready. With good intentions, parents may believe it is too difficult for their children to work through an identity crisis or that they know what is best for their child, and may assist them in choosing a path for the future. Unfortunately, these parents may be inadvertently causing more harm. Previous research has suggested that encouragement of autonomy by parents may contribute to children's identity achievement (Ling, Zhu, Li, & Zhang, 2010). By relieving the individual of their autonomy and the task of working through an identity crisis and exploring interests, the parents are forcing the individual into a foreclosed identity status. As a result, the foreclosed individual is burdened with the negative associated outcomes, such as a lack of intrinsic motivation, mastery goals, and academic engagement.

While previous research has been conducted to explore the relationships between the identity statuses and academic outcomes, investigation into the relationships between the identity statuses and the achievement goal orientations is fairly new (Was et al., 2009), and the present study aimed to contribute to this research area. Also, unique to this study is the exploration of autonomy as a possible mediator between the identity statuses and achievement goal orientations. Overall the results of the study indicate that it is more beneficial for individuals to

explore possible alternatives and work through a crisis before committing to an identity themselves, and that parents and academic institutions should encourage this exploration.

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Appendix A

Demographic Information

Please answer the following questions. Demographic information collected in the study will be used for research purposes only and will not be sold or used to identify any individuals.

Gender: _____

Age: _____

Full-time or part-time student: _____

Year of Study: _____

Appendix B

Identity Status Questionnaire

Please read each item and indicate to what degree it reflects your own thoughts and feelings. Indicate your answer by clicking a number on the survey corresponding to your agreement with each statement.

- 1= Strongly Disagree
- 2= Moderately Disagree
- 3= Disagree
- 4= Neither Agree nor Disagree
- 5= Agree
- 6= Moderately Agree
- 7= Strongly Agree

1. I haven't chosen the academic area I really want to get into, and I'm just studying anything until something better comes along.
2. There's no single "life style" which appeals to me more than another.
3. There are a lot of different kinds of people. I'm still exploring the many possibilities to find the right kind of friends for me.
4. I sometimes join in recreational activities when asked, but I rarely try anything on my own.
5. Politics is something that I can never be too sure about because things change so fast. But I do think it's important to know what I can politically stand for and believe in.
6. I'm still trying to decide how capable I am as a person and what academic areas will be right for me.
7. I'm looking for an acceptable perspective for my own "life style" view, but I haven't really found it yet.
8. There are many reasons for friendship, but I choose my close friends on the basis of certain values and similarities that I've personally decided on.
9. While I don't have one recreational activity I'm really committed to, I'm experiencing numerous leisure outlets to identify one I can really get involved in.
10. I haven't really considered politics. It just doesn't excite me much.
11. I might have thought about a lot of different academic areas, but there's never really any question since my parents said what they wanted.

12. After considerable thought, I've developed my own individual viewpoint of what is for me an ideal "lifestyle" and don't believe anyone will be likely to change my perspective.
13. My parents know what's best for me in terms of how to choose my friends.
14. I've chosen one or more recreational activities to engage in regularly from lots of things and I'm satisfied with those choices.
15. I guess I'm pretty much like my folks when it comes to politics. I follow what they do in terms of voting and such.
16. I'm really not interested in finding the right academic area, any area will do. I just seem to flow with what is available.
17. My own views on a desirable life style were taught to me by my parents and I don't see any need to question what they taught me.
18. I don't have any real close friends, and I don't think I'm looking for one right now.
19. Sometimes I join in leisure activities, but I really don't see a need to look for a particular activity to do regularly.
20. There are so many different political parties and ideals. I can't decide which to follow until I figure it all out.
21. It took me a while to figure it out, but now I really know what academic area I want to study.
22. In finding an acceptable viewpoint to life itself, I find myself engaging in a lot of discussions with others and some self-exploration.
23. I only pick friends my parents would approve of.
24. I've always liked doing the same recreational activities my parents do and haven't ever seriously considered anything else.
25. I've thought my political beliefs through and realize I can agree with some and not other aspects of what my parents believe.
26. My parents decided a long time ago what I should go into for school and I'm following through with their plans.
27. My parent's views on life are good enough for me, I don't need anything else.
28. I've tried many different friendships and now I have a clear idea of what I look for in a friend.

29. After trying a lot of different recreational activities I've found one or more I really enjoy doing by myself or with friends.
30. I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in.
31. It took me a long time to decide but now I know for sure what direction to go in for school.
32. I guess I just kind of enjoy life in general, and I don't see myself living by any particular viewpoint to life.
33. I don't have any close friends. I just like to hang around with the crowd.
34. I've been experiencing a variety of recreational activities in hopes of finding one or more I can enjoy for some time to come.
35. I really have never been involved in politics enough to have made a firm stand one way or the other.
36. I just can't decide what to study in school. There are so many possibilities.
37. After a lot of self-examination, I have established a very definite view on what my own lifestyle will be.
38. I really don't know what kind of friend is best for me. I'm trying to figure out exactly what friendship means to me.
39. All of my recreational preferences I got from my parents and I haven't really tried anything else.
40. My folks have always had their own political and moral beliefs about issues like abortion and mercy killing and I've always gone along accepting what they have.

Appendix C

Academic Engagement Scale

Please read each item and indicate to what degree it reflects your own thoughts and feelings. Indicate your answer by clicking a number on the survey corresponding to your agreement with each statement.

- 1= Strongly Disagree
- 2= Moderately Disagree
- 3= Disagree
- 4= Neither Agree nor Disagree
- 5= Agree
- 6= Moderately Agree
- 7= Strongly Agree

1. I enjoy going to school because I want to learn.
2. I go to school every day.
3. I go to school on time every day.
4. I often don't pay attention in class.
5. I take careful notes in class.
6. I always turn in my homework on time.
7. I study hard for all my examinations.
8. I don't pay serious attention to my schoolwork.
9. I don't care whether I do well in school or not.
10. If I do well on a test, I am inspired to continue to study hard.
11. If I don't do well on a test, I will study harder to do better next time.
12. If I don't understand my schoolwork, I find ways to understand it.
13. I spend most of my time doing homework and studying.
14. I work hard to complete my homework.

15. When my teachers assign students work to do in class, I work hard to complete it well.
16. I finish schoolwork before I do other activities.
17. I put full effort into my schoolwork.
18. I set high expectations for myself to do well in school.
19. I find ways to motivate myself to study.
20. Overall, I consider myself a good student.

Appendix D

Academic Self-efficacy

Please read each item and indicate to what degree it reflects your own thoughts and feelings. Indicate your answer by clicking a number on the survey corresponding to your agreement with each statement.

- 1= Strongly Disagree
- 2= Moderately Disagree
- 3= Disagree
- 4= Neither Agree nor Disagree
- 5= Agree
- 6= Moderately Agree
- 7= Strongly Agree

1. I sometimes wonder if I am really university material.
2. Anytime that I really need a good grade on a test, I can get it.
3. Sometimes I feel unaware of how to get good grades.
4. Test anxiety lowers my grade a lot.
5. I am pretty good at guessing the questions on tests beforehand.
6. I worry a great deal that I may not get the grade I need in a class.