ATHLETES AND DEPRESSION:
THE ROLE OF COLLECTIVE SELF-ESTEEM,

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ABSTRACT

Previous literature on depression has mainly focused on at-risk populations while more resilient populations, such as athletes, remain largely under-examined. Literature on athletes has consistently shown that this group had lower depression levels and better overall psychological well-being in comparison to non-athletes. The current study attempted to examine the underlying dynamics, particularly social support and social identity, inherent in participation in sport and the athlete experience that may contribute to the buffering effects against depression. It is possible athletes jointly experience social support and develop a sense of social identity through sport that increases their levels of collective self-esteem and personal self-esteem. Participants were 102 student-athletes and 107 non student-athletes enrolled in a California State University. Findings indicated that student-athletes reported lower levels of depression and higher levels of both collective self-esteem and personal self-esteem compared to their non student-athlete counterparts. In addition, collective self-esteem and personal self-esteem mediated the relationship between athlete status and depression. Both findings were consistent with research hypotheses.

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Thanks to every classmate, faculty member, and anyone else I interacted with during my time at CSUF. Most of all, thanks to my parents.

CHAPTER 1

INTRODUCTION

When addressing pathology, depression in particular, the focus remains on at-risk subgroups in the population. Scores of meta-analyses examine depression and connect it with at-risk populations such as low socioeconomic status individuals, drug users, individuals with diabetes, acculturating minority groups, individuals with epilepsy, and those suffering from sexual dysfunction (Atlantis & Sullivan, 2012; Bartoli et al., 2013; Fiest et al., 2013; Gupta, Leong, Valentine, & Canada, 2013; Lorant et al., 2003; Rotella & Mannucci, 2013). However, it may be fruitful to shift focus from at-risk populations to more resilient populations. The benefit of studying such resilient populations is to uncover what protects these individuals from depressive symptomatology. One such resilient population is student-athletes (Lanning, 1982).

Numerous studies have examined associations between student-athlete status and depression (Armstrong & Oomen-Early, 2009; Heird & Steinfeldt, 2013; Miller & Hoffman, 2009; Proctor & Boan-Lenzo, 2010; Puffer & McShane, 1991; Storch, Storch, Killiany, & Roberti, 2005). The existing research confirms the athletic population as being at relatively low risk of depression by showing one of two things: 1) Athletes generally fare better psychologically than do non-athletes, or 2) Prevalence of psychological symptoms is the same or lower in athletes compared to non-athletes. In as early as adolescence, the odds of suffering from depression and suicide ideation decrease

by 25% and 12%, respectively, as sports participation increases (Babiss & Gangwisch, 2009). By the time individuals reach the collegiate level, Puffer and McShane (1991) assert that athletes are generally better adjusted than non-athletes with respect to depression levels (Puffer & McShane, 1991). For example, Proctor and Boan-Lenzo (2010) discovered that 29.4% of non-athletes met criteria for possible depression contrasted with only 15.6% of athletes. Another study conducted by Donohue et al. (2004) examined undergraduate recreational athletes as well as National Collegiate Athletic Association (NCAA) athletes and compared them with an undergraduate control group. The results indicated that both cohorts of athletes, recreational and NCAA, displayed less severe global psychiatric symptoms compared to the non-athlete undergraduate students. Such findings support the idea that student-athletes may represent a depression-resilient group.

In many of the previous studies examining athletes and depression, there has been little to no mention of underlying dynamics that may help explain why the athletic cohort experiences a lower rate of depression. Studies recognize athletic participation as a buffer for depression but do not delve into how this protective buffer operates, particularly with respect to sports and team/social dynamics (Miller & Hoffman, 2009). A study done by Armstrong and Oomen-Early (2009) is one exception. In this study, athletes were compared to non-athletes and again, athletes showed significantly lower levels of depression than did non-athletes. Results indicated that athlete status by itself was not a statistically significant predictor of depression while self-esteem and social connectedness were. It is worth noting athletes in this study displayed greater levels of both social connectedness and self-esteem. The implication is that simply being an athlete

and playing sports may not be enough to buffer against depression. Rather, the findings suggest that athletes may benefit from the social processes inherent in athletics and being part of a team. Theoretically, it is these social processes the athletic cohort can draw upon to boost self-esteem and social connectedness that consequently may protect against depressive symptomatology.

In general, much of the existing research supports the notion that social support and social networks are the foundation of many athletic teams. Participation in college athletics provides an opportunity for individuals to identify with others in a unique, shared experience while drawing these individuals closer together thus validating a strong sense of connectedness and belonging (Lee, Draper, & Lee, 2001). This sense of social identity and connectedness seems to be of particular importance to athletes and may hold a key to what protects these individuals from depressive symptomatology.

<u>Social Identity</u>

The construct of social identity is defined as the "part of the individual's self-concept which derives from his or her knowledge of membership to a social group (or groups) together with the value and the emotional significance attached to it" (Amiot & Aubin, 2013, p.564). Social identity highlights the importance of social categories, in addition to individual characteristics, in the formation of self-concept and in one's perception of/behavior toward other people (Noel, 2012). In addition, social identity asserts that the group or groups an individual belongs to are an important source of pride and self-esteem (Tajfel, 1982). This group membership also largely contributes to giving individuals a sense of *who* they are. In other words, a large part of an individual's identity lies within the group or groups he or she is associated with socially. In addition to an

individual's unique identity, social identity has implications for self-esteem and self-concept; individuals strive to enhance or maintain self-esteem and to have a positive self-concept through their social groups (Tajfel, 1982). For example, a study by Ghavami, Fingerhut, Grant, Peplau, and Wittig (2011) found that when ethnic minority students (high school and college) and gay/lesbian adults reported high on identity achievement (understanding and exploring the meaning behind one's identity) and identity affirmation (having positive feelings and a sense of belonging to one's social group) they subsequently reported having a more positive self-concept and higher self-esteem. This study showed how individuals used identification with their respective marginalized minority group to maintain self-esteem and a positive self-concept. In addition, this study shows that social identity and self-esteem can be related. Clearly, the main tenets of social identity may have important implications that extend to the self.

According to Social Identity Theory, the criterion for a social group can be something as simple as a group of individuals who characterize themselves as members of the same social category (Luhtanen & Crocker, 1992). By this definition, athletes of a specific team or even athletes of a particular sport can qualify as constituting a social group to which Social Identity Theory can be applied. To identify oneself as part of a sports team or part of the athletic cohort at large can be important for individuals. Nair (2011) goes as far as to say that, using social identity, the sport of cricket, for example, can be considered to be a unifying symbolic entity for those individuals belonging to the nation of India. Some individuals consider being an athlete a large part of who they are, while others, like some Indian cricket players, use this identification to describe who they

are *overall*. Social identity is an important aspect of the self that contributes to another related construct, collective self-esteem.

Collective Self-Esteem

The concept of collective self-esteem (CSE) was developed by Luhtanen and Crocker (1992) in an attempt to capture a type of self-esteem in line with Social Identity Theory's conception of a collective identity. Up to this point, self-esteem was conceptualized in strictly individualistic terms; many felt this concept of self-esteem offered only a partial and incomplete view of an individual's self-concepts (Luhtanen & Crocker, 1992). Luhtanen and Crocker (1992) believed that the collective aspect of the self-concept is distinct from, yet related to, personal self-esteem. As such, collective self-esteem was defined as the aspect of the individual self-concept that is derived from an individual's social groups and how an individual interacts with others in this group (Luhtanen & Crocker, 1992).

Collective self-esteem (CSE) ties into social identity as it is one's global self-evaluation as a member of the social groups or categories to which he or she belongs. This includes components such as level of identification with the social group, self-perceptions of worthiness as a member, personal value placed on membership, and public respect for one's groups or categories (Luhtanen & Crocker, 1992). CSE can also be characterized by how positively or not an individual evaluates one's social identity and how individuals view and value the group membership aspect of their lives (Luhtanen & Crocker, 1992). Level of identification in particular can be a very important aspect of collective self-esteem. A study by Reding, Grieve, Derryberry, and Paquin (2011) showed that individuals who were more highly identified with a particular social group

had higher levels of extroversion, community identification, and CSE compared to individuals not as highly identified.

The effects of overall CSE can be quite positive. For example, high CSE has been shown to be associated with optimal human functioning and more positive interpersonal relationships (Bailis, Chipperfield, & Helgason, 2008). Crocker and her colleagues (1994) were also able to show, while drawing in part from Social Identity Theory (Tajfel, 1982), that the extent to which an individual positively evaluates his or her social group influences adjustment and well-being. If an individual thinks highly of the social group he or she belongs to, he or she naturally experiences a boost in esteem. In addition, CSE can uniquely account for variance in psychological well-being over and above the effects of personal self-esteem itself (Verkuyten & Lay, 1998). A study by Sharma and Agarwala (2014) done specifically on personal self-esteem, collective self-esteem and how it might predict depression levels showed a significant negative relationship between both constructs of self-esteem and depression. To my knowledge, there is no research that examines the construct of collective self-esteem in the athletic population.

<u>Athletes and Collective Self-Esteem</u>

Athletes, student-athletes in particular, are in a prime position to have higher amounts of collective self-esteem compared to the rest of the population. There are several reasons for this. Athletic talent and the athletic experience often begins at a young age and is cultivated through time, practice, and psychological commitment such that by the time athletes are in high school and college, athletes have already internalized a strong sense of identification in the athlete role (Johnson & Migliaccio, 2009). Those who grow up an athlete, in effect, organically develop an ingrained identity whereas non-

athletes may not have had that luxury and thus struggle to formulate a self-concept or

identity. In addition, individuals higher in athletic identity may surround themselves with

other athletes who promote a kind of self-definition that is centered on athletics, which

further solidifies identification with the athlete role (Heird & Steinfeldt, 2013).

Internalization of such an identity is essential for the development of collective self-

esteem.

  Another component of collective self-esteem is public collective self-esteem, that

is, how one feels about how *others* feel about the group to which they belong. If one feels

good about how his or her group is perceived by others, it follows that they should enjoy

higher levels of public collective self-esteem (Luhtanen & Crocker, 1992). Athletes,

meanwhile, are perceived as a privileged and respected population (Lanning, 1982). With

others generally respecting the athletic population and those who play sports, as opposed

to more marginalized populations like ethnic minorities, gays/lesbians or those having

low socioeconomic status, for instance, student-athletes are more likely to feel good

about how others perceive the group to which they belong. As a result, having higher

levels of public collective self-esteem contributes to having a higher level of collective

self-esteem overall.

  In addition, athletes who play a particular sport at the collegiate level are likely to

be fairly skilled in their respective sport. Having this degree of skill can give an

individual the ability to contribute meaningfully to his or her team. This idea of being

able to provide meaningful contributions is particularly relevant to collective self-esteem.

There is an aspect of collective self-esteem that hones in on competency as a group

member (Luhtanen & Crocker, 1992). If an individual does not feel like a worthy,

contributing, or valuable member to the group they belong to, they are less likely to be high in collective self-esteem. Student-athletes are in a prime position to enjoy this notion of being a valuable group member due to the emphasis of teamwork in sports; in sport culture, there is a pervasive belief no one singular member of the team is more valuable than the team as a whole, particularly when it comes to whether or not the team enjoys success or not (McEwan & Beauchamp, 2014). Within this framework of a team-first attitude, it can be particularly empowering for student-athletes to feel like valuable members of the team. This is another way student-athletes are uniquely positioned to enjoy higher levels of collective self-esteem.

<div align="center">Personal Self-Esteem</div>

Many theories of depression have included in some way that personal self-esteem plays a principal role in the etiology of depressive disorders, particularly low personal self-esteem. Personal self-esteem can be thought of as the extent to which an individual feels he or she is a person of worth (Rosenberg, 1965). Negative self talk, beliefs, and evaluations are central characteristics of low personal self-esteem. One of the dominant models of the relation between low personal self-esteem and depression, the vulnerability model, posits that negative self-evaluations constitute a causal risk factor of depression (Sowislo & Orth, 2013). Moreover, one of the main tenets of the cognitive theory of depression is that negative self-beliefs are not only a symptom of depression, but a diathesis exerting causal influence in the onset and persistence of depressive symptoms (Beck, 1987). By this model, personal self-esteem plays an important role in whether or not depressive symptoms are experienced. There is growing research in favor of the vulnerability model, particularly among longitudinal studies, that suggests low self-

esteem can prospectively predict depression (Sowislo & Orth, 2013). Hence, personal self-esteem cannot be discounted when discussing depression.

Numerous studies among various populations have shown the detrimental effects that low personal self-esteem can have. The construct has also been shown to be important in influencing the experience of depression and even other affective states like anxiety (Sinclair et al., 2010). For example, a study by Xue and Li (2007) showed that among 800 Chinese college freshmen, the predictive effects of personal self-esteem in addition to private collective self-esteem and public collective self-esteem on depression and anxiety were significant. Low levels of these kinds of self-esteem lead to higher levels of depression and anxiety. Hammond, Watson, O'Leary, and Cothran (2009) looked within the Apache Indian population and found that low personal self-esteem was central to problems such as suicide, depression, and alcoholism. Collectively, these studies indicate that personal self-esteem is relevant to depressive symptoms across populations.

<div align="center">Research Hypotheses</div>

In sum, collective and personal self-esteem may play a role in depression resilience. Thus, this study examined the roles of esteem in one depression-resilient population: college athletes. Hypotheses are as follows: 1) Athletes will report lower levels of depression when compared to non-athletes, 2) Athletes will report higher levels of both personal and collective self-esteem compared to non-athletes, and 3) Personal and collective self-esteem will mediate the association between athlete status and depression.

CHAPTER 2

METHOD

Participants

Targeted participants were student-athletes at a Division I school. Student-athletes who participated in this study played on sports teams including women's basketball, women's golf, men's and women's lacrosse, men's baseball, men's and women's soccer, men's ice hockey, men's and women's rugby, men's and women's volleyball, co-ed ultimate Frisbee, co-ed archery, women's equestrian, co-ed tennis, men's roller hockey, co-ed wushu (martial arts), and men's cycling. Most of the participants came from the following teams: women's volleyball (19.6%, n = 20), women's lacrosse (15.7%, n = 16), and men's ice hockey (15.7%, n = 16). Student-athletes averaged 1.95 years ($SD = 1.13$) playing on their respective team and 7.34 total years ($SD = 5.14$) playing their respective sport. These student-athletes were part of an organized team and competed at a high level against other student-athletes from various universities. They were not students who play a particular sport solely for informal recreational purposes.

Non-student athletes were recruited from the undergraduate student research participant pool at California State University, Fullerton (CSUF). Introductory psychology students at CSUF had the opportunity to participate in this study in partial fulfillment of their course research involvement requirement. This study was approved by the university's institutional review board. The final sample of this study consisted of 209

students at CSUF: 102 student-athletes and 107 non student-athletes. Key demographic

attributes divided by athlete status are outlined (see Table 1). The mean age of student

athlete participants was 20.43 years old ($SD = 2.27$) while the mean age of non-student

athletes was 19.23 years old ($SD = 1.79$).

Table 1. Demographic characteristics divided into sex, ethnicity, and class standing per
group
One-way analyses of variance (ANOVAs) were conducted to test for statistically

Variable		Student-athletes (n = 102)		Non student-athletes (n = 107)	
		n	%	n	%
Sex					
	Male	48	47.1	37	34.6
	Female	54	52.9	70	65.4
Ethnicity					
	Caucasian/Non-Hispanic	40	39.2	19	17.8
	Hispanic or Latino	37	36.3	60	56.1
	African American	2	2	5	4.7
	Asian American	18	17.6	15	14
	Pacific Islander	3	2.9	3	2.8
	Native American/Alaska Native	1	1	0	0
	Other	1	1	5	4.7
Class Standing					
	Freshman	24	23.5	52	48.6
	Sophomore	24	23.5	29	27.1
	Junior	19	18.6	17	15.9
	Senior	34	33.3	9	8.4
	Graduate	1	1	0	0

Note: Other included participants who self-identified as Middle Eastern, South Asian,
Armenian, Asian, or Egyptian.

significant differences in age, gender, and race/ethnicity between the student-athlete and

non student-athlete groups. Race/ethnicity was dichotomized into two groups,

Caucasian/Non-Hispanic and other, for the purpose of this one-way ANOVA. There were

not any statistically significant mean differences for gender, $F(1, 207) = 3.39$, $p = .067$.

However, there was a statistically significant mean difference for participant age,

$F(1, 207) = 17.99$, $p = .001$, with athletes slightly older than non-athletes. There was also

a statistically significant mean difference for race/ethnicity, $F(1, 207) = 12.46$, $p = .001$,

with non-athletes predominately identifying with ethnicities other than Caucasian/Non-

Hispanic. Correlations between variables are outlined (see Table 2 and Table 3). Given

that age was not related to collective self-esteem, personal self-esteem, and depression,

age was not covaried in further analyses. However, while race/ethnicity was not related to

collective self-esteem and depression, it was significantly related to personal self-esteem

at the 0.05 level. As a result, race/ethnicity was covaried in further analysis.

Table 2. Non Student-athlete Depression, Self-esteem, and Demographic Variables: Correlations (N = 107)

Variables	1	2	3	4	5	6
1. Depression	-					
2. Collective Self-esteem	-0.356*	-				
3. Personal Self-esteem	-0.594*	0.268*	-			
4. Gender	0.063	0.163	-0.054	-		
5. Age	-0.024	0.066	0.021	0.084	-	
6. Ethnicity/Race	0.149	0.025	-0.056	-0.029	-0.008	-

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

Table 3. Student-athlete Depression, Self-esteem, and Demographic Variables: Correlations (N = 102)

Variables	1	2	3	4	5	6
1. Depression	-					
2. Collective Self-esteem	-0.197**	-				
3. Personal Self-esteem	-0.386*	0.296*	-			
4. Gender	-0.081	-0.097	-0.184	-		
5. Age	-0.022	-0.074	0.014	-0.333*	-	
6. Ethnicity/Race	0.032	-0.068	0.225**	0.168	0.064	-

* Correlation is significant at the 0.01 level (2-tailed)
** Correlation is significant at the 0.05 level (2-tailed)

Procedure

Student-athletes were informed of the study, including dates and times of participation, via team representatives, club presidents, coaches, and the university's Sports Club Council. Non student-athletes were obtained through the university's student research participant pool via the Sona Systems Psychology Research Participant System. Interested non-athlete participants signed up online via Sona Systems. All interested participants (student-athlete and non student-athletes) reported to a classroom at CSUF at designated days and times to complete the study's paper-and-pencil questionnaires.

After reporting to the study location, all participants first provided their informed consent by physically signing a printed consent form and submitting it to the researcher. Once all informed consent forms were collected from participants, the researcher provided each participant with paper and pencil questionnaires. The measures were presented for completion in the following order: demographic questionnaire, the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992), Rosenberg Self-Esteem Scale (Rosenberg, 1965), and the Center for Epidemiological Studies Depression Scale-Revised (CESD-R) (Eaton, Muntaner, Smith, Tien, & Ybarra, 2004). Upon completion of the questionnaires, a debriefing statement was included on a final page along with contact information for any concerns or questions. In addition, referral information was provided on this page in case participants wanted to seek counseling services. Data was collected over a 4-month period from November 2014 to February 2015.

<center>Measures</center>

Demographics Questionnaire

A demographics questionnaire was developed by the researcher. The

questionnaire required participants to provide their age, sex, race or ethnicity, class

standing, and their athlete-status (i.e., student-athlete, non student-athlete). Those who

stated they were student-athletes identified the sport/team they played for, years on the

team, and years spent playing their respective sport.

Collective Self-Esteem Scale

The Collective Self-Esteem Scale (CSES; Luhtanen & Crocker, 1992) was used to

measure the construct of collective self-esteem. It assesses global, relatively stable levels

of collective self-esteem. This scale consists of 16 items on a 7-point Likert scale ranging

from Strongly Disagree to Strongly Agree. The CSES asks participants to respond to

items while considering the social memberships or groups (s)he belongs to. For the

purposes of this study, "social groups" or "group memberships" was changed to

"team(s)" for those who identified as student-athletes. For example, an original CSES

item reads "I am a worthy member of the social group I belong to." In this study, the item

reads "I am a worthy member of the team(s) I belong to." Non student-athletes took the

original, unmodified version of the CSES.

The CSES contains four subscales: membership, importance to identity, public

regard, and private regard (Garcia & Sanchez, 2009). The subscale measuring

'membership' examines an individual's own judgments about how worthy (s)he is in his

or her respective group (e.g., "I often feel I'm a useless member of my social groups;"

Luhtanen & Crocker, 1992). The subscale measuring 'importance to identity' examines

how important group membership is to an individual's overall self-concept (e.g. "The social groups I belong to are an important reflection of who I am"; Luhtanen & Crocker, 1992). The public regard subscale assesses how an individual thinks others view his or her social group (e.g. "In general, others respect the social groups I am a member of"; Luhtanen & Crocker, 1992). The private regard subscale assesses one's personal judgments of how satisfactory or not one's social groups are (e.g. "In general, I'm glad to be a member of the social groups I belong to"; Luhtanen & Crocker, 1992). There are four items within each subscale that combine to form a 16-point scale for collective self-esteem.

The CSES has demonstrated reliability and validity among a college student population. For example, the measure displayed good internal consistency reliability (alpha = .85) and acceptable test-retest reliability over a 6-week period (r = .68) among college students (Luhtanen & Crocker, 1992). A study by Bettencourt et al. (1999) also used the CSES with college students and found the overall scale showed high internal consistency reliability at both phases of the study. Phase 1 took place within the first 45 days of the academic year while Phase 2 took place within the final 45 days of the academic year (Phase 1: α = .88; Phase 2: α = .89) (Bettencourt et al., 1999). Internal consistency for the CSES in this sample is good (α = .842). Construct validity for the CSES was demonstrated by having significant, moderately strong correlations with personal self-esteem measures (Luhtanen & Crocker, 1992). Hence, collective self-esteem is related to, yet distinct from personal self-esteem. Additionally, Luhtanen and Crocker (1992) reported the scale did not correlate significantly with a measure of social desirability thus demonstrating the CSES's discriminant validity in college students.

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (RSES) was used to measure the construct of personal self-esteem (Rosenberg, 1965). Self-esteem is defined by the developer as an individual's overall sense of worth (Rosenberg, 1965). Like the CSES, the RSES assesses global and relatively stable levels of self-esteem. The RSES is a self-report instrument consisting of ten items on a four-point Likert scale. Five items are positively worded while the other five items are negatively worded. Participants are asked to rate the degree to which they agree or disagree with each item, from "Strongly Disagree" to "Strongly Agree." Scoring is based on a metric ranging from 10 (*poor self-esteem*) to 40 (*excellent self-esteem*).

The RSES is both reliable and valid in college populations. Zeigler-Hill et al. (2013) conducted a study with 419 university undergraduates using the RSES and found internal consistency in their study to be good at $\alpha = .88$. Another study demonstrated good levels of internal consistency and temporal stability for the RSES; Cronbach's alpha at the first and second administration in this study were .85 and .88 respectively while test-retest correlation was .84 over a four-week period (Martín-Albo, Núñez, Navarro, Grijalvo, & Navasquéz, 2007). In this sample, internal consistency for the RSES is excellent ($\alpha = .902$).

The RSES also has adequate validity. With regard to construct validity, a study by Martín-Albo et al. (2007) found that the RSES displayed significant, positive correlations, between .28 and .50, with five self-concept dimensions (academic, social, emotional, family, and physical). When it comes to predictive validity, a study by Sinclair et al. (2010) suggests self-esteem is linearly related to mood disorders; RSES

scores showed strong, negative associations with stress, depression, and anxiety

(-0.52, -0.62, and -0.47, respectively).

Center for Epidemiologic Studies Depression Scale-Revised

The Center for Epidemiologic Studies Depression Scale - Revised (CESD-R) was used to measure depressive symptomatology (Eaton et al., 2004). The measure assesses depressive symptomatology in the general population via a 20-item, self-report, symptom-rating scale that corresponds closely to DSM-IV criteria for depression (Eaton et al., 2004). In addition to reflecting more current diagnostic criteria than the CESD, the CESD-R improves on the psychometric limitations of its predecessor by adding an extra response category (nearly every day for two weeks), adding items reflecting anhedonia, suicidal ideation, and psychomotor retardation/agitation, removing items unrelated to modern conceptualizations of depression criteria, and removing items reflecting positive affect (Van Dam & Earleywine, 2011).

Examination of the CESD-R's psychometric properties in both a community and a college student sample suggested adequate reliability and validity (Van Dam & Earleywine, 2011). Internal consistency reliability among the student population was high ($\alpha = 0.928$) (Van Dam & Earleywine, 2011). Additionally, there was evidence of strong convergent and divergent validity when the CESD-R was compared to other measures of positive and negative affect, cognitive and somatic anxiety, and schizotypal personality traits (Van Dam & Earleywine, 2011). In this sample, internal consistency for the CESD-R is excellent ($\alpha = .911$).

CHAPTER 3

RESULTS

Descriptive statistics for all independent and dependent variables are listed below

in Table 4.

Table 4. Average scores of collective self-esteem, personal self-esteem, and depression
per group

Measure	Student-Athletes (n = 102)			Non Student-Athletes (n = 107)		
	M	*SD*	Range	*M*	*SD*	Range
CSES	88.91	9.86	63.75-105.75	81.46	11.39	52.25-105.75
RSES	22.25	5.49	9-30	20.29	6.31	4-30
CESDR	11.58	9.27	0-46	15.51	12.19	0-54

Note: CSES: Collective Self-esteem Scale; RSES: Rosenberg Self-esteem Scale;
CESDR: Center for Epidemiological Studies Depression Scale Revised

Analysis 1: Multivariate Analysis of Variance (MANOVA) Examining Differences

Between Groups in Depression and Self-Esteem

A MANOVA was conducted to examine whether levels of depression and self-

esteem (collective and personal) differed by athlete status[1]. In this analysis, athlete status

was the independent variable (IV), with collective self-esteem, personal self-esteem, and

depression level as the dependent variables (DVs). Race/ethnicity was co-varied since it was correlated significantly with the variable of personal self-esteem. The resulting MANOVA was statistically significant, $F(3, 204) = 8.76$, $p = .001$, suggesting that one or more variables differed by athlete status. Follow-up univariate analyses of variance showed that all three variables differed by athlete status: depression level, $F(1, 207) = 6.9$; $p = .038$, collective self-esteem $F(1, 207) = 28.3$, $p = .046$, and personal self-esteem $F(1, 207) = 5.7$, $p = .048$. Athlete status was related to higher levels of collective self-esteem, higher levels of personal self-esteem and lower levels of depression. In further follow-up analyses, a significant main effect of athlete-status on the multivariate composite of collective self-esteem and personal self-esteem was noted (*Pillai's trace* = .12, $F(2, 206) = 14.51$, p $= .001$). Univariate Roy-Bargmann stepdown tests (with collective self-esteem first followed by personal self-esteem) showed that this difference was associated with collective self-esteem only (*stepdown F*(1, 207) = 28.29, p $= .001$). Note, these analyses were performed both with and without the two NCAA student-athletes. Since results were essentially the same, the text reports analyses that include the two NCAA student-athletes.

Analysis 2: Personal and Collective Self-Esteem as Mediators of a Relationship Between

Athlete Status and Depressive Symptoms

Preacher and Hayes' (2008) bootstrapping approach and associated INDIRECT macro method for testing mediation was used to examine whether personal self-esteem and collective self-esteem mediated between the variables of athlete status (IV) and depression (DV). This bootstrap approach is more powerful than the traditional Baron and Kenny (1986) approach. To test the indirect effect of X on Y through the mediators,

Baron and Kenny (1986) use a Sobel test. However, the Sobel tests are low in power in comparison to the Preacher and Hayes (2008) bootstrap approach. Sobel tests rely on normal distribution theory to estimate the sampling distribution of path estimates while bootstrap tests re-sample the researcher's data (Zhao, Lynch, & Chen, 2010). The problem with relying on normal distribution theory is that the indirect effect is a product of two or more parameters and the sampling distribution of products is rarely normal. As a result, the bootstrap approach is almost always more powerful than Sobel tests.

Figure 1 presents the model along with unstandardized coefficients and standard errors for all direct effects. Direct effects of the IV to mediators showed that the path from athlete status to collective self-esteem was significant, $p = .001$, and the path (direct effect) from athlete status to personal self-esteem was not significant, $p = .066$. Direct effects of the mediators to the DV showed that the path from collective self-esteem to depression was significant, $p = .013$, and the path from personal self-esteem to depression was also significant $p = .001$. The total effect of athlete status to depression was significant, $p = .020$. The direct effect of athlete status to depression after controlling for collective and personal self-esteem is not significant $p = .447$.

The model accounted for 31% of the variance in depression level, $R^2 = .31$, $F(4, 204) = 22.7$, $p = .001$. To test statistical significance of the indirect effects of personal and collective self-esteem on athlete-status and depression, I constructed an estimate of indirect effect and a bias corrected 95% confidence interval based on 1000 bootstrap samples. The bootstrapped unstandardized indirect effect was -2.55, and the 95% confidence interval ranged from -5.25 to -.63. Thus, the indirect effect was

statistically significant; the data shows that athlete-status is linked to depression levels

through the mediators of collective self-esteem and personal self-esteem.
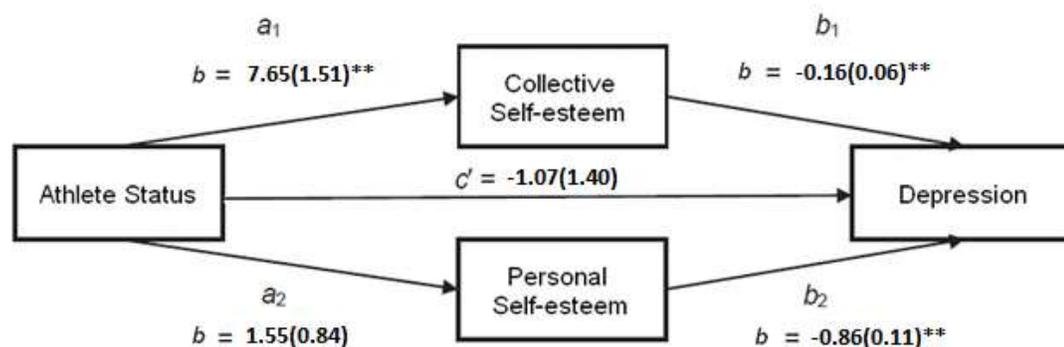
Figure 1. Mediation model of relationships between athlete status, collective self-esteem, personal self-esteem, and depression. a1 = the direct effect of athlete status on collective self-esteem. a2 = the direct effect of athlete status on personal self-esteem. b1 = the direct effect of collective self-esteem on depression, independent of athlete status. b2 = the direct effect of personal self-esteem on depression independent of athlete status. c' = the direct effect of athlete status on depression, independent of collective self-esteem and personal self-esteem. b = unstandardized path coefficient (SE). *$p < .01$. **$p < .05$.

CHAPTER 4

DISCUSSION

The purpose of this study was to learn more about buffers in depression by examining one resilient population. In this study, the resilient population of interest was athletes. Previous research studies indicated that athletes experience more positive psychological well-being, but the research largely stops there. This study attempted to look at the underlying dynamics as to why this is the case. One of the possible explanations may lie within the social aspects of being an athlete and how that may provide a boost to identity and self-esteem. Thus, the research examined collective self-esteem and personal self-esteem as potential resilience factors.

The researcher hypothesized that compared to non-athletes, student-athletes would report lower levels of depression, higher levels of collective self-esteem and higher levels of personal self-esteem. Additionally, collective self-esteem and personal self-esteem were expected to mediate between athlete status and depression. Both Hypothesis 1, student-athletes will report lower levels of depression compared to student non-athletes, and Hypothesis 2, student-athletes will report higher levels of personal self-esteem and collective self-esteem compared to student non-athletes, were supported. With respect to hypothesis 1 in particular, this is consistent with previous research by Proctor and Boan-Lenzo (2010) who reported that participation in an intercollegiate team sport appears related to lower levels of depression. However, it is worth noting that

previous research indicated athlete status alone was not a statistically significant predictor of depression (Armstrong & Oomen-Early, 2009). The same notion was true in this study. An initial MANOVA indicated that student-athletes had significantly lower depression levels. However, mediation analysis indicated that athlete-status by itself was not a significant predictor of depression; the direct effect of athlete status to depression was not significant. However, the total effect of athlete status on depression was significant. This lends further support to the notion that factors such as collective self-esteem and personal self-esteem mediate the relationship between athlete status and depression. Athlete-status *along* with collective self-esteem and personal self-esteem were found to significantly influence depression levels. This finding thus confirms hypothesis 3, that collective and personal self-esteem were found to mediate between athlete-status and depression.

It is interesting to note that student-athletes and non-student athletes were both required to refer to a social group that they belong to when responding to the CSES. Student-athletes were instructed to refer to the team they belong to while non student-athletes were instructed they could refer to any social group they belong to (e.g. religious, ethnic, sexual orientation). In spite of both populations drawing from a salient social group in their lives, student-athletes still showed significantly higher levels of collective self-esteem, personal self-esteem, and lower depression levels. This could indicate there is something inherently unique about the dynamics of sports participation which allow athletes to buffer against depression. Such social dynamics, like shared experiences and goals or a readily available social support network through teammates and coaches, may provide unique buffers for self-esteem and feelings of well-being. It is also possible that there are dimensions of athletic participation (e.g. the ability to relieve stress through

physical activity) that can help explain why athlete group membership in particular appears to be so beneficial as opposed to other types of group membership.

<u>Clinical Implications</u>

The findings of this study have several implications that could be beneficial to mental health practitioners as well as anyone suffering from or looking to buffer against depression. First, this study provides further evidence that the athlete population remains more resistant to depression than their non-athlete counterparts. Mental health practitioners could suggest to those who may be trying to combat or buffer against depression that they may want to consider playing on a sports team. Based on this study, involvement in sports was shown to have positive effects on feelings toward one's group memberships and how they privately viewed the group memberships they had. Knowing that involvement in sports could provide positive effects to self-esteem and combative effects against depression, it could be used as a type of early intervention or preventative measure for children who may be more susceptible to suffering from a mood disorder. One of the things that parents can consider and counselors can suggest is to get children involved in sports early on so that they can create a sense of belonging or positive group membership that they can feel good about.

A second, more general, implication of this study is that it is important to focus on the construct of self-esteem in order to achieve psychological well-being. However, this goes beyond the broad term of self-esteem. This study demonstrated that there are two important aspects of self-esteem that play significant roles: collective self-esteem and personal self-esteem. One of the overarching theories that necessitated this study was this: if an individual feels positive about their own group memberships and the social

groups he or she identifies with (i.e., collective self-esteem), then this can greatly contribute to how that individual values or attributes worth to him or herself (i.e., personal self-esteem). At the very least, this study provided some evidence that it may be worthwhile for clinicians to focus and explore an individual's level of self-esteem from both an individualistic and collectivistic standpoint.

At its core, this study provides further evidence that emphasizes the importance of the collective aspects in an individual's life, including social identity, group memberships, and social interaction. The results of this study suggest that there is a social, collectivistic aspect inherent in people's lives that affects mood. From a clinical standpoint, mental health workers may benefit from examining and working on such social aspects with their clients in order to buffer or combat depressive symptomatology.

<u>Limitations of the Study</u>

There were several limitations associated with this study. One limitation is that the questionnaires tended to be high in face validity. That is, each measure was fairly direct in measuring its associated construct. It is possible student-athletes presented themselves in a more favorable way than is actually true for fear of being stigmatized, particularly with items related to depression. Any sort of presentation of inadequacy, vulnerability, or weakness, i.e. any kind of psychological distress, is particularly stigmatized among the athletic population (Proctor & Boan-Lenzo, 2010). The researcher in this study attempted to control for this by emphasizing that responses would be kept confidential and unidentifiable with respect to who filled out his or her questionnaire set. Nonetheless, responses may be affected by this stigma despite assurances of confidentiality.

A second limitation is that the sample was drawn from a single university thus limiting generalizability to the entire population. Even though individuals from varying ethnicities participated in the study, participants were taken from a college population, which may not be representative of the population at large.

Future Research

There are many ways to expand on the results of this study. For example, it may be useful to examine a group of athletes who have moved on from playing competitive sports at the collegiate level. Future research could be conducted longitudinally to examine how levels of collective self-esteem, personal self-esteem, and depression differ at various times pre- and post-college, and how relationships between these variables may fluctuate over time. This may be particularly true of individuals who were student-athletes but continue playing their respective sports after college. It may be important to look into whether or not participation in sports in later adulthood yields the same effects as it does during the collegiate years.

This study was conducted using student-athletes at the collegiate level. In other words, one could make the assumption that the athlete identity is something that has been ingrained in these individuals for a period of time. It may be useful to perform this study, or at least delve deeper into the constructs of identity and collective self-esteem, with athletes of younger age groups. Such studies could provide clues as to when individuals begin to integrate being an athlete into their identity. As a result, examining younger athletes could provide insight into what ages are important for identity development and self-esteem.

It may also be useful in future studies to split athletes into individual and team sport classifications in order to uncover any differences between the two types of athletes regarding the constructs measured in this study. This is especially salient with respect to the construct of collective self-esteem. A "team" is defined as a group who develop structured relationships connected by the pursuit of individual and group level outcomes which are contingent on the efforts of all group members (Evans, Eys, & Bruner, 2012). There is such a strong notion of collectivism and interdependence in team sport that it might be informative to examine how individual and team sport athletes differ in their level of collective self-esteem and in turn, personal self-esteem and depression. The majority of student-athletes used in this study were involved in team sports.

Future research could also focus on other groups in a college environment that share similarities with sports teams from a group membership standpoint. There are plenty of groups, clubs, and organizations on university campuses to which social identity and collective self-esteem can be applied. Such groups could also provide the kind of meaningful group memberships that could help buffer against depressive symptomatology.

<div align="center">Conclusions</div>

This study confirmed findings from previous literature suggesting student-athletes are psychologically healthier compared to their non-athlete counterparts. However, this study also serves as an extension to the current literature by focusing on *why* athletes may experience less depressive symptomatology in comparison to non-athletes. Student-athletes appear to experience a boost in collective self-esteem and personal self-esteem

which helps buffer against depression. This suggests there must be a collectivistic or social aspect of an athlete's experience that is important to their depression resilience.

One of the purposes of this study was to potentially uncover clues as to the possible buffers resilient populations possess that more at-risk populations do not have. While the research suggests student-athletes seem to have a higher sense of collective self-esteem than non-athletes, it does not mean that it is impossible for non-athletes to have a comparable sense of collective self-esteem. Other research suggests that the most significant and consistent predictor of self-esteem is high quality social interactions (Marshall, Parker, Ciarrochi, & Heaven, 2014). For non-athletes, it may require a more concentrated effort in finding such quality interactions. Whether it is sports or membership in another social group, the importance of a high quality social interaction may be invaluable to both collective self-esteem and personal self-esteem.

APPENDIX A

INFORMED CONSENT FORM

Informed Consent Form
California State University, Fullerton

Dear participant:

The study in which you are being asked to participate in is being conducted by Ryan Cruz, a graduate student of Psychology (clinical), under the direction of Christine Scher, Ph.D. at California State University, Fullerton.

The study is being conducted primarily in fulfillment of thesis requirements for the Master of Science degree in Psychology (clinical). Specifically, the study deals with how collective and personal self-esteem might affect having feelings of depression or anxiety. In this study, you will complete several measures regarding your self-esteem and things you have thought, felt, or experienced lately. Some of these questions ask about very sensitive topics, such as suicidal thoughts. Please be aware that these questions are being asked for research purposes only, not to provide psychological assistance. However, if you would like assistance in finding psychological help, please let me know. Alternatively, you may contact CSUF's Counseling and Psychological Services at (657) 278-3040.

Participation in this study is expected to last between 20-45 minutes. Risks of this study include experiencing some transient negative mood as a result of reading negative statements or reflecting upon feelings and states you may have experienced in the past week or weeks. Please let the researcher know if you are feeling very distressed. The benefits of this study may include a better understanding of the dynamics surrounding depression and anxiety. Additionally, the study may provide insight into things that could possibly serve as a protective buffer against such distressed feelings.

All of your responses will be kept confidential to the extent allowed by law. Your name will not be reported with your responses; all data will be reported in group form only. Results of this study may be published but no names or identifying information will be included for publication. Data will be stored in a locked research lab, with access limited to Dr. Scher and her research associates. Data will be destroyed a minimum of three years following publication of the study results.

Participation in this study is completely voluntary. You are free to withdraw from the study at any time without penalty. You will receive .75 units of psychology research credit for your participation or credit toward your team's tier standing if you are an SCIC student-athlete; you will receive these units regardless of whether you withdraw from the study.

If you have additional questions please contact Ryan Cruz at (951) 202-9050 or Dr. Scher (Faculty Advisor) at (657) 278-8428. If you have questions about the rights of human research participants contact the CSUF IRB Office at (657) 278-7640 or irb@fullerton.edu.

Ryan Cruz does not have a financial or other conflict of interest relating to the results of this study.

I have carefully read and understand this consent form. By signing below, I agree that I am at least 18 years of age and agree to participate in this project.

Name of Participant (please print) _____

Signature of Participant   **Date** _____

Signature of Investigator   **Date** _____

APPENDIX B

QUESTIONNAIRE INSTRUCTIONS

The following questionnaire set contains five measures for you to complete.

Complete each measure as truthfully as you can to the best of your knowledge, there are no right or wrong answers.

APPENDIX C

DEMOGRAPHICS QUESTIONNAIRE

Demographics Questionnaire

Please answer the following:

1. Age: _____

2. Gender (circle one): Male   Female

3. How would you best classify your race/ethnicity (circle one):
      Caucasian/Non-Hispanic
      Hispanic or Latino
      African American
      Asian American
      Pacific Islander
      Native American/Alaska Native
      Other: _____

   4. Class standing at CSUF (circle one): Freshman Sophomore Junior Senior Graduate

   5. Are you a student-athlete at CSUF (NCAA or SCIC sanctioned club sport): Yes   No

<u>If you responded no to the question above, please continue to the next page.</u>
<u>If you responded yes to the question above, please continue to answer the following:</u>

6. What team do you belong to (circle one)?
      NCAA Baseball   Baseball Club
      NCAA Men's Basketball   Cycling Club
      NCAA Women's Basketball   Ice Hockey Club
      NCAA Men's Soccer   Roller Hockey Club
      NCAA Women's Soccer   Men's Lacrosse Club
      NCAA Men's Golf   Women's Lacrosse Club
      NCAA Women's Golf   Men's Soccer Club
      NCAA Indoor Track and Field   Women's Soccer Club
      NCAA Track and Field   Men's Rugby Club

NCAA Cross Country   Women's Rugby Club
NCAA Volleyball   Men's Volleyball Club
NCAA Tennis   Women's Volleyball Club
Archery Club   Tennis Club
Wushu Club   Ultimate Frisbee Club
Equestrian Club   Other: _____

7. Years on the team: _____

8. Years playing your respective sport competitively: _____

APPENDIX D

COLLECTIVE SELF-ESTEEM SCALE (STUDENT-ATHLETE)

Collective Self-Esteem Scale (STUDENT-ATHLETE)
INSTRUCTIONS: ONLY TAKE THIS VERSION IF YOU IDENTIFIED AS A STUDENT-ATHLETE. We are all members of different social groups or social categories. Some of such social groups or categories pertain to gender, race, religion, nationality, ethnicity, and socioeconomic class. We would like you to consider your membership to your team, and respond to the following statements on the basis of how you feel about that team and your membership in it. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following scale from 1 to 7:

		Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1	I am a worthy member of the team I belong to.	1	2	3	4	5	6	7
2	I often regret that I belong to the team I do.	1	2	3	4	5	6	7
3	Overall, my team is considered good by others.	1	2	3	4	5	6	7
4	Overall, my team has very little to do with how I feel about myself.	1	2	3	4	5	6	7
5	I feel I don't have much to offer to the team I belong to.	1	2	3	4	5	6	7
6	In general, I'm glad to be a member of the team I belong to.	1	2	3	4	5	6	7
7	Most people consider my team, on the average, to be more ineffective than other social groups.	1	2	3	4	5	6	7
8	The team I belong to is an important reflection of who I am.	1	2	3	4	5	6	7
9	I am a cooperative participant in the team I belong to.	1	2	3	4	5	6	7
10	Overall, I often feel that the team of which I am a member is not worthwhile.	1	2	3	4	5	6	7
11	In general, others respect the team that I am a member of.	1	2	3	4	5	6	7
12	The team I belong to is unimportant to my sense of what kind of a person I am.	1	2	3	4	5	6	7
13	I often feel I'm a useless member of my team.	1	2	3	4	5	6	7
14	I feel good about the team I belong to.	1	2	3	4	5	6	7
15	In general, others think that the team I am a member of is unworthy.	1	2	3	4	5	6	7
16	In general, belonging to my team is an important part of my self-image.	1	2	3	4	5	6	7

APPENDIX E

COLLECTIVE SELF-ESTEEM SCALE (NON STUDENT-ATHLETE)

Collective Self-Esteem Scale (NON STUDENT-ATHLETE)
INSTRUCTIONS: ONLY TAKE THIS VERSION IF YOU *DID NOT* IDENTIFY AS A STUDENT-ATHLETE. We are all members of different social groups or social categories. Some of such social groups or categories pertain to gender, race, religion, nationality, ethnicity, and socioeconomic class. We would like you to consider your memberships in those particular groups or categories, and respond to the following statements on the basis of how you feel about those groups and your memberships in them. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following scale from 1 to 7:

		Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1	I am a worthy member of the social group I belong to.	1	2	3	4	5	6	7
2	I often regret that I belong to the social group I do.	1	2	3	4	5	6	7
3	Overall, my social group is considered good by others.	1	2	3	4	5	6	7
4	Overall, my social group has very little to do with how I feel about myself.	1	2	3	4	5	6	7
5	I feel I don't have much to offer to the social group I belong to.	1	2	3	4	5	6	7
6	In general, I'm glad to be a member of the social group I belong to.	1	2	3	4	5	6	7
7	Most people consider my social group, on the average, to be more ineffective than other social groups.	1	2	3	4	5	6	7
8	The social group I belong to is an important reflection of who I am.	1	2	3	4	5	6	7
9	I am a cooperative participant in the social group I belong to.	1	2	3	4	5	6	7
10	Overall, I often feel that the social group of which I am a member is not worthwhile.	1	2	3	4	5	6	7
11	In general, others respect the social group that I am a member of.	1	2	3	4	5	6	7
12	The social group I belong to is unimportant to my sense of what kind of a person I am.	1	2	3	4	5	6	7
13	I often feel I'm a useless member of my social group.	1	2	3	4	5	6	7
14	I feel good about the social group I belong to.	1	2	3	4	5	6	7
15	In general, others think that the social group I am a member of is unworthy.	1	2	3	4	5	6	7
16	In general, belonging to my social group is an important part of my self-image.	1	2	3	4	5	6	7

APPENDIX F

ROSENBERG SELF-ESTEEM SCALE

Rosenberg Self-Esteem Scale

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **1**. If you agree with the statement, circle **2**. If you disagree, circle **3**. If you strongly disagree, circle **4**.

1	On the whole, I am satisfied with myself.	1	2	3	4
2	At times, I think I am no good at all.	1	2	3	4
3	I feel that I have a number of good qualities.	1	2	3	4
4	I am able to do things as well as most other people.	1	2	3	4
5	I feel I do not have much to be proud of.	1	2	3	4
6	I certainly feel useless at times.	1	2	3	4
7	I feel that I'm a person of worth, at least on an equal plane with others.	1	2	3	4
8	I wish I could have more respect for myself.	1	2	3	4
9	All in all, I am inclined to feel that I am a failure.	1	2	3	4
10	I take a positive attitude toward myself.	1	2	3	4

APPENDIX G

CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE – REVISED

Center for Epidemiologic Studies Depression Scale – Revised (CESD-R)

Below is a list of the ways you might have felt or behaved. Please circle how often you have felt this way in the past week or so.

The rating scale is as follows:
1   Not at all or less than one day
2   1-2 days
3   3-4 days
4   5-7 days
5   Nearly every day for 2 weeks

1	My appetite was poor.	1 2 3 4 5
2	I could not shake off the blues.	1 2 3 4 5
3	I had trouble keeping my mind on what I was doing.	1 2 3 4 5
4	I felt depressed.	1 2 3 4 5
5	My sleep was restless.	1 2 3 4 5
6	I felt sad.	1 2 3 4 5
7	I could not get going.	1 2 3 4 5
8	Nothing made me happy.	1 2 3 4 5
9	I felt like a bad person.	1 2 3 4 5
10	I lost interest in my usual activities.	1 2 3 4 5
11	I slept much more than usual.	1 2 3 4 5
12	I felt like I was moving too slowly	1 2 3 4 5
13	I felt fidgety.	1 2 3 4 5
14	I wished I were dead.	1 2 3 4 5
15	I wanted to hurt myself.	1 2 3 4 5
16	I was tired all the time.	1 2 3 4 5
17	I did not like myself.	1 2 3 4 5
18	I lost a lot of weight without trying to.	1 2 3 4 5
19	I had a lot of trouble getting to sleep.	1 2 3 4 5
20	I could not focus on the important things.	1 2 3 4 5

APPENDIX H

PARTICIPANT DEBRIEFING

Participant Debriefing

Thank you for participating in this research study. The general purpose of this research is to better understand depression and the role mediating factors play (such as collective self-esteem and personal self-esteem). In the study, we also assessed what role being a student-athlete or student non-athlete may play in terms of self-esteem levels. Additionally, we are interested in whether such self-esteem levels affect feelings of depression and anxiety.

Sometimes people will experience some transient negative mood as a result of reading negative statements or reflecting upon feelings and states they may have experienced in the past week or weeks. Please let the researcher know if you are feeling very distressed.

If you have any questions or concerns about the study, please feel free to contact Ryan Cruz at (951) 202-9050. If you would like to obtain a copy of the group results of the study, please contact Ryan Cruz after May 2015. If you wish to seek any psychological counselling services please feel free to contact CSUF's Student Health and Counseling Center at (657) 278-3040.

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