

Diversity Attitude Associations in Pre-service Physical Education Teachers

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Abstract The purpose of the present study was to investigate whether weight-related attitudes mediate the effect of goal orientation on cultural pluralism and diversity attitudes among pre-service physical educators. Results from 235 (Mage = 20.91 years, SD = 7.75) participants confirm the positive relationship between task orientation and attitudes toward cultural pluralism and diversity attitudes (valuing, appreciating, and implementing), and that individuals who possess negative character stereotypes mediated this relationship. In addition, the positive relationship between ego orientation and being uncomfortable with diversity was confirmed, along with the mediation of negative character stereotypes within this relationship. The results provide initial evidence for factors associated with diversity attitudes that should be addressed in physical education teacher education programs. As research in this area moves forward, it is important to develop and test evidence-based educational interventions in order to improve diversity attitudes and ultimately teacher effectiveness.

Keywords: *goal orientations, obesity bias, pedagogy, diversity, physical education*

1. Introduction

Given the increase of cultural and ethnic diversity in the classroom, teacher educators are presented with the challenge of preparing pre-service teachers to positively interact with K-12 students who vary in terms of culture and ethnicities (Burden, Hodge, & Harrison, 2012). One concern is that many pre-service teachers enter physical education teacher education (PETE) programs having limited exposure to students who are different than themselves (Burden, Hodge, O'Bryant, & Harrison, 2004). Whether they are aware of their beliefs and values, they belong to social and cultural communities that form personal, social and cultural identities as well as their attitudes, beliefs, and values. These beliefs and attitudes, in turn, influence the interactions and pedagogies that teachers choose to incorporate (Graybill, 1997).

Diversity in the physical education (PE) classroom, however, goes beyond ethnic and cultural differences. Pre-service teachers are being required to plan lessons that differentiate and individualize instruction for K-12 students that vary in physical abilities, body shapes and sizes, and preferences for different physical activities. If the goal of PE is to promote physical activity engagement that results in healthy active lifestyles for all students, it is

important that teachers understand the ecologies of their students, value students' individual differences, and enact relevant pedagogies to create an inclusive environment where all students feel comfortable to learn, regardless of their individual differences (Timken & Watson, 2010).

The majority of PE research studies that have addressed issues of diversity or individual differences have done so with a fairly narrow and singular focus, such as examining race/ethnicity or weight classification (e.g., Burden, Hodge, & Harrison, 2015). Perception of overweight is often associated with negative judgments or endorsement of negative stereotypes (e.g., lazy or self-indulgent) (Greenleaf, Martin, & Rhea, 2008). Moreover, previous research has not associated attitudes toward cultural pluralism and diversity with achievement goals. Achievement goals are important to consider, as PE classrooms are achievement settings, and one's competence-relevant aims and motives can create qualitatively different teacher thoughts, emotions, and teaching behaviors (Butler & Shibaz, 2008). Pre-service teachers' orientation to either develop or demonstrate teaching competence has been associated with students' reports of positive teaching approaches (Retelsdorf, Butler, Streblov, & Schiefele, 2010; Shim, Cho, & Cassady, 2013), and may be associated with valuing and appreciating cultural diversity. Research on teacher motivation has primarily focused on achievement goals as

outcomes (e.g., De Jesus & Lens, 2005), and not necessarily as predictors of other attitudes. Achievement goal theory could provide a useful framework for understanding these associations. In the present paper, we take a look at diversity attitude and cultural pluralism associations in pre-service PE teachers.

There are limited studies that consider multiple aspects of diversity and interrelationships among beliefs that are associated with enacted inclusion (i.e., teaching practices that are fair and provide equitable access for all students to learn and be physically active). It is likely that these beliefs are inter-related and influence each other. PETE programs have an increasing number of requirements for accreditation and state and federal mandates as to what to teach (National Association of Sport and Physical Education, 2008), and as a result need to prioritize instructional time within PETE programs to address the hidden curriculum (Walton-Fisette et al., 2018). The hidden curriculum is the beliefs, attitudes, and values that are communicated unintentionally and unconsciously during schooling (Ronholt, 2002). It is important that PETE program instruction is transformative because of the role beliefs can play in filtering “inconsistent” information during pre-service teaching experience (Pajares, 1992). Unchallenged or latent beliefs resurface once pre-service teachers enter the k-12 classroom, and thus, there is tendency for in-service teachers to revert back to entry dispositions and “teach how they were taught”, especially when work conditions are difficult (Richards, Templin, & Graber, 2014). The current study is a first step toward understanding the interrelationships among beliefs that may be associated with attitudes toward cultural pluralism and diversity.

Pre-service teachers often enter PETE programs with an athletic background having spent many hours practicing on sport teams and engaging in highly competitive arenas, and their love of sports is a main socializing factor for entering the PE teaching profession (Curtner-Smith et al., 2008; Richards et al., 2014). Often the goal of competitive sports is to achieve or display high ability in practice and game contexts. Athletes develop goal orientations, or ways to view competence, which are viewed in two different perspectives: task orientation and ego orientation (Duda 1989; Duda & Nicholls, 1989). Individuals with task orientation are self-referenced, and are oriented to self-improvement and mastery. They feel successful when they exert effort and it increases their performance or understanding. Goal orientation is associated with particular beliefs of the purpose of sport and education. Being task oriented is related to the belief that education and sport provide opportunities for mastery and personal growth, personal and social responsibility, and to adopt and maintain a healthy lifestyle (Duda, 1989; Duda & Nicholls, 1989). On the other hand, ego oriented individuals are other-referenced, they seek to display superior ability and avoid performance that would show their inferior ability. Mastery alone does not imply high competence, either one must be more successful with equal effort, or use less effort for similar success. In terms

of the purposes of participation, ego orientated individuals believe sport and education provide opportunities for personal gains, such as increasing social status, wealth and superiority over others that comes from superior performance relative to others (Duda, 1989; Duda & Nicholls, 1992). Since the inception of achievement goal theory, other researchers have further explored motivational constructs related to the task-ego distinction. Elliot & McGregor (2001) theorized that adding the component of approach (approaching success) and avoidance (avoiding failure) would significantly provide a greater prediction on ones’ motivation. These two dimensions provide four distinctly different reasons for engaging in PE content. However, in terms of the present study, the approach and avoidance distinction to either approach success or avoid failure was not explored because the focus on the study is the mediation of the achievement goal and diversity attitudes with weight-related attitudes. There was not a clear connection between the approach success or avoid failure in the literature and weight-related attitudes. Therefore, inclusion of these constructs unnecessarily complicates the mediational analysis.

Exploring bias more specifically, PE teachers’ can be closed-mind about students that are overweight and obese and may compare them to idealized body shape and size as promoted by the media (Peters & Jones, 2010). PE pre-service and in-service teachers frequently endorse negative beliefs and assumptions about overweight and obese individuals (e.g., Fontana, Furtado, Marston, Mazzardo., & Gallagher, 2013). Many different stereotypes are associated with being overweight or obese, such as lack of personal control, attractiveness, athletic abilities, and character flaws (Author, 2008). Evidence exists that PETE programs could exacerbate the problem. O’Brien, Hunter, and Banks (2007), for example, found that PE pre-service teachers later in the program had greater biases than measured in their first year, and these biases were greater than psychology majors. Of particular concern are teachers’ stereotypes that overweight students lack athletic, cognitive, and social abilities compared to normal weight students (Author, 2005). These biases may be self-fulfilled in the gym and serve as a barrier and impede learning of a healthy active lifestyle among students who are overweight and obesity (Cardinal, Whitney, Narimatsu, Hubert, & Souza, 2014). PE teachers’ perspectives of body shapes and size may be associated with the presence of diversity beliefs, as body shape and size is an individual difference factor.

Pre-service PE teachers are often required to teach students that are culturally different than themselves (Burden et al., 2004). Culture develops locally in a particular situation, such as in a school or community as students, teachers, and administrators interact with each other. Many different variables can define culture, such as social economic status, race, language, family structure, and religion (Flory & McCaughtry, 2011; Graybill, 1997). Cultural competency requires that PE teachers have the knowledge and skill required to appreciate and value

cultural diversity, and subsequently consider diverse individual needs in their pedagogies (Stanley, 1996, 1997). After reviewing different frameworks concerning the role of culture in education, Flory and McCaughtry (2011) proposed that for teachers to teach with cultural competency they need to understand the cultural dynamics of the situation, make connection between the cultural dynamics and education, and enact inclusive pedagogies reflective of that knowledge. Teachers that are able to meet these three requirements are able to create quality learning environments in which students are highly engaged.

Although PE teachers value diversity, teachers often struggle to implement culturally responsive pedagogies (Columa et al., 2010; Stanley, 1997). PE teachers may not understand community dynamics or culture in general, consequently expressing shock and disbelief when they encounter a diverse student population (Flory & McCaughtry, 2011). Or, pre-service teachers may not understand the culture of immigrants who hold onto their culture from other geographic areas. It may also be the case that PE teachers understand cultural dynamics, but do little to connect their knowledge to education and fail to implement culturally relevant pedagogy (Flory & McCaughtry, 2011). One reason is that teachers may be uncomfortable with cultural diversity (Stanley, 1997) because they have not understood their own culture and cultural biases. In these situations, PE teachers will teach what they are comfortable with; often times, that includes team sports or athletic activities they participated in as student athletes (Burden et al., 2004). Additionally, teachers may develop differential expectations as a result of their biases and ultimately may treat their students in ways that stifle learning or engagement in physical activity (Mavi & Sharpe, 2000). Given the potential for exclusion of diverse students in physical activity, it is important to think about the mindset of pre-service teachers.

It is likely that preservice teachers' goal orientation is related to cultural pluralism and diversity attitudes and the willingness to implement culturally relevant pedagogies. Recent investigation of general education pre-service teachers' attitudes concerning cultural diversity revealed associations with achievement motivational beliefs (Kumar & Hamer, 2013; Kumar et al., 2015). Kumar et al. (2015) found valuing diversity (e.g., promoting mutual respect among students, feeling responsible for engaging in culturally responsive teaching) mediated the relationship between endorsement of implicit negative stereotypes toward diversity and the inclination to promote task-oriented goals in the classroom. In qualitative interviews with PE pre-service teachers, Todorovich (2006) found that task-oriented individuals had an inclusive mindset and endorsed teaching approaches focused on all students achieving at their own ability levels. These teachers were focused on all individuals, not social comparisons. On the other hand, ego-oriented teachers had a more exclusive mindset and an undifferentiated view of ability. These teachers focused

on high ability students and reported that low ability students can benefit from PE, but need to be protected from harm (Todorovich, 2009). Although qualitative research is not generalizable, it is reasonable to expect that ego-oriented teachers would be uncomfortable with diverse students and less inclined to incorporate inclusive pedagogies. In addition, it is possible that they would endorse stereotypes related to those who have shapes and sizes different than the norm due to their inclination for social comparison and preference for high abilities. To date, research has not addressed this potential association. Yet, it seems logical to expect that because of the pervasive nature of weight-related stereotypes and expectancies that goal orientation could play a role in pre-service teachers' attitudes toward diversity and beliefs about obesity.

Given this information, the purpose of the present study was to investigate whether weight-related attitudes mediate the influence of goal orientation on cultural diversity attitudes among pre-service physical educators. We tested a parsimonious model of mediation. We predicted that obesity bias constructs would mediate the relationship of task orientation on cultural pluralism and diversity attitudes; and, the relationship of ego orientation on cultural pluralism and diversity attitudes.

2. Method

2.1. Participant

Two hundred and thirty-five pre-service teachers (49.4% males, 50.6% females) participated in the study. Mean age for the sample was 20.21 years ($SD = 7.75$). Race and ethnicity of participants was 87.9% White, 3.2% Black, 5.5% Hispanic, 1.4% Asian, and 1.7% Other. The majority of pre-service teachers were junior or senior level students (68.2%) that came from six universities from a variety of regions across the United States (Southeast, Northeast, Southern, Midwest, and two from the Mountain West). Also, pre-service teachers indicated that they had extensive sport and physical activity experience: recreational activity (87.7%), recreational sport team (87.6%), high school varsity (91.4%), college intramural (65.8%), and college varsity sport (48.9%).

2.2. Measures

Your paper must use a page size corresponding to A4 which is 210mm wide and 297mm long. The margins are set as follows: top= 15 mm, bottom= 15 mm, right=17.5 mm, left = 20 mm. Your paper must be in two column format with a space of 1.93 characters between columns.

2.2.1. Demographics questionnaire

Demographic questions included self-reported age, gender, race/ethnicity, weight, height, and previous sport participation (recreation activities, recreational sport team, varsity high school sport team, university intramural sport

team, university varsity sport team). Pre-service participants reported their current year in school.

2.2.2. Goal orientation

Participants' goal orientation was assessed using the Task and Ego Sport Questionnaire (Walling & Duda, 1995), which includes a total of 16 items. The stem of the questions for each item was "I feel really successful in physical education or movement skill instruction when...". Eight items assess ego orientation or goals that focused on social comparison and competing with others (e.g., ...I beat the others) and eight items assess task orientation, which are goals that focused on personal improvement and effort (e.g., ...I learn a skill by trying hard). The goal orientation questionnaire did not include approach/avoidance distinction because the theory goes beyond the theoretical connections in the model and does not fit the study's purpose or research questions. The questions were rated on a scale from 1 (strongly disagree) to 5 (strongly agree). Scores are summed for each of the subscales. Cronbach alphas for the current study were .90 (task orientation) and .94 (ego orientation).

2.2.3. Anti-fat attitudes

The 34-item Anti-Fat Attitudes Test (AFAT) (Lewis et al. 1997) was used to measure attitudes toward overweight and obese individuals and includes three subscales: weight control/blame (9 items; e.g., "If bad things happen to fat people, they deserve it"), social/character disparagement (15 items; e.g., "Most fat people don't keep their surroundings neat and clean"), and physical/romantic unattractiveness (10 items; e.g., "It's hard not to stare at fat people because they are so unattractive"). Participants report their agreement with each item on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach alphas for the current study were .90, .82, and .82, respectively.

2.2.4. Diversity attitudes

The Pluralism and Diversity Attitude Assessment (PADAA; Stanley, 1996) was administered to assess the participants' attitudes toward multi-cultural education. It contains 19 questions rated on a 6-point scale from 1 (strongly disagree) to 6 (strongly agree). There are four subscales: 1) Appreciate Cultural Pluralism (5 items; e.g., "Each student should have an equal opportunity to learn and succeed in education"), 2) Value Cultural Pluralism (5 items; e.g., "Each minority culture has something positive to contribute to American society"), 3) Implement Cultural Pluralism (5 items; e.g., "Education activities should be representative of a wide variety of cultures"), 4) Uncomfortable with Diversity (4 items; e.g., "I am uncomfortable around students whose ethnic heritage is different from my own"). Cronbach alphas for the current study were .67, .78, .81, and .71 respectively.

2.3. Procedure

Research protocol was approved by Institutional Review Boards (IRB) (Adelphi University Institutional Review Board, Georgia State University Institutional Review Board, and University of Wisconsin-Whitewater Institutional Review Board). Informed consent was obtained for pre-service teachers prior to filling out questionnaires and was in accordance with declaration of Helsinki. Surveys were administered using two different methods due to situational constraints. In two of the universities, informed written consent was obtained, and then pre-service teachers' filled out a hard copy questionnaire. In the other universities, where computers were available, the questionnaires were administered online through a web-based questionnaire service (SurveyMonkey). On the first webpage was the consent form. If participants agreed to participate, they clicked the "yes" button and then filled out the questionnaire. All participants had an incentive that if they participated in the study they would be entered into a raffle to win one of four Polar Heart Rate monitors worth approximately \$100. Participants were reassured that their participation was voluntary and was not tied to their grades. Choice to enter their name was kept separate from their data. In both hard copy and electronic methods, the order of the surveys was counterbalanced (four different orders).

2.4. Data Analysis

Descriptive statistics and scale reliabilities were analyzed using SPSS v. 21. Data were also screened for normality. Pearson correlations were run to determine potential relationships between goal orientation, obesity bias, and cultural pluralism and diversity. Using the PROCESS module in SPSS (Hayes, 2012), initial regression models and parallel mediation models were investigated. The purpose of a mediation model is to investigate the influence of a third variable (i.e., mediator) on the relationship between the independent and dependent variable. The mediator explains the reason for how or why the relationship exists. Mediation is conceptually different from a moderation investigation, which assesses the capacity of a third variable to weaken or strengthen the relationship between variables.

3. Results

3.1. Descriptive Statistics and Scale Reliability

Means, standard deviations, and scale reliability are reported in Table 1. Of note, participants had high levels of task orientation and moderate levels of ego orientation. In addition, obesity bias measures were moderate, except for character disparagement, which was low. Participants had high subscale scores for valuing, appreciating, and willingness to implement cultural pluralism, in addition to moderate to low subscales scores toward being uncomfortable with diversity. Some notable associations in the correlation matrix were the significant positive associations among the diversity measures; valuing,

appreciating, and willingness to implement cultural pluralism, and the negative individual association with uncomfortable with diversity (see Table 2). In addition, there were positive correlations between ego orientation and the obesity bias subscales of social/character disparagement, physical/romantic unattractiveness, and weight control blame.

Table 1. Means, Standard Deviations, and Scale Reliabilities for Variables Placed in the Model

Variable	M	SD	Cronbach's alpha
Task Orientation	4.46	.47	.90
Ego Orientation	3.49	1.07	.94
Social/character disparagement	1.92	.60	.82
Physical/romantic unattractiveness	2.74	.67	.82
Weight control/blame	2.82	.67	.90
Appreciate Diversity	5.66	.59	.67
Value Diversity	5.10	.74	.78
Implement Diversity	4.79	.86	.81
Uncomfortable with Diversity	2.22	1.15	.71

3.2. Mediation Models

In considering significant correlations between goal orientation, obesity bias, and cultural pluralism and diversity, several mediation models were run. The first set of models considered the mediation of character disparagement and weight control blame between task orientation and the cultural pluralism and diversity measures. The second set considered the mediation of character disparagement, romantic ideals, and weight control blame between ego orientation and the cultural pluralism and diversity measures.

For valuing cultural pluralism, the regression analysis revealed that task orientation was a significant predictor, $F(1, 233) = 12.55, p < .001, R^2 = .05$. Based on the mediation analysis, character disparagement ($\beta = -.36, t(231) = -3.46, p < .001$) was a significant mediator between task orientation and valuing cultural pluralism, $F(3, 231) = 14.52, p < .001$. Although there was a relationship between task orientation, weight control blame, and valuing cultural pluralism, weight control blame ($\beta = -.06, t(231) = -.63, p = .53$) was not a significant mediator. In total, the model tested accounted for 16% of the variance in valuing cultural pluralism.

For appreciating cultural pluralism, the regression analysis revealed that task orientation was a significant

predictor, $F(1, 233) = 38.55, p < .001$. Based on the mediation analysis, character disparagement ($\beta = -.33, t(231) = -3.94, p < .001$, was a significant mediator between task orientation and appreciating cultural pluralism, $F(3, 231) = 20.87, p < .001$. Although there was a relationship between task orientation, weight control blame, and appreciating cultural pluralism, weight control blame ($\beta = .07, t(231) = 1.04, p = .30$) was not a significant mediator. In total, the model tested accounted for 21% of the variance in appreciating cultural pluralism.

For implementing cultural pluralism, the regression analysis revealed that task orientation was a significant predictor, $F(1, 233) = 8.57, p < .01$. In addition, task orientation predicted character disparagement and weight control blame. However, based on the mediation analysis, neither character disparagement ($\beta = -.23, t(231) = -1.82, p = .07$) nor weight control blame ($\beta = -.06, t(231) = -.50, p = .62$) was a significant mediator between task orientation and implementing cultural pluralism. In total, the model tested accounted for 4% of the variance in implementing cultural pluralism.

For being uncomfortable with diversity, the regression analysis revealed that task orientation was a significant predictor of being uncomfortable with diversity, $F(1, 233) = 4.43, p = .04$. Based on the mediation analysis, character disparagement ($\beta = .61, t(231) = 3.67, p < .001$) was a significant mediator between task orientation and being uncomfortable with diversity, $F(3, 231) = 10.73, p < .001$. Although there was a relationship between task orientation, weight control blame, and being uncomfortable with diversity, weight control blame was not a significant mediator ($\beta = .02, t(231) = .15, p = .88$). In total, the model tested accounted for 12% of the variance in being uncomfortable with diversity.

The regression analysis revealed that ego orientation was a significant predictor of valuing cultural pluralism, $F(1, 233) = 12.21, p < .001$. Based on the mediation analysis, character disparagement ($\beta = -.38, t(230) = -3.29, p < .001$) was a significant mediator between ego orientation and valuing cultural pluralism, $F(4, 230) = 10.64, p < .001$. Although there was a relationship between ego orientation, romantic ideals, weight control blame, and valuing cultural pluralism, romantic ideals ($\beta = -.01, t(230) = .12, p = .90$) and weight control blame ($\beta = -.02, t(230) = -.18, p = .86$) were not significant mediators.

Table 2. Correlations between Goal Orientation, Obesity Bias, and Cultural Pluralism and Diversity

	1	2	3	4	5	6	7	8	9
1. Task Orientation	-								
2. Ego Orientation	.09	-							
3. Social/character disparagement	-.23**	.23**	-						
4. Physical/romantic unattractiveness	-.06	.32**	.73**	-					
5. Weight control/blame	-.17**	.29**	.70**	.72**	-				
6. Value Diversity	.23**	-.22**	-.37**	-.30**	-.29**	-			
7. Uncomfortable with Diversity	-.14*	.17**	.34**	.22**	.25**	-.21**	-		
8. Appreciate Diversity	.38**	-.05	-.34**	-.19**	-.20**	.61**	-.29**	-	
9. Implement Diversity	.19**	-.23**	-.23**	-.26**	-.18**	.69**	-.28**	.41**	-

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

In total, the model tested accounted for 16% of the variance in valuing cultural pluralism.

The regression analysis revealed that ego orientation was not a significant predictor of appreciating cultural pluralism, $F(1, 233) = .61, p = .44$. Therefore, a mediation analysis was not conducted.

The regression analysis revealed that ego orientation was a significant predictor of implementing cultural pluralism, $F(1, 233) = 12.87, p < .001$. In addition, ego orientation predicted character disparagement, romantic ideals, and weight control blame. Based on the mediation analysis, neither character disparagement ($\beta = -.15, t(230) = -1.08, p = .28$) nor romantic ideals (β (romantic) = $-.23, t(230) = -1.70, p = .09$) were significant mediators between ego orientation and implementing cultural pluralism. Weight control blame ($\beta = .08, t(230) = .65, p = .01$) was a significant mediator, $F(4, 230) = 6.12, p < .001$. In total, the model tested accounted for 9% of the variance in implementing cultural pluralism.

Finally, the regression analysis revealed that ego orientation was a significant predictor of being uncomfortable with diversity, $F(1, 233) = 6.75, p = .01$. Based on the mediation analysis, character disparagement ($\beta = .72, t(230) = 3.93, p = .01$) was a significant mediator between ego orientation and being uncomfortable with diversity, $F(4, 230) = 8.77, p < .001$. Although there was a relationship between ego orientation, romantic ideals, weight control blame, and being uncomfortable with diversity, romantic ideals ($\beta = -.21, t(230) = -1.19, p = .24$) and weight control blame ($\beta = .06, t(230) = .36, p = .72$) were not significant mediators. In total, the model tested accounted for 13% of the variance in being uncomfortable with diversity.

In sum, there was a significant relationship between task orientation and attitudes toward cultural pluralism and diversity attitudes (valuing, appreciating, and implementing), which can be accounted for by pre-service teachers' possession of negative character stereotypes. Also, the positive relationship between ego orientation and being uncomfortable with diversity was significant, and negative character stereotypes held by the pre-service teachers explains this relationship.

4. Discussion

Pre-service teachers enter PETE programs having been exposed to the hidden curriculum (Roholt, 2002), socialized from elite sport (Curtner-Smith et al., 2008), and have had limited exposure to classrooms with diverse cultures (Burden et al., 2004). As a result, PE pre-service teachers may possess a host of exclusive attitudes and societal beliefs that may be consistent with the preference for students with higher abilities or that share a similar culture as them. Given that PETE programs need to be more effective in preparing teachers to plan and implement instruction with diverse student cultures and individual differences, it is important to understand how these attitudes and beliefs are inter-related. The present

study investigated whether weight-related attitudes mediate the influence of goal orientation on cultural pluralism and diversity attitudes among pre-service physical educators.

Consistent with our predictions, our study confirms that task orientation is directly associated with attitudes toward cultural pluralism and diversity. This finding is consistent with Todorovich (2006) who found that task-oriented pre-service PE teachers were open-minded; they believed that all lessons should be inclusive and that all students are capable of success. Task orientation implies that one is focused on individuals and individual improvement, versus social comparison. Also, the hypothesized associations between PE pre-service teachers who valued diversity and appreciate cultural pluralism and willingness to implement cultural pluralism were supported. Our data was consistent with studies on pre-service PE teachers cultural and diversity attitudes. Those who valued, appreciated and had a willingness to implement cultural pluralism and diversity were not uncomfortable with diversity (Columna, Foley, & Lytle, 2010; Stanley, 1997). Given the amount of cultural diversity that exists, it is more important than ever to employ inclusive pedagogies so that all learners are treated fairly and have equitable access to knowledge and physical activity experiences so that they can learn how to live a healthy active lifestyle.

The main focus of the study was on the mediation of weight-related attitude in the relationship between goal orientation and cultural pluralism and diversity. Character disparagement, which represents a group of stereotypes related to negative character traits of overweight and obese people, significantly mediated the relationships of task orientation and appreciating diversity, task orientation and valuing diversity, and task orientation and willingness to implement cultural pluralism, but not the relationship with uncomfortable with cultural diversity. In other words, pre-service teachers with a higher orientation toward individual improvement and task mastery were less likely to endorse obese persons' negative character traits, which ultimately influenced their attitudes toward cultural pluralism and diversity. Todorovich (2006) found that task oriented individuals believed that lessons should be inclusive regardless of skill and abilities and all are capable of success.

On the other hand, ego orientation was a significant predictor of valuing, willingness to implement cultural pluralism and being uncomfortable with cultural pluralism, but not appreciating cultural pluralism. Stanley (1997) found that pre-service teachers interested in coaching were more uncomfortable with diversity than those more interested in teaching. Further, Todorovich (2009) found that ego oriented PE pre-service teachers' focus was on high ability students and using PE to identify and recruit athletes for athletics. It makes sense that pre-service PE teachers would be uncomfortable with diversity because their main focus is with high ability. Identifying high ability involves social comparison. Kumar and Hamer (2013) in a study of general education pre-service teachers found that those who had endorsed

performance-related (i.e., ego oriented) pedagogical practices were likely to be uncomfortable with diversity. They recommended that these students would need additional support to engage in self-reflection exercises, which would bring consciousness to unconscious beliefs and help pre-service teachers to acknowledge and understand their personal biases. This would also include helping pre-service teachers develop a “multicultural professional identity” so that they continually reflect on their beliefs and attitudes and work to enact inclusive pedagogies. For PETE students, teacher educators should provide opportunities early in their program for self-reflection on their own physical activity and sport involvement, as well as the intersection of the sociocultural experiences that have shaped their worldview. Such reflections could allow PETE students to develop more complex understandings of their own histories as well as a more culturally responsive approach to working with diverse students.

Ego orientation and cultural pluralism and diversity attitudes were influenced by obesity bias. Weight control blame, or the endorsement that overweight and obese people should have personal control over their eating and exercise patterns, was a significant mediator between ego orientation and willingness to implement cultural pluralism. In elite sports, coaches hold their athletes accountable for their performance through making performance public and comparing with other performers. It is likely that viewing success as defined through social comparison coincides with beliefs regarding weight control responsibility. Also, character disparagement was a significant mediator between ego orientation and valuing cultural pluralism and between ego orientation and being uncomfortable with diversity. In other words, pre-service teachers with a higher orientation toward demonstration of their ability (i.e., social comparison) were more likely to endorse obese persons’ negative character traits, which ultimately influenced their attitudes toward cultural pluralism and diversity. This supports the contention that negative attitudes toward one type of human variation, such as body types, can have negative influence on other attitudes, in this case, affinity toward cultural pluralism.

This study has a number of strengths and weaknesses. The study consisted of preservice teachers from around the United States. Thus, the external validity is higher than if the study had teachers from only one geographical area. Second, this is the first study exploring the relationship among attitudes and beliefs among different concepts related to inclusion of different individual differences in PE. It is important to understand how these beliefs and attitudes are associated with each other so that teacher educators can create programs where pre-service teachers can become conscious of their implicit beliefs and values and learn to individualize and differentiate instruction and create social climates so all feel comfortable learning about their bodies and being physically active. A weakness is that this study only considered explicit measures of obesity bias, so future research will need to identify and explore relationships with implicit biases as

well. Second, the authors did not include behavioral measures. Research points to knowing how these beliefs and attitudes are manifested in teaching children and if discrimination appears. Third, the pre-service teachers in this study were primarily white, thus the relationships may change in a more racially diverse teacher population. Last, caution is needed in interpreting any mediation results. Mediation studies are not conclusive unless imperatives exist, such as criterion validity of the measures and reliability across other studies.

Given the results, PETE programs should focus on providing quality experiences in planning and implementing teaching with diverse students from different cultures. Traditionally geographic areas of the United States, Canada, and Australia have been struggling with issues of cultural diversity for some time, and now teachers from other areas of the world, such as the European Union, have been dealing with migration of immigrants and valuing and appreciating diverse cultures (e.g., Santoro & Forghani-Arani, 2015). Pre-service teachers will likely value pluralism, but many researchers discuss how pre-service teachers engage in studentship, or selecting the things they feel are important and ignoring the rest (Richards et al., 2014). Thus, experiences will require them to critically reflect and be able to discuss their prior beliefs and attitudes. As part of that reflection, focus should be on how social comparison or ego orientation can be motivating, but it may not be appropriate in PE when there are many diverse individuals and the need for personal improvement and healthy behaviors should be favored over athletic ability.

Also, PETE programs should consider educating pre-service teachers on how to implement teaching strategies to create a mastery-motivated climate (i.e., consistent with task-oriented goals). Harwood, Keegan, Smith, & Raine (2015), in a recent meta-analysis of psychological, sport and PE studies, indicated that creation of a mastery motivated climate is positively associated with several adaptive motivational outcomes (e.g., self-confidence, positive affect, moral attitudes). Moreover, PE research demonstrates the benefit of using teaching strategies to create a mastery-motivated climate (e.g., TARGET strategies) for successful inclusion, as demonstrated in providing inclusion for special-need students (Valentini & Rudisill, 2004), overweight and obese individuals (Griffin, Meaney & Hart, 2013), and students from multiple ethnic groups (Kouli & Papaioannou, 2009). Rukavina, Doolittle, Li, Manson, and Beale (2015) found that experienced teachers who were committed to effective teaching of overweight and obese students used instructional strategies consistent with a mastery climate to include overweight and obese in PE. Strategy use was more likely when teachers had inclusive beliefs (i.e., belief that all students can learn), teacher self-efficacy and work ethic, and favorable situational factors.

References

- Burden Jr., J. W., Hodge, S. R., & Harrison Jr., L. (2012). Teacher educators' views about social justice pedagogies in physical education teacher education. *Journal of Curriculum and Teaching, 1*, 6-21, 2012.
- Burden Jr., J. W., Hodge, S. R., & Harrison Jr., L. (2015). Physical education undergraduate students' colorblind racial ideology and multicultural teaching competence. *Multicultural Learning and Teaching, 10*, 55-75.
- Butler, R., & Shibaz, L. (2008). Achievement goals for teaching as predictors of students' perceptions of instructional practices and students help seeking and cheating. *Learning and Instruction, 18*, 453-467.
- Cardinal, B. J., Whitney, A. R., Narimatsu, M., Hubert, N., & Souza, B. J. (2014). Obesity bias in the gym: An under-recognized social justice, diversity, and inclusivity issue. *Journal of Physical Education, Recreation and Dance, 85*(6), 3-6.
- Columna, L., Foley, J. T., & Lytle, R. K. (2010). Physical education teachers' and teacher candidates' attitudes toward cultural pluralism. *Journal of Teaching in Physical Education, 29*, 295-311.
- Curtner-Smith, M., Hastie, P., & Kinchin, G. D. (2008). Influence of occupational socialization on beginning teachers' interpretation and delivery of sport education. *Sport, Education and Society, 13*, 97-117.
- De Jesus, S. N., & Lens, W. (2005). An integrated model for the study of teacher motivation. *Applied Psychology: An International Review, 54*, 119-134.
- Duda, J. L. (1989). Relationship between task and ego orientation and the perceived purpose of sport among high school athletes. *Journal of Sport and Exercise Psychology, 11*, 318-335.
- Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology, 84*, 290-299.
- Elliot, A. J., & McGregor, H. A. (2001). A 2x2 achievement goal framework. *Journal of Personality and Social Psychology, 80*, 501-519.
- Flory, S. B., & McCaughy, N. (2011). Culturally relevant physical education in urban schools: Reflecting cultural knowledge. *Research Quarterly for Exercise and Sport, 82*, 49-60.
- Fontana, F. E., Furtado, O., Marston, R., Mazzardo, O., & Gallagher, J. (2013). Anti-fat bias among physical education teachers and majors. *The Physical Educator, 70*, 15-31.
- Graybill, S. W. (1997). Questions of race and culture: How they relate to the classroom for African American students. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 70*, 311-318.
- Greenleaf, C., Martin, S. B., & Rhea, D. (2008). Fighting fat: how do fat stereotypes influence beliefs about physical education? *Obesity, 16*, 53-59.
- Griffin, K., Meaney, K., & Hart, M. (2013). The Impact of a mastery motivational climate on obese and overweight children's commitment to and enjoyment of physical activity: A pilot study. *American Journal of Health Education, 44*, 1-8.
- Harwood, C. G., Keegan, R. J., Smith, J. M., & Raine, A. S. (2015). A systematic review of the intrapersonal correlates of motivational climate perceptions in sport and physical activity. *Psychology of Sport and Exercise, 18*, 9-25.
- Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling. Retrieved from <http://www.afhayes.com/public/process2012.pdf>
- Kouli, O., & Papaioannou, A. G. (2009). Ethnic/cultural identity salience, achievement goals and motivational climate in multicultural physical education classes. *Psychology of Sport and Exercise, 10*, 45-51.
- Kumar, R., & Hamer, L. (2013). Preservice teachers' attitudes toward student diversity and proposed instructional practices: A sequential design study. *Journal of Teacher Education, 64*, 162-167.
- Kumar, R., Karabenick, S. A., & Burgoon, J. N. (2015). Teachers' implicit attitudes, explicit beliefs, and the mediating role of respect and cultural responsibility on mastery and performance-focused instructional practices. *Journal of Educational Psychology, 107*, 533-545.
- Lewis, R. J., Cash, T. F., Jacobi, L., & Bubb-Lewis, C. (1997). Prejudice toward fat people: The development and validation of the Anti-fat attitudes test. *Obesity Research, 5*, 297-307.
- Mavi, F., & Sharpe, T. (2000). Reviewing the literature on teacher and coach expectations with implications for future research and practice. *Physical Educator, 57*, 161-164.
- National Association for Sport and Physical Education. (2008). *National initial physical education teacher education standards*. Retrieved from <http://www.ncate.org/LinkClick.aspx?fileticket=9jpRd%2B5aH84%3D&tabid=676>
- O'Brien, K. S., Hunter, J. A., & Banks, M. (2007). Implicit anti-fat bias in physical educators: physical attributes, ideology and socialization. *International Journal of Obesity, 31*, 308-314.
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*, 307-332.
- Peters, D. M., & Jones, R. J. A. (2010). Future sport, exercise, and physical education professionals' perceptions of physical self of obese children. *Kinesiology, 42*, 36-43.
- Retelsdorf, J., Butler, R., Streblov, L., & Schiefele, U. (2010). Teachers' goal orientations for teaching: Associations with instructional practices, interest in teaching, and burnout. *Learning and Instruction, 20*, 30-46.
- Richards, K. A. R., Templin, T. J., & Graber, K. (2014). The socialization of teachers into teacher education: Review and recommendations for future works. *Kinesiology Review, 3*, 113-134.
- Rønholdt, H. (2002). 'It's only the sissies...': Analysis of teaching and learning processes in physical education: A contribution to the hidden curriculum. *Sport, Education and Society, 7*(1), 25-36.
- Rukavina, P. B., Doolittle, S., Li, W., Manson, M., & Beale, A. (2015). Middle school teachers' strategies for including overweight and obese students in skill and fitness instruction. *Journal of Teaching in Physical Education, 34*, 93-118.
- Santoro, N., & Forghani-Arani, N. (2015). Interrogating practice in culturally diverse classrooms: What can an analysis of student resistance and teacher response reveal?. *European Journal of Teacher Education, 38*(1), 58-70.
- Shim, S., Cho, Y., & Cassady, J. (2013). Goal structures: The role of teachers' achievement goals and theories of intelligence. *The Journal of Experimental Education, 81*, 84-104.
- Stanley, L. S. (1996). The development and validation of an instrument to assess attitudes toward cultural diversity and pluralism among preservice physical educators. *Educational and Psychological Measurement, 56*, 891-897.
- Stanley, L. S. (1997). Preservice physical educators' attitudes toward cultural pluralism: A preliminary analysis. *Journal of Teaching in Physical Education, 16*, 241-249.
- Timken, G. L., & Watson, D. (2010). Teaching all kids: Valuing students through culturally responsive and inclusive practice. In J. Lund & D. Tannehill (Eds.), *Standards-based physical education curriculum development* (2nd ed., pp. 122-153). Boston, MA: Jones and Bartlett.
- Todorovich, J. (2006). *Teaching perspectives of extremely task-oriented preservice physical education teachers*. Unpublished manuscript. Department of Health, Leisure, and Exercise Science, University of West Florida, Pensacola, FL.
- Todorovich, J. (2009). Extremely ego-oriented preservice teacher's perspectives on teaching physical education. *Journal of Teaching in Physical Education, 28*, 155-172.
- Valentini, N. C., & Rudisill, M. E. (2004). An inclusive mastery climate intervention and the motor skill development of children with and without disabilities. *Adapted Physical Activity Quarterly, 21*, 330-347.
- Walling, M. D., & Duda, J. L. (1995). Goals and their associations with beliefs about success in and perceptions of the purposes of physical education. *Journal of Teaching in Physical Education, 14*, 140-156.
- Walton-Fisette, J. L., Philpot, R., Phillips, S., Flory, S. B., Hill, J., Sutherland, S., & Flemons, M. (2018). Implicit and explicit pedagogical practices related to sociocultural issues and social justice in physical education teacher education programs. *Physical Education and Sport Pedagogy, 23*, 497-509.