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Do Seniors (50+) Know What Practices are Appropriate in Physical Education

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Abstract

The purpose of this study was to investigate senior (50+) adult’s knowledge of appropriate instructional practices (AIP) in physical education. This study is a continued line of studies assessing certain populations knowledge of AIP. Previous research has been conducted among Physical Education Teacher Education (PETE) majors, parents, school administrators, elementary, middle school and high school students. For this study 372 senior adults were surveyed regarding their knowledge of AIP in PE. Surveys were distributed to the participants at the Huntsman Senior World Games. It was found that senior adults misidentified nine instructional practices from the survey. It was found that senior adults identified having winners and losers in games in PE class, students that misbehave should be punished with exercising, and playing dodge ball is OK for students to play. These instructional practices are considered inappropriate. The implications of this study once again reinforce that physical educators need to educate senior adults and that implementing appropriate instructional practices is an effective method to educate senior adults and the general public.

24 A students' participation in k-12 physical education (PE) has the potential of benefitting
25 them throughout their life (Barney & Prusak, 2016). One of the main components of PE that
26 could affect lifetime physical activity is the instructional practices students are exposed to. For
27 example, if students have to exercise as a form of punishment or if the teacher chooses students
28 to serve as captains to come to the front of the class and pick teams. The results could possibly
29 be detrimental to the students. Barney, Pleban, Fullmer, Griffiths, Higginson, and Whaley
30 (2016) investigated former PE student's experiences dealing with exercise as punishment when
31 they were in PE classes. The former students stated that exercise as punishment "was
32 humiliating", "It can traumatize a student", and that it "did not accomplish anything." Barney,
33 Prusak, Beddoes, and Eggett (2016) studied the effects of students (captains) picking teams in PE
34 class. For this study, junior high aged male students were surveyed and interviewed regarding
35 their perceptions and feelings about captains picking teams in PE class. Surprisingly, the survey
36 data revealed that junior high aged males weren't negatively affected by captains picking teams
37 in front of their PE class. Yet, the interview data portrayed a different picture. Some students
38 knew they would be picked last. Not liking it particularly. They just wanted to be on the same
39 team with a friend. The more skilled students that were picked first felt bad for their classmates
40 that were picked last or towards the end. Both studies illustrate that inappropriate instructional
41 practices in PE can have the potential to affect student attitudes towards PE and the possibility of
42 being physical activity throughout their life.

43 For years having student exercising as punishment and having captains pick team in front
44 of the class have been accepted as everyday occurrences or appropriate instructional practices
45 (AIP) in PE. Within the national organization of Society of Health and Physical Education
46 (SHAPE America), the National Association of Sport and Physical Education (NASPE) have

47 created three documents for the purpose of informing K-12 physical educators regarding
48 appropriate instructional guidelines for physical education. The three documents are for
49 elementary (2009a), middle school (2009b) and high school (2009c) physical education. The
50 three documents “offer specific guidelines for recognizing and implementing developmentally
51 appropriate instructional practices in (elementary, middle school & high school) physical
52 education” (Barney & Strand, 2008). The documents continue saying that the practices should
53 be in the best interests of students (appropriate) and those that are counterproductive
54 (inappropriate) should be avoided. Thus, the purpose of these documents is to aid physical
55 educators in exposing students to appropriate instructional practices in PE, enabling students to
56 be successful in activity throughout their lives (Barney, Strand & Prusak, 2013). A series of
57 studies have been conducted to better understand AIP in PE. Barney and colleagues have
58 surveyed K-12 students (Barney & Christenson, 2014; Barney, Christenson, & Pleban, 2012),
59 physical education teacher (PETE) majors (Barney & Christenson, 2013; Barney, Christenson, &
60 Pleban, 2012), school administrators (Barney & Prusak, 2016); and parents (Barney & Pleban,
61 2010). Generally, each group could correctly identify appropriate and inappropriate instructional
62 practices from K-12 PE. Yet, there were eight instructional practices that were consistently
63 misidentified. The misidentified survey items a) students should participate in activities with
64 large number of students on a team, b) competitive activities have identified ‘winners and
65 losers’, c) public picking of captains and teams, d) fitness testing for public recognition and
66 rewards, e) the use of militaristic calisthenics for fitness purposes, f) inclusion of dodge ball, g)
67 skill assessment in nonauthentic or contrived settings, and h) grading student attitudes based on
68 attendance, wearing gym clothes and effort (Barney & Christenson, 2013, 2014; Barney,
69 Christenson, & Pleban, 2012; Barney & Pleban, 2010; Barney & Prusak, 2016; Barney & Strand,

70 2008). With these populations that were studied regarding their knowledge of AIP, the authors
71 felt that another population could continue to shed light on AIP in PE. For this reason, the
72 purpose of this study was to investigate 50 and older adult's knowledge of appropriate
73 instructional practices in K-12 PE.

74 **Method**

75 For this study 372 senior adults (50 and older) (171 males & 156 females; 50's: 49; 60's:
76 138, 70's: 114, 80's: 25 & 90's: 1) participated in this study. The participants were from the
77 United States, Canada, Italy, Mexico and Japan.

78 **Instrumentation**

79 For this study, the researcher utilized surveys that was created and used from other AIP
80 research studies (Barney & Pleban, 2010; Barney & Strand, 2008; Barney & Prusak, 2016;
81 Barney & Christenson, 2014). The survey had a total of 21 statements, focusing in five areas
82 regarding physical education. The participants would mark their answer on the survey either 'Y'
83 if they agreed with the survey statement or 'N' if they did not agree with the survey statement.
84 The five areas were a) curricular decisions, b) health-related fitness, c) assessment, d) active
85 participation, and e) instructional strategies. Four statements refer to curricular decisions, five
86 statements for health-related fitness, three statements for assessment, one statement for active
87 participation, seven statements for instructional strategies and one demographic question.
88 Descriptive statistics were used, including perceptions to determine if seniors agreed or
89 disagreed for each survey statement to help explain the results.

90 **Procedures**

91 The researchers employed nonprobability sampling to collect study survey data. The
92 researchers placed themselves by the carotid artery screening station at the Huntsman World

93 Senior Games in St. George, Utah. As the participants waited to participate in the carotid artery
94 screening they were asked if they would be willing to participate in this study. Prior to data
95 collection, the university review board (IRB) granted approval to conduct this study.

96 **Data Analysis**

97 The data were analyzed using descriptive statistics in the Statistical Package for the
98 Social Science (SPSS) 24.0 program. Percentages were used to reflect the senior's responses for
99 each item being analyzed. The other method of data analysis was analyzing senior's responses to
100 the questions from the survey. The researchers read and re-read the data from the survey
101 statements until common themes became evident (O'Sullivan & Tsanaridou, 1992).

102 **Results**

103 Table 1 reveals nine statements that the senior participants incorrectly identified as
104 appropriate and inappropriate instructional practices in PE. Results pertinent to each of the five
105 general areas (curricular decisions, health-related fitness, assessment, active participation and
106 instructional strategies) are further discussed.

107 **Curricular Decisions**

108 A majority of the senior participants incorrectly identified one curricular decision
109 statement as inappropriate. Statement 17 stated, "Outside of class assignments are not necessary
110 for physical education." Surprisingly, a majority of the female participants (51%) felt that
111 outside of class assignments were not necessary. And 63% of the male participants correctly
112 answered the survey statement.

113 **Health-Related Fitness**

114 For these survey statements two statements were incorrectly answered (6 & 15).
115 Statement six says, "If a student gets in trouble or misbehave in PE class, it's OK for them to

116 have to run a long time, or do push-ups.” For this survey statement the male participants
117 incorrectly answered (54%) this statement. Conversely, a majority of the female participants
118 correctly answered (60%) this statement. For statement 15, which states, “Fitness activities in
119 PE class should consist of mass exercises, following a designated leader”, 60% of the male
120 participants incorrectly answered this statement.

121 **Active Participation**

122 A majority of both male and female participants incorrectly identified one survey
123 statement dealing with active participation. Statement nine states, “It is OK for students to play
124 dodge ball in PE class.” For the male participants 83% identified playing dodge ball in PE as an
125 appropriate practice. For the female participants 73% misidentified this statement.

126 **Assessment**

127 For the assessment survey statements, three statements were incorrectly identified (7, 8,
128 & 18). Statement seven states, “A student’s grade in PE class should show how hard they work
129 in class and how good they are at games.” The data revealed that 67% of male participants and
130 53% of the female participants incorrectly answered this survey statement. For statement eight,
131 which states “For basketball lessons, a student should be graded on how well they can dribble a
132 ball through a line of cones”, a majority of the male participants incorrectly (54%) identified this
133 statement. And for statement 18, it states, “Part of a students’ grade should be based on
134 attendance, dressing for activity, and compliance to classroom rules.” For this statement 91% of
135 the males and 97% of the female participants misidentified this survey statement.

136 **Instructional Strategies**

137 Two survey statements (1 & 13) were incorrectly answered regarding instructional
138 strategies. Statement one states, “In PE class, games and activities should have ‘winners and

139 losers.’ Both male and female participants incorrectly answered this statement. For the male
140 participants, 64% incorrectly identified the statement. And 56% of the female participants
141 misidentified the statement. Statement 13 states, “Every student should have a piece of
142 equipment for all activities played in PE class.” This statement should have been answered as an
143 appropriate instructional practice. Yet, 54% of the males and 51% of the females incorrectly
144 identified this statement.

145 **Qualitative Analysis**

146 For this study, the participants were asked to answer the survey questions provided to
147 them. Yet, the researcher were pleasantly surprised that when the participants filled out the
148 survey they would write their feelings or opinions regarding certain survey questions. These
149 responses the participants expressed were not asked for or initiated by the researchers. Many of
150 the participant’s responses aligned with the survey questions that were misidentified.

151 **Curricular Decisions**

152 Participant responses regarding outside of class assignments were “Depends on the
153 assignment”, “Yes, but they can be lots of fun”, and “No, they may not be necessary, but
154 learning that exercise is important in their lives.”

155 **Health-Related Fitness**

156 The participant’s comments regarding fitness activities in PE class should consist of mass
157 exercises by following a designated leader were, “Maybe just for warm-ups”, “sometimes it is
158 OK”, and “This might happen occasionally but not generally.” The other survey question the
159 participants responded to dealt with students having to exercise as punishment for getting into
160 trouble or misbehavior. One participant stated, “Depends. It might help.” Another participant
161 said, “Only if it changes the kid’s behavior.”

162 **Active Participation**

163 The survey question dealing with student's participation in dodge ball in PE class was
164 mixed. One participant stated, "Worst event from my childhood", and another participant stated,
165 "Don't make kids hate PE." One participant stated, "We did it (played dodge ball) and enjoyed
166 it", and "Modifications were made with squish balls. So, the ball won't hurt."

167 **Instructional Strategies**

168 Participant responses dealing with having winners and losers in PE were "Absolutely.
169 That is how we did it in PE", and "Maybe. Some students may not want to be known as a loser."

170 **Discussion**

171 The purpose of this study was to investigate 50 and older adult's knowledge of
172 appropriate instructional practices in k-12 physical education. Participants of this study felt that
173 PE class should have 'winners and losers' in class activities, that student's that get into trouble or
174 misbehave should run a long time or do push-ups as punishment, a students' grade should be
175 determined how good they are at games in PE class, that students should be graded on how well
176 they can dribble a ball through cones, that playing dodge ball in PE class is acceptable, that when
177 all student are learning a skill they should not have a piece of equipment to assist their learning,
178 fitness activities should consist of mass exercises led by a class leader, outside of class
179 assignments are not necessary, and student grades should be based on attendance, dressing for
180 activity and compliance to classroom rules.

181 One of the first items the participants misidentified as an appropriate practice dealt with
182 out of class assignments are not necessary. Pantanowitz, Lidor, Nemet, and Eliakim (2011)
183 studied the attitudes and compliance towards homework assignments in PE among high school
184 students in Israel. The main finding from this study was that the parents and over half of the

185 students supported the provision of homework assignments in PE. Yet, very few of the students
186 completed homework assignments. This study illustrates that the idea of homework in PE is a
187 good idea. But having the student actually do and complete the homework assignment is the real
188 question. The idea of homework in PE is not a new idea. Novak and Lynott (2015) have stated
189 that the notion of homework in PE has been discussed for 50 years. Yet, it has not taken hold or
190 promoted to benefit students. The participants in this study did not see its value for students.

191 Another point for discussion comes from statement six which states, “If a student gets in
192 trouble or misbehaves in PE class, it is OK for them to have them run a long time or do push-
193 ups.” This statement dealing with exercising as punishment. The results from this study
194 revealed that 54% of the male participants found exercise as punishment is an appropriate
195 instructional practice in PE. Research has found that when PE teachers have students exercise as
196 a form of punishment, students don’t like it. One study conducted by Barney, Pleban, Fullmer,
197 Griffiths, Higginson and Whaley (2016) investigated former k-12 PE students experiences with
198 exercise as punishment in PE. College-aged student were surveyed. Participants were asked if
199 they felt exercise as punishment was appropriate. Participants said, “it is cruel and unusual
200 punishment”, and “it sends a bad message.” Students were also asked how they felt when they
201 witnessed students exercising as punishment. They stated, “It scares the group or makes them
202 feel uneasy”, and “It makes us fear the teacher.” These types of instructional practices do not
203 create positive attitudes towards PE class and in some cases, being not being physically active
204 throughout life.

205 A third point of discussion comes from statement nine, which states, “It is OK for
206 students to play dodge ball in PE class.” The topic of dodge ball has been debated as both a
207 positive and negative activity for students to play in PE class. Dodge ball has been glamorized in

208 movies (Cooper, Dobkins, & Gillespie, 2007) and in print media (Reilly, 2001). The game of
209 dodge ball in PE has been debated in state legislatures, to the point of being banned (Associated
210 Press, 2004). For the fact that dodge ball is banned in many states and in many school districts,
211 Barney and Prusak (2016) studied school administrator's knowledge of certain instructional
212 practices in PE. One of the surprising results of their study was that 75% of school
213 administrators surveyed in this study felt dodge ball is appropriate to play in PE. The results
214 from this current study revealed that a large majority of the participants felt dodge ball was an
215 appropriate instructional practice in PE. Yet, one participant stated that her participation in
216 dodge ball was the "worst event from my childhood." The participation of students playing
217 dodge ball is another instructional practice that PE teachers need to seriously reconsider having
218 their students participate in. Dodge ball only serves the strong and most skilled students. The
219 last point of discussion is from statement 18, which states, "Part of a student's grade should be
220 based on attendance, dressing for activity, and compliance to classroom rules." Can you imagine
221 a student just 'showing up' in a math class and receiving a passing grade? For some reason,
222 many of the participants in this study felt that attending class, dressing for class and complying
223 to class rules will be a part of a student's grade. This is a common thought for many years
224 dealing with PE. Because of this assessment practice that has taken place in PE, it has created
225 questions in the minds of parents regarding the importance and legitimacy of physical education.
226 Because of this practice the participants of this study probably consider PE as nothing more than
227 play time.

228 **Implications**

229 Barney, Prusak, Strand & Christenson (in press) wrote a review of research dealing with
230 appropriate instructional practices in PE. They reported results of research studies conducted

231 with parents (Barney & Pleban, 2010), elementary-aged students (Barney & Christenson, 2014),
232 middle school students (Barney, Prusak & Strand, 2013), high school students (Barney & Strand,
233 2008), elementary education majors (Strand, Barney & DeFries-Evans, 2008; Barney & Strand,
234 2006), physical education majors (PETE) (Barney & Christenson, 2013; Barney, Christenson &
235 Pleban, 2012), School Administrators (Barney & Prusak, 2016), and k-12 physical educators
236 (Strand & Bender, 2011). In their review, it was reported that eight instructional practices were
237 continually misidentified from the above-mentioned populations. Thus, known as the 8 repeat
238 offenders.

239 For this study five of the eight repeat offenders were misidentified. With this population,
240 the question may be asked, how can these older adults affect k-12 physical education? In some
241 cases, they may not have any effect on k-12 PE. Yet, this population is a growing number of
242 people that suggests that students have been exposed to inappropriate instructional practices for a
243 number of years. Because of the exposure to inappropriate instructional practices, many of these
244 populations, including these senior participants, are of the opinion that these instructional
245 practices are appropriate for students to be exposed to, and that this is just what is done in PE
246 class. These kinds of results from this study put the onus on PE teachers to implement and have
247 their students participate in activities that will create positive experiences that will lead to a
248 lifetime of being physically active. Another important implication from this study is that PE
249 class is not the same that these senior's participated when they were in k-12 PE. Physical
250 educators have an opportunity to educate the public regarding appropriate instructional practices
251 in PE. As physical educators educate the public, many of the people are parents, grandparents,
252 school board members and voters. With a better-informed perspective, they can affect the future
253 of PE in a child's school and school district (Aicinena, 1991).

254 As the researchers analyzed the data they concluded that many of these inappropriate
255 instructional practices have been taught in PE classes for many years. And because these
256 instructional practices have been conducted for so many years, society is of the opinion that this
257 is standard operating procedure in physical education class. These inappropriate instructional
258 practices have the potential to negatively affect a person's lifetime of physical activity. If
259 physical educators want to play a part in a students' lifetime activity, as these athletes in the
260 senior games, then AIP need to be implemented in PE lessons.

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346 Table 1

347 Results of Misidentified Statements Regarding Appropriate Instructional Practices from 50+
 348 Adults

349 Question	350 Male		351 Female	
	352 Y	353 N	354 Y	355 N
356 1. In PE class, games and activities should have “winners and losers.”	357 64%	358 36%	359 56%	360 44%
361 6. If a student gets in trouble of misbehaves in PE class, it’s OK for them to have to run a long time, or do push-ups	362 54%	363 46%	364 40%	365 60%
366 7. A students’ grade in PE class should show how hard they work in class and how good they are at games.	367 67%	368 33%	369 53%	370 47%
371 8. For basketball lessons, a student should be graded on how well they can dribble a ball through a line of cones.	372 54%	373 46%	374 42%	375 58%
376 9. It is OK for students to play dodgeball in PE class?	377 83%	378 17%	379 73%	380 27%
381 13. Every student should have a piece of equipment for all activities played in PE class.	382 46%	383 54%	384 50%	385 50%
386 15. Fitness activities in PE class should consist of Mass exercises, following a designated leader.	387 61%	388 39%	389 52%	390 48%
391 17. Outside of class assignments are not necessary for physical education.	392 37%	393 63%	394 52%	395 48%

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399 Table 1 Continued

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401 Results of Misidentified Statements Regarding Appropriate Instructional Practices from 50+
402 Adults

403 Question	Male		Female	
404	Y	N	Y	N
405				
406 18. Part of a students'	91%	9%	97%	3%
407 grade should be based				
408 on attendance, and				
409 compliance to classroom				
410 rules.				
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