

FUTURE SPORT, EXERCISE AND PHYSICAL EDUCATION PROFESSIONALS' PERCEPTIONS OF THE PHYSICAL SELF OF OBESE CHILDREN

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Abstract:

Anti-fat bias has been previously identified amongst practising obesity health care specialists, physical education (PE) teachers and students of exercise science and PE in samples in the USA and New Zealand. The present research investigated the perceptions of the physical self of 'fat' versus 'normal-weight' children held by 167 students studying sport exercise and PE related programmes in higher education in England. One-sample *t*-tests identified that the sample held negative perceptions towards 'fat' children (identified by subscale mean scores that were significantly different from the subscale mean of 2.5 that would identify equivocal perception between 'fat' and 'normal-weight' children) on five of the six subscales of an adapted version of the *Children & Youth Physical Self Perception Profile* (CONDITION 1.52±.49; BODY 1.63±.43; PHYSICAL SELF-WORTH 1.79±.47; SPORT 1.88±.45; GLOBAL SELF-ESTEEM 2.10±.50, all $p < .01$; STRENGTH 2.48±.52, $p = .67$). Such results are indicative of the obesity discourse that currently prevails within PE and sport professions; a discourse constructed, arguably, on misleading foundations. Obesity awareness training is, therefore, required in such trainee exercise science, sport and PE populations. Pedagogical approaches espoused during programmes of study ought to emphasize personal meaning, personal reference and child-centeredness so that such approaches are more likely to be employed in their future professional practice.

Key words: attitudes, anti-fat bias, adolescents, overweight, pedagogy

Introduction

The World Health Organization has described the increasing prevalence of obesity across all age groups in the world as a 'global epidemic' (WHO, 2006). In the UK alone, there are estimated to be around 1 million obese children under the age of 16 with the prevalence of 'at least overweight' in boys and girls aged 2-15 in 2002 reported as 22 and 28%, respectively (National Office for Statistics, 2002). The trend in childhood obesity and the identification of the potential importance of sport and physical activity participation in reducing the problem has stimulated a range of cooperative multi-agency initiatives in England. These have involved sports coaches, exercise specialists and physical educators as the frontline physical activity promoters to maximize sport, exercise and physical activity participation throughout childhood and youth (The Audit Commission, 2006; Department of Health, 2008).

Previous research has, however, identified anti-fat bias amongst such practitioners and indicated that negative implicit and explicit attitudes and perceptions can predict prejudiced behaviour

towards the target groups (McConnell & Leibold, 2001; Rudman & Glick, 2001). Indeed, in the broadest context, Davison and Birch (2004) conclude that "discriminatory practices emanating from fat stereotypes have broad-reaching negative implications on the accessibility of health care, educational opportunities, employment opportunities, and the social treatment of overweight individuals".

It is therefore essential to identify if such negative perceptions of overweight and obese children exist in those undergoing training to become the physical activity professionals of the future. If such perceptions are manifest, the findings from this research would add further support to calls for the development of awareness raising interventions in the training of these populations (Gately, 2007). Anti-fat bias has been observed in the most knowledgeable obesity health professionals in the USA, with stereotypes of 'lazy', 'stupid' and 'worthless' associated with obese people (Schwartz, Chambliss, Brownell, Blair, & Billington, 2003). There is some evidence to suggest that this bias is stronger amongst females, in younger respondents

and those who had higher body mass index (BMI). The outcomes of the study clearly support findings from previous research which identified that overweight women perceived that their health professional did not understand how difficult it was to be overweight (Wadden, et al., 2000). As such, those with a professional role in supporting patients and reducing levels of overweight and obesity were found to possess prejudice that was explicitly evident to their patients. It was purported, therefore, that if patients felt uncomfortable in such healthcare settings as a result of practitioner bias, "it would not be surprising if they avoided care" and that interventions which enhanced 'appreciation of the experiences of obese individuals may be useful in changing attitudes' (Schwartz, et al., 2003).

A large online sample of the general population representing weight category ranges from underweight to extremely obese has also demonstrated that whilst all weight status groups exhibited significant anti-fat bias, there was an inverse relationship between weight status of the participant and the level of observed bias, with weight bias decreased with increased weight category (Schwartz, Vartanian, Nosek, & Brownell, 2006). Chambliss, Finley, & Blair (2004) found a strong anti-fat bias in the 'good' vs 'bad' and 'motivated' vs 'lazy' implicit stereotype measures, with having an obese friend, having a family history of obesity and lower belief in the level of personal responsibility for the condition associated with less anti-fat bias. As such, their research was congruent with the seemingly global anti-fat bias, but also acknowledged that having a direct familial or social relationship with an obese person and holding the belief that the condition is not purely the individual's fault mediated the strength of the anti-fat bias. This would appear congruent with the previously cited appreciation of the experiences of obese individuals being key to changing anti-fat attitudes (Schwartz, et al., 2003) and again, highlights the potential negative impact that failure to appreciate obesity issues may have upon the likelihood of positive interaction between obese people and the health, fitness and physical education professionals of tomorrow.

Anti-fat attitudes and negative obesity bias have also been identified specifically in future physical education, exercise and fitness professionals through research involving physical education undergraduates in New Zealand (O'Brien, Hunter, & Banks, 2007) and undergraduate and graduate students studying exercise sciences in the USA (Chambliss, et al., 2004). Research with first year and third year PE students and a control sample of psychology students from the University of Otago in New Zealand demonstrated several significant differences between the PE and control sample and between different year groups of PE students (O'Brien, et al., 2007). Whilst all student groups

demonstrated significant anti-fat bias in three attributes of the *Implicit Association Test* in relation to attitudes of 'good' vs 'bad', 'motivated' vs 'lazy' and 'smart' vs 'fat', main effects were found for both the student group (PE group greater anti-fat bias) and the year group (year three greater anti-fat bias) and a significant interaction effect revealed that the year three PE sample had significantly greater anti-fat bias than all other groups of students. Whilst the remainder of the instruments used by O'Brien et al. (2007) related to the students' explicit attitudes towards measures of physical self-identify and ideological beliefs rather than directly to student perceptions of fatness in children, the authors concluded that small attitudinal differences between student groups in the first year of their course increase greatly over time. This was suggested as "indicating the socialisation of prejudice" (O'Brien, et al., 2007) which would appear to be heightened in physical education programmes. Although without the benefit of data gathered in specific relation to physical education delivery, as negative attitudes have previously been identified as leading to prejudiced behaviours (McConnell & Leibold, 2001), O'Brien et al. (2007) also concluded that the training of physical educators needs to include programmes to reduce implicit and explicit anti-fat prejudice. This would appear congruent with the contention of Martinek (1997) who found that lower expectations of individuals have also been shown to influence the quality and quantity of feedback and instruction in physical activity and sport-related educational settings.

Surprisingly, however, only one published study has examined the perceptions of youth 'obesity' among practising PE teachers (Greenleaf & Weiller, 2005). In their sample of 105 practising PE teachers, Greenleaf and Weiller (2005) measured global anti-fat attitudes towards fat 'people' using the *Antifat Attitudes Scale* (Morrison & O'Connor, 1999); performance expectations for 'overweight' and 'normal weight' youth using selected strength, flexibility, endurance/fitness, coordination and sport competence scale items from Marsh's *Physical Self-Description Questionnaire*; and overall expectations for 'normal weight' and 'overweight' youth in relation to physical skill, reasoning, cooperation and social interaction. As such, though only representing approximately half of the data collection instruments used in the research, these aspects of their investigation related to 'overweight' rather than obesity issues in youth and in relation to global rather than youth-related anti-fat attitudes. Despite potential misinterpretation of the focus of the study upon 'overweight' as opposed to over 'fatness', all expectation and ability scores were significantly worse for 'overweight' compared with 'normal-weight' youth. The items exhibiting the most equivocal status between 'overweight' and

'normal-weight' youth were strength expectation, sport competence expectation and reasoning ability, whilst the greatest differentials were found in the items representing endurance expectation and physical ability. It was concluded that holding lower expectations of, and anticipating decreased physical ability in, 'overweight' youth could be problematic for the provision of effective physical education programmes.

Thus, research has shown that current and future health and PE professionals at the forefront of obesity prevention and physical activity promotion show socialized anti-fat bias that is similar to the population and control samples. It is also suggested that the explicit awareness of this by patients/clients/students may well reduce the positive experience and likelihood of participation in health care, physical activity promotion and indeed physical education settings. Despite this, no published work has explored future sport, exercise and physical education professionals' perceptions of the physical self of the 'obese child' in comparison with their perception of the physical self of the 'normal weight' child. Hence, the present research is novel in its attempt to quantify the perceptions of the physical self of obese children held by future sport, exercise and physical education professionals. This research also provides the first empirically supported discussion of the ramifications of the presence of explicit, anti-fat perceptions potentially resulting in prejudice, non-inclusive behaviours and reduced likelihood of participation in organized sport, exercise and physical education opportunities.

The aim of the research was to investigate the perceptions held by future sport, exercise and physical education professionals of the physical self of 'fat' children compared with their perceptions of 'normal-weight' children.

Methods

Participants

One hundred and sixty-seven students (mean age 20.9±2.9 yrs; mean height 1.75±.11 m; mean mass 72.4±12.7 kg; mean BMI 23.7±3.4 kg·m²) who were studying sport, exercise, and physical education-related courses in higher education in England completed a questionnaire consisting of demographic information and an adapted version of the *Children and Youth Physical Self Perception Profile* (Whitehead, 1995).

Instruments

The first section of the survey contained informed consent information including an explanation of the study, including the nature of the subsequent questions. Participation was entirely voluntary with completed and returned questionnaires accepted as informed consent to participate.

The second section of the survey consisted of questions which gathered demographic data about the respondent. These included questions to obtain data for the following variables: sex, age in years, self-reported height (m) and weight (kg), course of study and current year of study (ranging from first to fourth year). This was followed by an adapted version of the CY-PSPP. The CY-PSPP is a 36-item questionnaire that has been commonly used to measure the physical self-perceptions of children and adolescents (Jones, Polman & Peters, 2009; Whitehead, 1995). The instrument is headed by the title *What am I like?* and requires the participant to determine which of two opposing statements is most like them, and then to select one option to indicate whether the statement they have selected is *really true* or *sort of true* for them (see Figure 1). Within the questionnaire, there are six subscales that measure self-perceptions of sports competence (SPORT), physical condition (CONDITION), body image (BODY), physical strength (STRENGTH), physical self-worth (PSW) and global self-esteem (GSE).

The subscale mean was calculated as the mean of the responses to the six individual component items that make up the subscale with a higher score representing a higher self-perception.

The adapted CY-PSPP used in the present study was revised so that each item had the prefix *Compared to normal weight kids...* and had *some kids* or *other kids* replaced with *fat kids* in every item (see Figure 2). This approach permitted respondents to determine their own perception of *normal-weight kids* against which to compare their perception of *fat kids* and as such permitted the comparison with a self-referenced peer control group 'norm'. The participants were required to decide which statement was true for their perception of *fat kids* compared to *normal-weight kids* and then indicate whether the statement was *sort of true* or *really true*. One example of the adaptation of an original item for each subscale follows:

- sport competence (SPORT) – the original item *What am I like?..., some kids do very well at all*

Really true	Sort of true	WHAT AM I LIKE?			Sort of true	Really true
	X	Some kids would rather play outdoors in their spare time	OR	Other kids would rather watch TV		

Figure 1. Original CY-PSPP instrument example item.

kinds of sports OR some kids don't feel they are very good when it comes to sports was adapted to Compared to normal-weight kids..., fat kids do very well at all kinds of sports OR fat kids don't feel they are very good when it comes to sports;

- physical condition (CONDITION) – the original item *What am I like?..., some kids have a lot of stamina for vigorous physical exercise OR some kids soon get out of breath and have to slow down or quit* was adapted to *Compared to normal-weight kids..., fat kids have a lot of stamina for vigorous physical exercise OR fat kids soon get out of breath and have to slow down or quit;*
- body image (BODY) – the original item *What am I like?..., some kids are pleased with the appearance of their bodies OR some kids wish that their bodies looked in better shape physically* was adapted to *Compared to normal-weight kids..., fat kids are pleased with the appearance of their bodies OR fat kids wish that their bodies looked in better shape physically;*
- strength (STRENGTH) – the original item *What am I like?..., some kids think that they are strong, and have good muscles compared to other kids their age OR some kids think that they are weaker, and don't have such good muscles as other kids their age* was adapted to *Compared to normal-weight kids..., fat kids think that they are strong, and have good muscles compared to other kids their age OR fat kids think that they are weaker, and don't have such good muscles as other kids their age;*
- physical self-worth (PSW) – the original item *What am I like?..., some kids have a positive feeling about themselves physically OR some kids feel somewhat negative about themselves physically* was adapted to *Compared to normal-weight kids..., fat kids have a positive feeling about themselves physically OR fat kids feel somewhat negative about themselves physically;*
- global self-esteem (GSE) – the original item *What am I like?..., some kids are happy with themselves as a person OR some kids are often not happy with themselves* was adapted to *Compared to normal-weight kids..., fat kids*

are happy with themselves as a person OR fat kids are often not happy with themselves.

Procedure

The survey was distributed to approximately 300 students studying sports-related, sport science and physical education programmes in higher education in England. Data from the 167 completed and returned surveys (participation rate of approximately 56%) were entered into the Statistical Package for the Social Sciences (SPSS) version 14.

Body mass index was calculated from the participant's self-reported height and weight (kg·m²) and participants were categorized as underweight (BMI<20), normal weight (BMI 20-24.99), overweight (BMI 25-29.99) or obese (BMI>30).

The responses to each item of the adapted CY-PSPP were coded as 1 for the *really true* option that identified lowest relative perception compared to their perception of *normal-weight kids*, 2 for the *sort of true* option that identified a lower relative perception compared to their perception of *normal-weight kids*, 3 for the *sort of true* option that identified a higher relative perception compared to their perception of *normal-weight kids* and 4 for the *really true* option that identified the highest relative perception compared to their perception of *normal-weight kids*.

The mean for each subscale was then calculated by adding together the responses to the six items that made up the subscale and dividing this by 6. Only a mean score for the subscale of 2.5 would therefore identify equivocal perception of *fat* compared to *normal-weight kids*.

Data analysis

Reliability of the six subscales of the adapted CY-PSPP was investigated using Cronbach's alpha coefficients with acceptable internal consistency identified as $\alpha \geq .7$ (Ntoumanis, 2001).

One sample *t*-tests, which identify if the mean of a subscale is significantly different from a fixed value were used to identify whether the subscale means achieved were significantly different to 2.5 (the subscale mean value that would suggest an equivocal perception of *fat* versus *normal-weight kids*). Significant difference with a mean value above 2.5 would, therefore, indicate a positive bias for the perception of *fat kids* compared to *normal-weight kids*, i.e., that the perceptions towards

Really true	Sort of true	COMPARED TO NORMAL-WEIGHT KIDS...			Sort of true	Really true
	X	Fat kids would rather play outdoors in their spare time	OR	Fat kids would rather watch TV		

Figure 2. Adapted CY-PSPP instrument example item.

the fat kids in the subscale were more favourable than those held towards the normal weight kids. Significant difference with a mean value less than 2.5 would indicate a negative bias for the perception of *fat kids* compared with *normal-weight kids*, i.e., that the perceptions held towards the fat kids in the subscale were less favourable than those held towards the normal-weight kids. Also calculated were effect size (η^2), 95% confidence intervals and the percentage of respondents who had a mean score lower than 2.5 for each subscale.

Group differences using the demographic variables as grouping variables were investigated for each subscale using independent sample *t*-tests for sex differences (male, female), and one-way ANOVA for year of study (first, second, third, fourth year) and BMI category (underweight, normal weight, overweight, obese) differences.

Results

Cronbach's alpha for the subscales were calculated as CONDITION $\alpha=.85$; BODY $\alpha=.74$; PSW $\alpha=.83$; SPORT $\alpha=.78$; GSE $\alpha=.80$ and STRENGTH $\alpha=.86$ and the internal reliability of all of the subscales of the adapted CY-PSPP was therefore deemed to be good. Mean (\pm SD) for each subscale, results of one-sample *t*-tests (*t*, *df*, *p*), mean difference, effect size - η^2 (if significant difference is apparent), 95% lower and upper confidence intervals and the percentage of respondents with a subscale mean score below the equivocal score of 2.5 are shown in Table 1.

It is evident from Table 1 that subscale means for all except the STRENGTH subscale were significantly lower than the equivocal perception value of 2.5, indicating the presence of significant anti-fat perceptions in the CONDITION, BODY, PSW, SPORT and GSE subscales. The majority of participants also had mean subscale scores lower than 2.5 for each of these five subscales. Only the STRENGTH subscale showed no significant anti-fat bias and a greater percentage of participants having

mean scores above the 2.5 value (49%) than below (41%).

Results of *t*-test and ANOVA analyses (with alpha set at $p<.05$), identified that no significant subscale differences were present between the groups created from each of the demographic variables, i.e., there were no significant sex differences, year group differences or BMI category differences apparent for any of the subscales (the results of these analyses are therefore not presented). This identified that the perceptions held towards *fat kids* compared to *normal-weight kids* were relatively universal across the sample regardless of sex, year of study and participant BMI category.

Discussion and conclusions

These data support previous findings of anti-fat bias in samples of practising health professionals, exercise science and PE students and PE teachers in the USA and New Zealand. As an extension to the literature, the data provides direct evidence that anti-fat bias is evident in relation to fat children, with perceptions of the physical self of fat children held by the participants being significantly lower for body image, sport competence, physical condition, physical self-worth and global self-esteem (Table 1).

Only perception of the strength of fat children was found to be equivocal to the strength perception of normal-weight children, a feature which reflects the research of Greenleaf and Weiller (2005), who found the smallest differential between expectancies of overweight and normal weight youth to be in relation to their strength self-description items. The perception of equivocal strength and, indeed, the finding that a larger percentage of participants (49%) identified fat children as greater in the strength subscale than normal-weight children (41% less) could be suggested as either causing, or potentially being resultant from, obese children being more comfortable performing, being encouraged towards, or even being targeted to participate in, activities

Table 1. Subscale means (\pm SD), one sample *t*-tests results (*t*, *df*, *p*), mean differences, effect sizes - η^2 (if significant difference is apparent), 95% confidence intervals and the percentage of respondents with a subscale mean score below the equivocal score of 2.5

Subscale	M	SD	<i>t</i>	<i>df</i>	<i>Diff</i>	<i>p</i>	η^2	CIL	CIU	%
CONDITION	1.52	.49	24.97	159	-.98	<.001	.8	-1.05	-.90	97
BODY	1.63	.43	25.36	159	-.87	<.001	.8	-.94	-.80	96
PSW	1.79	.47	19.00	160	-.71	<.001	.7	-.78	-.64	94
SPORT	1.88	.45	16.99	151	-.62	<.001	.7	-.70	-.55	92
GSE	2.10	.50	9.98	156	-.40	<.001	.4	-.48	-.32	78
STRENGTH	2.48	.52	.43	157	-.02	.669	n/a	-.10	.06	41

Legend: M - mean; SD - standard deviation; *t* - *t*-test result; *df* - degrees of freedom; *Diff* - mean difference; *p* - level of significance; η^2 - eta square effect size; CIL - 95% confidence limit (lower bound); CIU - 95% confidence limit (upper bound); % - percentage of respondents with subscale mean score lower than 2.5

in sport, exercise and physical activity settings that require strength rather than activities that require endurance or physical conditioning.

None of the demographic variables were found to significantly moderate the anti-fat perceptions held and there was no relationship found between age and subscale means (although this may stem from the relatively homogenous age of the sample). As such, it would appear that gender, current weight status, and year of study had no significant impact upon the level of anti-fat bias with groups of students on the sport, exercise and physical education courses holding similar negative perceptions of fat children when compared with their normal-weight peers.

Further research is necessary to establish whether these data are unique to future sport, exercise and PE professionals and to establish if these perceptions become even more negative towards obese children as students progress through potentially body-oriented educational programmes. Indeed, the impact of experience and 'exposure' to the rising levels of childhood obesity should be explored. This may be possible through sampling of professionals with a far greater range of years of experience gained while childhood obesity levels have been rising. Indeed, physical education teachers may present the most important population to examine as they constitute the only profession required to deliver quality physical activity opportunities to ALL children of school age and who arguably have had the most exposure to the rising levels of childhood obesity.

Appreciation of the findings from the current study alongside previous studies (Schwartz, et al., 2003; Wadden, et al., 2000) has serious implications for the possible impact of negative perceptions of obese children in sport, exercise and physical education settings. These implications may be heightened still further if obese children are as perceptive as obese women in sensing such lack of understanding in those purported to be supporting them.

International comparative research is also required to investigate potential international differences in perceptions and the underlying causation of such perceptions in different national contexts that may exist in many facets of sport, exercise and physical education training and philosophy.

Following identification of the anti-fat perceptions held towards fat children by healthcare, sport, exercise and physical education trainees and professionals, the issue remains whether such perceptions actually do manifest into negative behaviours towards obese children in settings

designed to promote and inculcate sport, exercise and physical activity enjoyment and participation. Theory and previous research has identified the ability of negative implicit attitudes to predict future prejudicial behaviours towards the target group. The identification of negative perceptions of the physical self of obese children, the lower expectations and anticipation of lower physical ability held by sport, exercise and physical education specialists toward obese children and adolescents is therefore alarming. The potential for these to develop into discriminatory, damaging behaviours toward obese children and adolescents is not beyond question. Investigation of the ramifications that these perceptions and subsequent negative behaviours may have upon the obese child's physical and psychological health and likelihood of participating in sport, exercise and physical activity in the near and distant future is, therefore, of paramount importance.

In synergizing the findings from this and other previous studies into anti-fat attitudes in such physical ability focused specialists, the suggestion by Jalongo (1999) that obesity should be considered a 'diversity' issue would seem to warrant serious consideration in such settings. The current findings therefore add further support to calls from previous authors for the development of obesity awareness programmes and materials to attempt to change the anti-fat bias held by frontline healthcare, sport, exercise and physical education professionals (Gately 2007; Greenleaf & Weiller 2005; O'Brien, et al., 2007). Such intervention tools for use in sport, exercise and physical education environments would need to develop from appreciation of not only the 'experiences of obesity' in relation to health and well-being, but specifically the experiences of obesity in direct relation to sport, exercise and physical education settings. In addition, the findings from the current study explicitly identify that intervention programmes are necessary for those who deal specifically with children and adolescents. The inclusion of training, modules and discourse on *obesity appreciation* issues within the initial training and continuing professional development of sport, exercise and physical education professionals may be of paramount importance not only for enhancing the immediate engagement of overweight and obese children and adolescents in physical activity, exercise and sport and their enjoyment of the experience, but also for increasing the likelihood of overweight and obese children and adolescents adopting a physically active lifestyle into adulthood.

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KAKO BUDUĆI STRUČNJACI U SPORTU, TJELOVJEŽBI I TJELESNOME ODGOJU PERCIPIRAJU TJELESNI IZGLED PRETILE DJECE

Predrasude prema pretilim ljudima utvrđene su kod specijalista zdravstvene skrbi koji se bave pretilošću, kod profesora tjelesne i zdravstvene kulture te studenata kineziologije u SAD-u i Novom Zelandu. Cilj provedenog istraživanja bio je utvrditi percepcije tjelesnog izgleda "debele" u odnosu na djecu "normalne težine" kod 167 studenata kineziologije (sporta, vježbanja i fizičke kulture) u Engleskoj. Rezultati *t*-testova su pokazali da su ispitanici imali negativnu percepciju pretile djece (utvrđeno srednjim vrijednostima podljestvice koje su se statistički značajno razlikovale od njezine aritmetičke sredine (2,5) koja bi potvrdila jednaku percepciju pretile djece i djece normalne težine), na pet od ukupno šest podljestvica adaptirane verzije upitnika *Children & Youth Physical Self Perception Profile* (kondicijska pripremljenost $1.52 \pm .49$; slika tijela $1.63 \pm .43$; tjelesno samovrednovanje $1.79 \pm .47$; sportska kompetencija $1.88 \pm .45$; opće samopou-

zdanje $2.10 \pm .50$, svi na razini značajnosti $p < .01$; te tjelesna jakost i snaga $2.48 \pm .52$, $p = .67$). Dobiveni rezultati su indikativni za odnos prema pretilim osobama koji trenutno prevladava kod profesionalnih djelatnika u sportu i tjelesnoj i zdravstvenoj kulturi, a koji je nedvojbeno izgrađen na pogrešnim temeljima. Stoga je za populacije pripravnika u kineziologiji, sportu i tjelesnoj i zdravstvenoj kulturi potrebna edukacija i razvoj svijesti o pretilosti. Pedagoški pristupi koji se provode u okviru studentskih programa trebali bi naglasiti osobnost pojedinca, te osobni odnos i orijentaciju prema djetetu kako bi takvi pristupi i takav odnos prema djeci bili i primijenjeni u budućem profesionalnom radu sportskih stručnjaka i znanstvenika.

Ključne riječi: stavovi, predrasude prema pretilim osobama, adolescenti, prekomjerna tjelesna težine, pedagogija

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