

Proactive personalities, ego-identity status, and career aspiration among college student athletes

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The research indicates that proactive personality and ego-identity status are two crucial factors related to an individual's career, but have yet to be fully explored in college student-athletes. This study examines the relationship between proactive personality, ego-identity status, and career aspiration. In addition, the interaction between proactive personality and the various ego-identity statuses are investigated. In total, 224 college student-athletes ($M_{age} = 20.67 \pm 0.98$) participated in this study. Background information, proactive personality, ego-identity status, and career aspiration were measured and were analyzed. Correlation analyses showed that both proactive personality and career aspiration were positively correlated with moratorium and identity achievement, and negatively correlated with identity diffusion. Furthermore, the interactions of proactive personality with identity diffusion, moratorium, and foreclosure were significant, and the total explanation of variance was increased by 8.8%. Future studies could focus on the special interactions between proactive personality, moratorium, and foreclosure, and its effects on student-athletes.

KEY WORDS: Athletic identity, Career, Identity, Foreclosure, Diffusion, Moratorium, development.

Introduction

The development and planning of athlete careers have been an important topic for scholars and practitioners. During career adjustments and transitions, athletes often experience psychological problems—such as depression, anxiety, identity crises, and low self-esteem (Lavalley & Robinson,

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2007; Wylleman, Alfermann, & Lavallee, 2004)- potentially resulting in substance abuse and eating disorders (Wylleman et al., 2004). Retirement and career transitions mostly occur in the earlier stages of an athlete's life. However, because athletes have been dedicated to their sport, they are typically less prepared for a different career (Lavallee & Robinson, 2007; Cosh, Crabb, & LeCouteur, 2013). Career transitions are especially challenging for graduating college student-athletes who are about to end their sports career and shift to a different work field, which often affect their mental and physiological health (Murdock, Strear, Jenkins-Guarnieri, & Henderson, 2016).

PROACTIVE PERSONALITY

The idea of a proactive personality has become popular in recent studies on career development, career adaptability, and job performance. A person with a proactive personality is defined as "one who is relatively unconstrained by situational forces and who effects environmental change (Bateman & Crant, 1993, p.105)." People with a proactive personality actively seek opportunities, respond to challenges, and shape (as opposed to being affected by) their environment (Bateman & Crant, 1993; Crant, 2000; Fuller, Hester, & Cox, 2010). Fuller and Marler (2009) conducted a meta-analysis of 107 empirical studies related to proactive personality and determined that proactive personality is related to objective and subjective employment success. Because modern society changes rapidly, employees must constantly deal with change. Therefore, having a proactive personality in the face of change is considered a crucial factor in a person's adaptability and ability to remain competitive in ever changing situations (Fuller & Marler, 2009).

Proactive personality was initially studied in the context of the workplace. However, the concept has been extended to education and other disciplines. For example, studies have investigated correlations among self-esteem, proactive personality, career exploration, future work self, and career adaptability (Cai et al., 2015). Some studies have also demonstrated that proactive personality predicts student self-efficacy in learning; the influence of a proactive personality has a cross-time-frame and cross-venue stabilizing effect (Lin, Lu, Chen, & Chen, 2014). However, the literature on student-athletes remain scant. Lu and Kuo (2016) investigated the correlation between proactive personality and the career planning of students at departments of sport and recreation. They found that students' future work selves mediated the relationship between proactive personality and their career planning. Lu (2017) demonstrated that a proactive personality and the

internship qualities of students positively predicts career adaptability and employment success. Moreover, a proactive personality can moderate the correlation between work control and internship satisfaction. Lu and Kuo (2018) later examined correlations among proactive personality, self-efficacy, and creativity in students at departments of sport and recreation. These studies, however, sampled students from sport or recreation-related departments who were not necessarily athletes. Brown et al. (2015), in their interviews of college student-athletes, revealed that because student-athletes must simultaneously cope with challenges from their sport and their academic workload (in addition to psychological and psychosocial transitions), the strategies most interviewees adopted were being active and scheduling activities in advance. Therefore, considering the reported importance of proactive personality, as well as the paucity of studies on college student-athletes, the first objective of this study is the investigation of the correlation between proactive personality and career aspiration in college student-athletes.

Ego-Identity Status

Another crucial factor affecting career development during adolescence is ego-identity status (Marcia, 1966). It is often used in the field of education to understand the development and transition of the ego-identity status of students, at different stages, as well as the correlation between ego-identity status and career development. Marcia (1966) proposed four different styles of identity statuses based on individual's process of explorations and commitments made to a certain role: (1) *Identity diffusion* is characterized by a lack of exploration of oneself and alternatives and a lack of commitment to an identity; (2) *Moratorium* reflects current exploration of choices but no commitment; (3) *Foreclosure* refers to a role commitment based on little or no exploration of oneself and alternatives; (4) *Achievement* is characterized by stable self-views that have been acquired through extensive self-examination (Nauta & Kahn, 2007).

Studies have noted that the ego-identity status of college students is related to several crucial factors during their career, such as career determines self-efficacy, career adaptability, career transition, career identity, and career maturity and so on (Nauta & Kahn, 2007; Negru-Subtirica, Pop, & Crocetti, 2015). In the field of sport science, several studies have investigated the identity foreclosure of college student-athletes. Earlier studies such as Murphy, Petitpas and Brewer (1996) observed that both athlete identity and identity foreclosure were negatively correlated with the career maturity of athletes. Using the concept of identity foreclosure, recent studies have noted that exces-

sive and exclusive athlete identity may have nonadaptive effects (Beamon, 2012; Brewer & Petitpas, 2017). That is, in being influenced by external factors (such as their parents or coaches) and failing to consider alternative careers, young athletes often focus hardheadedly and prematurely in a specific sports and forgo that crucial phase when ego-identity is developed and explored (Cosh et al., 2013). In career decision-making, athletes who exhibited greater identity foreclosure relied more on external sources: they expected others to make key decisions for them and had low self-efficacy (Murdock et al., 2016; Whipple, 2009). Turan, Koç, and Karaoglu (2017) investigated the ego-identity status of 651 students who studied sports, noting that ego-identity status varied depending on categories such as age, college major (teaching, coaching, management, or recreation), and university entrance examinations scores. Because studies on college student-athletes are scarce, the second objective of this study is the investigation of the correlation between ego-identity status, proactive personality, and career aspiration in college student-athletes.

Interaction Effects

In addition to studying the correlation between proactive personality and ego-identity status, the interaction between both is worth exploring. Identity status is related to the intensity, clarity, and stability of one's self-concept. Many studies have investigated the aforementioned interaction using the proactive personality as a moderator. Cai et al. (2015) and Lu and Kuo (2016) have investigated the interaction between proactive personality and future work self. Harvey, Blouin, and Stout (2006) found proactive personality to be a moderator between interpersonal conflicts and job-related outcomes. More precisely, they found high proactive personalities show significantly worse performance and more exhaustion as the level of work conflict experienced grows. As for various ego-identity statuses, Berzonsky (1995) examined the moderating effect of ego-identity status on self-presentation and self-concept, under the assumption that the degree of internalization of self-presentation is affected by ego-identity status. That study discovered that different identity statuses produced different moderating effects. For example, a higher moratorium results in the internalization of self-presentations, and, in turn, a more negative self-evaluation. By contrast, a higher foreclosure results in greater resistance against a positive role's influence.

Individuals with a proactive personality actively seek opportunities and respond to challenges (Fuller & Marler, 2009). Previous studies have also noted that students who undergo self-exploration (those with the achievement or

moratorium statuses) are likely to be more adaptable and work more efficiently (Berzonsky & Kuk, 2000). It is worth considering whether such characteristics strengthen the positive effect of a proactive personality on career aspiration. By contrast, previous studies have noted that individuals already committed to some goals (those in the achievement or foreclosure statuses) were more determined to commit themselves to future roles (Berzonsky, 1995). However, in student-athletes with foreclosed status, the twofold combination between commitment to a role and the lack of self-exploration has unclear effects. Specifically, would this combination also interact with the change-seeking characteristic of a proactive personality, thereby having different effects on career outcomes? In a review, Kroger and Marcia (2011) also argued that studies of ego-identity status must consider more possible moderating effects.

Therefore, based on these studies, the third objective of this study is the investigation of the interaction between proactive personality and the various ego-identity statuses on career aspiration.

Methods

PARTICIPANTS AND PROCEDURES

In total, 224 student-athletes (males = 142; females = 70, $M_{age} = 20.67$ y, $SD = 0.98$) were recruited from five colleges by purposive sampling. To focus on the effect that their dual identity (as athletes and students) had on athletes' career, the study recruited only college student-athletes who studied at the sports or physical education-related departments and who continually participated in competitions at the inter-school level or higher. Participants were involved in either individual sports (track and field, table tennis, tennis, gymnastics, archery, or golf) or team sports (basketball, baseball, volleyball, or Kabaddi). They had 6.61 ($SD=3.84$) years of sports competition and training experience on average, and trained for 22.45 ($SD=2.33$) hours per week. Considering the aims of the study, freshmen were excluded to ensure that participants were fully aware of their dual identity. After receiving approval from a formal institutional review board, teachers and coaches were contacted by first author to acquire a preliminary consent, after which the study's purpose and procedures were explained to participants. The survey was administered after students, fully understanding their rights, gave their informed consent in writing and understood that the questionnaire was to be completed anonymously and in confidence. The paper survey took 20 minutes to complete. Each participant received a coupon equivalent to US\$3.30 upon completion of the survey.

INSTRUMENTS

Proactive Personality assessment

In the initial survey, proactive personality was measured using the 17-item Proactive Personality Scale developed by Bateman and Crant (1993). After that, several scholars have revised

the scale into 4, 5, 6, 10-item versions (Claes, Beheydt, & Lemmens, 2005). This study adopted the 10-item revision where the validity and reliability were established by previous studies such as comparing with the original scale (Seibert, Crant, & Kraimer, 1999) and internal reliability analysis and factor analysis across cultures (Claes et al., 2005). Each item was accompanied by a 6-point Likert scale (1: *strongly disagree*, 6: *strongly agree*). An example of an item is the question *I am constantly on the lookout for new ways to improve my life*. Its Chinese version has been used for measuring proactive personality in college students in Taiwan, and has been validated with good reliability and stable factor structure (Lin et al., 2014; Lu, 2017; Lu & Kuo, 2016). The reliability of this scale was indicated by a Cronbach's alpha coefficient of .877.

Ego-Identity Status assessment

The earliest surveys measuring ego-identity status used the Objective Measure of Ego Identity Status Scale (OM-EIS) formulated by Adams, Shea, and Fitch (1979). Researchers have subsequently revised the OM-EIS to develop the Extended Objective Measure of Ego Identity Status-2 (Adams, Bennion, & Huh, 1989). This revised measure comprises eight dimensions for each of the four ego-identity statuses with a total of 64 items. Most studies on ego-identity status have adopted this scale. However, the scale's inclusion of eight dimensions (such as politics and religion) means that its range is too wide and its number of items is too large. Therefore, studies have developed revised and simplified versions. Because this study focused on ego-identity status and its relation to career aspiration, a Chinese version of Ego Identity Status Inventory of Lai (2018) was adopted. Using 1102 Taiwanese university students as research sample, a 24-item complete scale and a 12-item simplified scale were developed and verified in Lai (2018) through an analytic hierarchy process involving exploratory factor analysis, confirmatory factor analysis, convergent and discriminant validity, split-half reliability, and test-retest reliability. The present study used the 12-item simplified scale of Lai. This scale comprises three items for each of the four dimensions measuring ego-identity status, including *Identity diffusion*, *Moratorium*, *Foreclosure*, *Achievement*. The internal consistencies of each of the dimension were indicated by the Cronbach's alpha coefficients of .935, .910, .795, and .935, separately.

Career Aspiration assessment

Career aspiration is an individual's ambitions and expectations in relation to their career development, that is, the extent to which a person can achieve the desire goal for his or her future academic performance, occupation, and life development. This study adopted the Career Aspiration Scale developed by Gray and O'Brien (2007). The original scale included three dimensions: achievement aspiration, leadership aspiration, and educational aspiration. Given that participants in this study were all college student-athletes, items in Leadership subscale are relatively irrelevant in their current situation (e.g., *When I am established in my career, I would like to manage other employees*). Thus, only achievement aspiration and educational aspiration were used as indicators. The scale contained a total of 16 items; its Chinese version exhibited good reliability, validity, and applicability to adolescent respondents. The internal consistencies of each of this scale's dimensions were indicated by the Cronbach's alpha coefficients of .877 (achievement aspiration) and .816 (educational aspiration). The overall Cronbach's alpha of this scale was .916.

DATA ANALYSIS

Invalid responses were discarded after the data were collected. The skewness and kurtosis of the data were analyzed to verify that they were normally distributed. Differences between gender and grade with respect to proactive personality, ego-identity status, and career aspirations were examined using the difference test. The correlations among variables were examined using correlation analysis. Finally, the interaction between proactive personality and the ego-identity statuses were analyzed using multiple hierarchical regression. Given the gender differences in moratorium, gender was entered in step one of hierarchical analysis to control for the possible effect of it. Proactive personality and the four ego-identity statuses were entered in the second step. In the last step, the interaction term between proactive personality and four ego-identity statuses was tested. The analysis is detailed in Table 2. The Statistical analyses were performed using SPSS 21.0 for windows and significance was indicated by $\alpha = .05$.

Results

Differences between genders and grades were first examined with respect to proactive personality, ego-identity status, and career aspiration. According to the results, participants of different genders only differed in moratorium. Male participants had significantly higher scores for moratorium than females (male: 4.27 ± 1.01 , female: 4.04 ± 0.59 ; $t = 2.105$, $p = .037$). Significant differences were absent between grades. Therefore, in the subsequent analysis, only gender was included in regression analysis to control for the possible effect of it.

Correlation among variables

Table I displays the correlation among variables. A proactive personality was positively correlated with moratorium and identity achievement, nega-

TABLE I
Correlation Between Proactive Personality, Ego-Identity Status, & Career Aspiration

	01	02	03	04	05	06	07	08
01 Proactive personality	.877	-.21**	.17*	-.03	.41**	.44**	.52**	.50**
02 Identity diffusion		.935	.09	.53**	.05	-.14*	-.20**	-.18**
03 Moratorium			.910	.06	-.03	.23**	.16*	.18**
04 Foreclosure				.795	.44**	-.09	-.04	-.08
05 Identity achievement					.935	.30**	.42**	.37**
06 Achievement aspiration						.877	.82**	.97**
07 Educational aspiration							.816	.94**
08 Total Career aspiration								.916
Mean	4.40	3.05	4.19	3.12	3.83	4.01	4.44	4.22
SD	0.62	1.30	0.89	1.10	0.93	0.92	0.72	0.78

* $p < .05$; ** $p < .01$

tively correlated with identity diffusion, and insignificantly correlated with foreclosure. Similar correlations were observed for career aspiration. Achievement aspiration, educational aspiration and total career aspiration were all positively correlated with proactive personality. The higher the moratorium and identity achievement, the higher the career aspiration of participants. Conversely, the higher identity diffusion, the lower the career aspiration.

Interaction between proactive personality and ego-identity status

As detailed in Table II, the variable of gender, entered in the first step, was not a significant predictor. After proactive personality and the four ego-identity statuses were entered in the second step, the total explanation of variance was 31.5%. Proactive personality, moratorium, and identity achievement positively predicted career aspiration, whereas identity diffusion negatively predicted career aspiration. The interactions of proactive personality with identity diffusion, moratorium, and foreclosure were significant in the third step and the regression coefficients were .174, -.164, and—.231, respectively. The percentage of the variance of overall performance that was

TABLE II
Hierarchical Analysis Results

	ΔR^2	Adjusted R^2	β	t
Step 1	.00	.00		
Gender			-.011	-.158
Step 2	.335*	.315		
Gender			-.037	-.636
Proactive personality			.318*	4.721
Identity diffusion			-.027	-.387
Moratorium			.151*	2.544
Foreclosure			-.212*	-2.694
Identity achievement			.342*	4.601
Step 3	.088*	.394		
Gender			-.069	-1.243
Proactive personality			.357*	5.354
Identity diffusion			-.022	-.321
Moratorium			.241*	3.575
Foreclosure			-.117	-1.477
Identity achievement			.287*	4.040
Personalities $\times$ Identity diffusion			.174*	2.044
Personalities $\times$ Moratorium			-.164*	-2.289
Personalities $\times$ Foreclosure			-.231*	-2.386
Personalities $\times$ Identity achievement			-.091	-1.425

* $p < .05$; ** $p < .01$

explained increased by 8.8%; the accumulated variance explained was 39.4%. The interactions are graphed in Figures 1 to 3.

Figure 1 illustrates the interaction between proactive personality and identity diffusion. Regardless of whether an individual had a proactive personality, the higher the identity diffusion, the lower their career aspiration. A gradually and negatively sloped correlation line was obtained for participants with a highly proactive personality.

Figure 2 illustrates the interaction between moratorium and a proactive personality. Student-athletes with a highly proactive personality (black solid line) had high career aspirations regardless of the level of moratorium. However, for participants with a low proactive personality: the higher their moratorium, the higher their career aspirations.

Figure 3 illustrates the interaction between foreclosure and a proactive personality. For participants with a highly proactive personality: the higher their foreclosure, the lower their career aspirations. However, for participants with a low proactive personality: the higher their foreclosure, the higher their career aspiration.

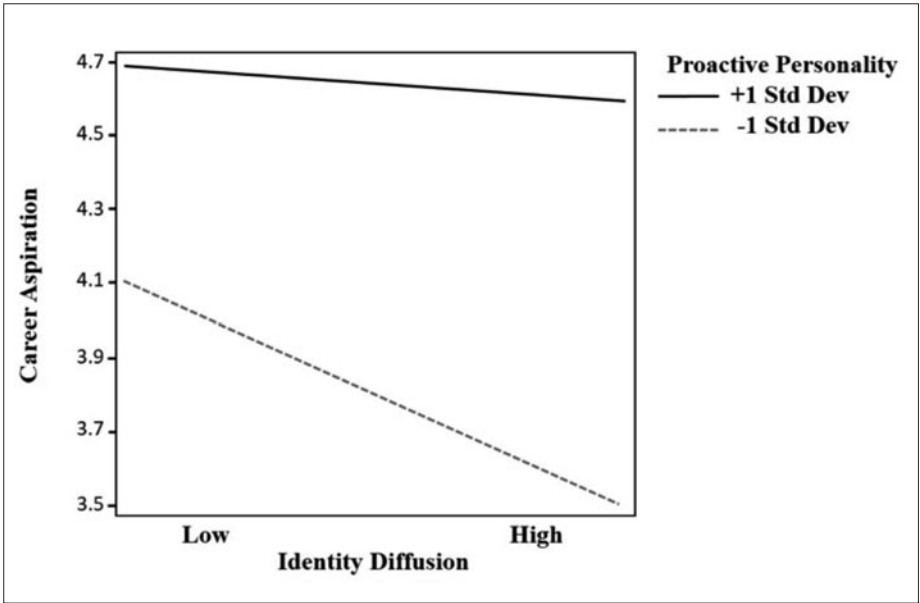


Fig. 1. - Interaction between proactive personality and identity diffusion.

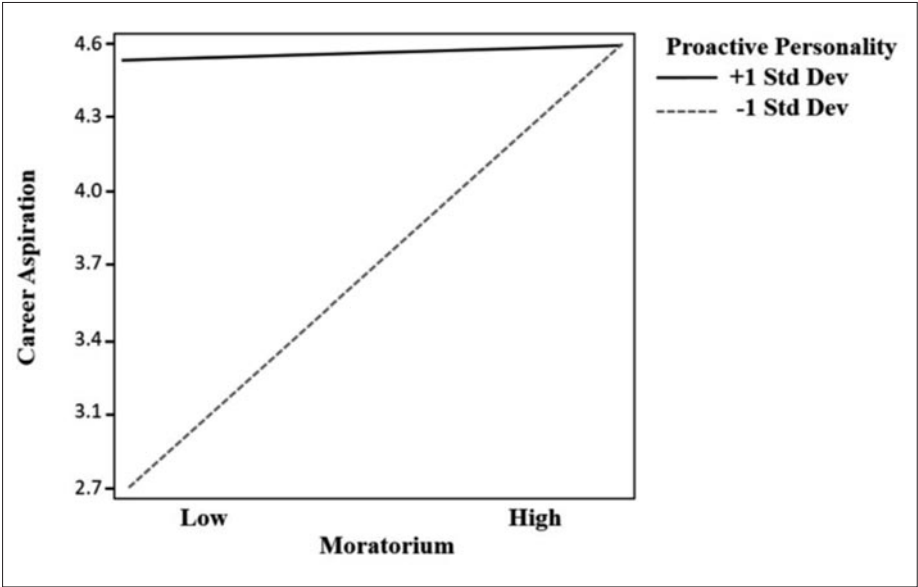


Fig. 2. - Interaction between proactive personality and moratorium.

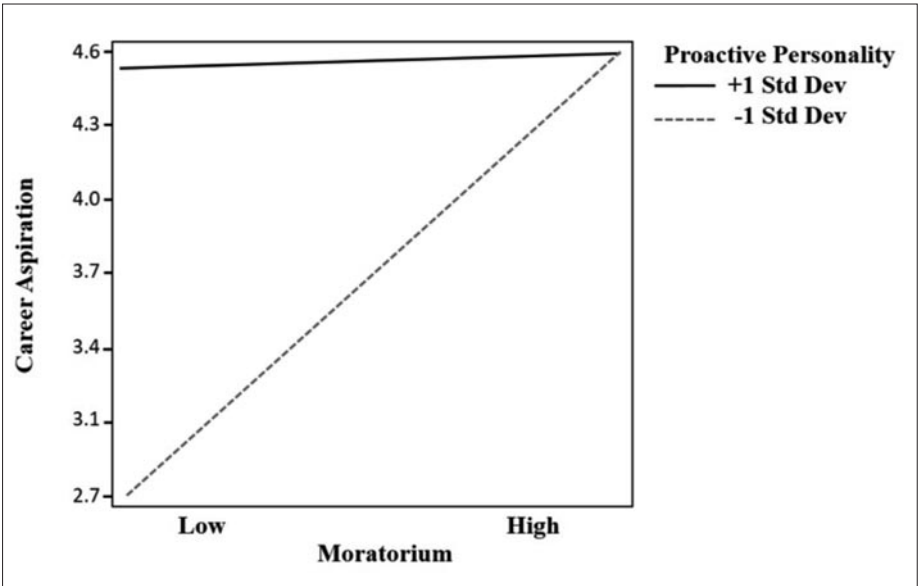


Fig. 3. - Interaction between proactive personality and foreclosure.

Discussion

This study investigated the correlations involving proactive personality, ego-identity status, and career aspiration. The interaction between proactive personality and the various ego-identity statuses were also investigated. First, the correlational results of this study were consistent with theoretical expectations and results in the literature. Both identity achievement and moratorium had positive correlations with career aspirations and a proactive personality. In the model formulated by Marcia (1966), these two ego-identity statuses contain elements of exploration. Therefore, students with a highly proactive personality actively seek opportunities-especially individuals having the moratorium status, although they have yet to discover an appropriate role or self-identity. This status may be the precursor of identity achievement through constant exploration (Kaplan & Flum, 2010; Schwartz, 2001). Therefore, a high moratorium status is not necessarily negative. Instead, this status can be positively correlated with career aspirations and a proactive personality. Moreover, a proactive personality was negatively correlated with identity diffusion. This was so because participants with a highly proactive personality exhibited a behavior of active exploration (rather than passivity) in response to environmental change (Bateman & Crant, 1993; Crant, 2000; Fuller et al., 2010). Therefore, a proactive personality was negatively correlated with identity diffusion (i.e., being noncommittal) (Downing & Nauta, 2010). Furthermore, no significant correlations were observed among foreclosure, career aspiration, and a proactive personality. This absence of correlation may be related to the opposite state of foreclosure- where an individual, being committed to a role, does not explore alternatives. Although foreclosure was not significantly correlated with career aspirations and a proactive personality, its interaction with a proactive personality was a significant and noteworthy predictor.

This study especially focused on the interactions between proactive personality and the various ego-identity statuses. Notably, these interactions were a significant predictor that increased the variance explained by 8%. First, the study determined a consistently negative correlation between identity diffusion and career aspiration in both high and low proactive personalities. However, as evident in Figure 1, a proactive personality moderated this negative correlation, indicating that the lack of career aspiration in highly noncommittal individuals can be moderated by a proactive personality (which resulted in a positive effect). Because people with a high identity diffusion neither have a clear goal nor are engaged in meaningful exploration, previous studies have considered people with high identity diffusion to be

the least adaptable (Downing & Nauta, 2010; Kaplan & Flum, 2010). Although an interaction was observed in this study, high identity diffusion was still significantly correlated with lower career aspirations in student-athletes, regardless of whether they had a proactive personality. Therefore, practitioners, parents, and coaches who are involved in the career development of student-athletes must pay attention to those student-athletes with higher level of identity diffusion.

A unique interaction between proactive personality and moratorium was also determined. As evident in Figure 2, moratorium was positively related to career aspiration in student-athletes with low proactive personality. This may be related to how meaningful exploration is included in the status of moratorium. The items such as *In finding an acceptable perspective on life itself, I find myself engaging in occasional self-exploration and frequent discussions with others* indicated that when individuals recognize themselves as being in a status of moratorium, they are not only passively in the state of identity diffusion, but also in the process of shaping a proper identity (Kaplan & Flum, 2010; Kroger & Marcia, 2011; Schwartz, 2001). Therefore, the higher the moratorium, the higher the career aspirations of people with low proactive personality. However, people with a highly proactive personality have high career aspirations, regardless of their level of moratorium. Previous studies have determined that people with such characteristics actively pursue their goals: they sought opportunities, were unrestricted by their environment, and were looking for solutions (Crant, 2000; Fuller et al., 2010). Therefore, proactive student-athletes can have high career aspirations regardless of their moratorium levels. Previous studies have demonstrated that although moratorium is the precursor for the achievement of self-identity, those in moratorium are also in an uncertain, highly-anxious state (Kaplan & Flum, 2010; Schwartz, 2001). Therefore, moratorium is a complex psychological state. This study initially observed an interaction between moratorium and high and low proactive personality. Future studies can explore these two conflicting elements of moratorium to clarify its influence on emotion and behavior.

The interaction between proactive personality and foreclosure indicated that participants with low proactive personality had a positive correlation between foreclosure and career aspiration. Conversely, for student-athletes with a highly proactive personality, the higher their foreclosure, the lower their career aspiration. Literature (Brewer & Petitpas, 2017; Whipple, 2009) indicates that individuals with the status of foreclosure are already committed to certain roles or tasks before entering the process of exploration and often encounter greater problems with career adjustment and career transition. In consistent with several studies reported that similar negative effects

are most noticeable in these high proactive participants. For example, Harvey et al. (2006) demonstrated that as interpersonal conflicts in the workplace became more frequent, people with a highly proactive personality have lower performance and higher job burnout. Ng and Feldman (2012) also revealed that in young employees, excessive interference from supervisors has a negative effect on innovative behavior, regardless of how proactive the employee's personality is. Under these conditions, the high proactive individuals need to suppress their traits such as goal orientation and the desire to solve problems, where such suppression turns into a potential source of stress and frustration (Crant, 2000). However, note that the explanation is more proper for athletes' career transition out of sport. This study investigated neither the cause of the student-athletes' foreclosure nor their opinions on the roles they were committed to. Follow-up research data are required to verify the interpretation of the present study's results.

By contrast, if the role identity of individuals with low proactive personality stems from external factors, they are likely to passively succumb to environmental pressure and be limited by their situation (Thomas, Whitman, & Viswesvaran, 2010). When being committed to a certain role, student-athletes can temporarily achieve a stable state and develop their careers without worrying about their future (Murdock et al., 2016; Turan et al., 2017). However, note that foreclosure refers to an individual who has committed themselves to a role, not to an individual who has undergone self-exploration (Kroger & Marcia, 2011). Therefore, previous studies have noted the negative effects of having an exclusive identity in student-athletes. Problems such as a lack of career exploration have been highlighted, especially in career transitions and career development. Some studies have also revealed the difficulties people with foreclosure face when looking for alternative paths. Such people defensively maintain the status quo or avoid feedback that make them insecure. The longer the state of foreclosure is maintained, the more likely individuals feel shame and guilt whenever they face doubts or insecurity (Kroger & Marcia, 2011). Foreclosure in student-athletes, therefore, must be addressed.

Implications & Limitations

The interaction between proactive personality and ego-identity status has practical implications for the career development of athletes. As displayed in Figure 2, the importance of exploration to the career aspiration of athletes can be easily detected through the interaction between proactive

personality and identity moratorium. The literature has specifically demonstrated that athletes have lesser self-efficacy and hold less anticipation toward their career if they receive negative feedback from people around them, such as their teachers, instructors, or peers, who also have the bias of athletes having unsatisfactory academic performance (Riciputi & Erdal, 2017; Wininger & White, 2008). Therefore, student-athletes who lack a proactive personality require greater assistance from their coaches, parents, and teachers. Such assistance creates an environment with numerous career choices, allows them to seize opportunities in their career exploration, and makes them look forward to reaching their goals. Furthermore, the result for the interaction between highly proactive personalities and identity foreclosure implied that if the athlete's sense of self-approval is controlled by others instead of their own experience from exploration, the positive effects of their proactive personality may be dampened, which negatively influences their career aspirations. Accordingly, to better understand the process and appropriateness of the athlete's career decision-making, the positive effects of a proactive personality must be exerted through adequate career counseling.

The limitations of this study are listed and suggestions for future studies are proposed, as follows. First, the nonexperimental research design and the sole reliance on self-report inventories in this study prevent making causal inferences from the findings. Further, this study deliberately focused on college student-athletes who are currently participating in sporting competitions above the inter-school level or higher. This study did so to better understand the effect of having a dual role (of a student and athlete) on these student-athletes. This method of selecting participants differed from previous studies, which involved students who studied at related departments of sport and recreation. Those studies have noted the difference between college majors with respect to self-identity statuses (Turan et al., 2017). Such differences in the background of participants, however, were not examined in this study and can be included in future studies. Second, due to the lack of relevant literature in sports, this study could only examine the relationship between proactive personality and ego-identity status preliminarily. However, more details should be clarified in future investigations such as how many participants belonging to each identity status. Furthermore, theorists also argue the importance of contextual factors and circumstances as well as the dynamic identity shifts as individuals develop (Kaplan & Flum, 2010). Future studies could use more complete and longitudinal datasets of ego-identity statuses to understand the effects of different situations on student-athletes.

Finally, researchers have argued that situational factors should be considered as a supplement to studies on proactive personality and ego-identity

status. Fuller et al. (2010) demonstrated that job autonomy may strengthen or weaken the relationship between proactive personality and performance. Studies on ego-identity status also noted the relationship between similarity and interpersonal attraction in the identity status of adolescents (e.g., Goldman, Rosenzweig, & Lutter, 1980). These studies have determined that people are attracted to those with similar attitudes, personality traits, stereotypical beliefs, and economic status. Such patterns are likely to also exist with respect to ego-identity status. However, the literature on the correlation between an individual's self-status and environment (such as the self-status of their peers) is inadequate. Future studies could also explore the effect of the ego-identity status of groups and other individuals on the development of an individual's self-status. Results from such future studies will be an aid to researchers and practitioners focused on the career development of student-athletes.

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