Contemporary Issues in Juvenile Justice

Volume 7 | Issue 1 Article 1

2013

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Journal of Knowledge and Best Practices in Juvenile Justice and Psychology 2013, Vol. 7, No. 1, 1-10

Influence of Responsibility-Based Physical Activity within a Secured Juvenile Correctional Facility

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The purpose of this study was to determine the influence of responsibility-based physical activity instruction on postadjudicated youths' personal and social responsibility perception, physical fitness levels, as well as juvenile correctional officers' attitudes toward its implementation. An embedded mixed-method design was used. Based on the results, responsibility-based physical activity instruction had no statistically significant effect on youth's personal and social responsibility perception. However, it positively influenced intervention groups' personal and social responsibility perception at a rate of 1.19 times per session and did not negatively impact their fitness levels. Furthermore, responsibility-based physical activity may influence juvenile correctional officers' attitudes toward importance of physical activity for rehabilitation.

Keywords: adjudicated, juvenile, correctional officers, mixed-method, personal and social responsibility, social ecological model

Youth who have been adjudicated to long term residential facilities are entitled to the same quality physical education as their non incarcerated peers (NASPE, 2009). Quality physical education and/or activity programs may have rehabilitative implications for this population. For example, quality physical education should be used to positively influence responsible social and personal behavioral development by providing students with opportunities to assume leadership, cooperate with others, and accept responsibility for their own behavior (CDC, 2011; National Association for Sport and Physical Education, 2009).

The central importance of discipline maintenance by correctional facilities may conflict with the educational needs of post adjudicated youth (Lewis, Schwartz, & Ianacone, 1988). Particularly within the context of physical education or activity, a disciplinary priority may influence the instructional style during physical activity. For example, a military or command style of instruction (Mosston & Ashworth, 2002) may be emphasized in a physical training paradigm for control rather than more developmentally appropriate student-centered physical education or activity instruction.

To date, there have been just a few researchers who have investigated the effects of physical activity on health-related measures and affective dispositions of post adjudicated youth (Munson, 1988; Munson, Baker, & Lundegren, 1985). However, the investigation of physical education and/or activity instructional models that have been developed to provide youth with opportunities to assume leadership, cooperate with others, and accept responsibility for their behavior is non-existent. There is a need to investigate the influence of physical education and/or activity models that place more emphasis on the affective domain, as opposed to the psychomotor or cognitive domains, for youth who have been adjudicated to long term residential facilities.

Furthermore, Silliman-French, Yun, French, Goode, Hilgenbrinck, and Nichols (2007) conducted a physical activity programming needs assessment of pre adjudication and post adjudication secure correctional facility center administrators. Based on the results of this study, administrators suggested that there was a need for very close collaboration with school-based administrators. Specifically, correctional facility administrators felt that physical education programs that focused on individual and cooperative-based activities should be mandatory. However, they did not feel that a highly qualified professional was needed to provide these activities, thus collaboration with the school-based administrators who could possibly provide curriculum resources was preferred.

The disproportionately limited research addressing physical activity intervention, especially in the area of instructional models developed to positively influence the affective domain of adjudicated youth, leaves a "gap" in the literature that needs to be addressed. Furthermore, the perceived need by juvenile correctional staff to increase the variety of activities (e.g., affective-focused physical activity that focuses on individual and cooperative-based activities) for post adjudicated youth also needs to be addressed in the literature. A possible step toward addressing these areas of limitation in the physical activity lit-

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erature for post adjudicated youth may be to determine if implementing an affective-focused physical education and/or activity instructional model can positively influence the physical activity behavior of post adjudicated youth. In addition, to determine if providing an example of how to implement an affective-focused physical education and/or activity instructional model to staff (i.e., juvenile correctional officers) at a secured facility can influence their attitude towards its implementation feasibility for incarcerated youth.

Based from a systematic review, the affective-focused physical education and/or activity instructional model *Teaching Personal and Social Responsibility* (TPSR) has been demonstrated within the literature as an influential model for underserved or at-risk youth (Debusk & Hellison, 1989; Hammond-Diedrich & Walsh, 2006; Hellison, 2003; Watson, Newton, & Kim, 2003; and Wright, White, & Gaebler-Spria, 2004). It provides opportunities for participants to assume leadership, cooperate with others, and accept personal and social responsibility. Although this model has been used as a physical education and/or activity instructional model for underserved youth, it has not been investigated as a physical education and/or activity instructional model for youth whom have progressed from at-risk to adjudicated.

The TPSR instructional approach was designed for cultivating the decision-making process of participants by implementing specific strategies within the physical activity environment (Hellison, 2010). In general, these strategies effectively shift responsibility from the instructor to the participants. The instructional approach uses four themes and five progressive program goals (i.e., responsibilities) to teach participants to take responsibility for the well-being of themselves and others. These include: (a) respect, (b) participation and effort, (c) self-direction, (d) caring and compassion, and (e) applying the previous four levels outside of the physical activity environment.

The primary purpose of this study was to determine the influence of a 6-week physical education and/or activity program based on the TPSR model on the physical activity behavior of post adjudicated youth. The secondary purpose was to determine the influence of implementing the 6-week responsibility-based program for post adjudicated youth on the attitude of juvenile correctional officers (JCOs) overseeing these youth.

The hypotheses and research question were as follows: (a) post adjudicated youth involved in a 6-week *Taking Personal and Social Responsibility* physical activity instructional approach will have personal and social responsibility perception scores significantly higher than their post adjudicated peers involved in a traditional physical training-based physical activity instructional approach, and (b) post adjudicated youth involved in a 6-week TPSR physical activity instructional approach will not significantly differ in physical fitness levels from their post adjudicated peers involved in the traditional physical training-based physical activity instructional approach. The following research question guided the secondary, and qualitative, purpose of this study: What influence does implementing responsibility-based instruction for post adjudicated youth have on the attitude of juvenile correctional officers toward its implementation within a post adjudication secure juvenile correctional facility?

Theoretical Framework

The *Social-Ecological Model* (SEM) was used to frame this study (Bronfenbrenner, 1977). The model was based on the concept that a person's development is affected by their interaction with the environment, specifically their perception of the environment and the way in which they deal with it. For example, a person's development is affected by the formed relations across immediate settings, as well as larger informal and formal social contexts that embed the immediate settings.

The SEM includes four nested structures of a person's ecological environment. These structures are progressively complex regarding the interaction between a developing person and their environment and include: (a) microsystem; (b) mesosystem, or interpersonal; (c) exosystem, or institutional; and (d) macrosystem (Bonfenbrenner, 1977; Bonfenbrenner, 1979; Gregson, Foerster, Orr, Jones, Benedict, Clarke, 2001). The Social-Ecological Model is a theory based on the concept that a relationship between individual and contextual factors exist and are interconnected. The rationale for using this theory to guide this study was to identify whether responsibility-based physical activity instruction could influence physical activity behavior. The SEM levels of the interpersonal (i.e., residents' group behavior) and institutional (i.e., behavior of juvenile correctional officers' (JCOs') attitude toward responsibility-based physical activity instruction) structures and their relationship were the focus areas of this study.

Method

An embedded mixed-method design was used in this investigation. The use of a pretest-post test control group design was used to examine the influence of responsibility-based physical activity instruction on personal and social responsibility perception, and health-related fitness levels (i.e., aerobic capacity, muscle strength, and endurance) of post adjudicated youth who were residents within a secure juvenile correctional facility. The research design involved collecting qualitative data after the intervention phase for the secondary purpose. With the focus of understanding JCOs' attitude toward responsibility-based instruction for post adjudicated youth, a descriptive case study approach was used to frame the qualitative supportive role in this study (Patton, 2002). The research protocol was approved by the Institutional Review Board Committee of Texas Woman's University.

Setting and Participants

This study was conducted at a County Juvenile Detention Center (CJDC) that provided care for adolescents aged 13 to 17. The facility provided short-term care for alleged delinquent juveniles or adjudicated delinquent juveniles awaiting court disposition. In addition, the County Juvenile Detention Center (CJDC) also provided long-term care for adjudicated youth (i.e., residents) in a post adjudicated program entitled Individualized Comprehensive and Rehabilitative Engagement (ICARE). The total population of youth (i.e., alleged delinquent juveniles, adjudicated delinquent juveniles awaiting court disposition, post adjudicated juveniles) at this facility was 35 at the

time of this study. The total population of residents (i.e., post adjudicated juveniles) completing the ICARE program was 23 and included 7 female and 16 male adolescents. All youth at the facility were either alleged or adjudicated delinquents for substance abuse or mental health-related offenses.

Two sample populations were used in this study to investigate either the primary or secondary purposes. Participants for the primary purpose of this study were 16 post adjudicated male youths. Participants ranged from age 15 to 17 years (*M* age = 15.75 years, SD = 0.83). The ethnicities of these participants were five Hispanic, two African American, and nine Caucasian. All male adolescent participants had been previously adjudicated and placed at the CJDC. Participants' length of stay prior to this study ranged from 3 to 16 weeks. Specifically, these 16 adolescents were the total male resident population for the ICARE program. Participants for the secondary purpose of this study were six male Juvenile Correctional Officers. These male JCOs were John, Jack, Charles, Michael, George, and William (pseudonyms). The ethnicities of these participants were three Hispanic and three Caucasian. All six JCOs were members of the secure juvenile correctional facility staff at the CJDC. Specifically, these six officers were the total JCO population for the male adolescents in the ICARE program.

Physical activity for the residents occurred in a designated physical activity area which was the following: (a) gymnasium/cafeteria space, (b) recreation yard, and/or (c) section room.

The areas used mostly throughout the study were the gymnasium/cafeteria and outdoor recreation field. The section room was used twice during the study because of inclement weather days.

Procedure

The procedure for the primary purpose of the study involved randomly assigning male residents (*N* = 16) at the County Juvenile Detention Center (CJDC) completing a long-term behaviorally-based Individualized Comprehensive and Rehabilitative Engagement (ICARE) program to either the Teaching Personal and Social Responsibility (TPSR) instructional intervention group (*n* = 8), or the traditional physical training-based instructional control group (*n* = 8).

Both groups received their physical activity instruction three times per week for 18 sessions during the time allotted by the secure juvenile correctional facility from 7:45 am to 8:45 am. Each group received their physical activity instruction separately during the 60 minute time frame (i.e., gymnasium/cafeteria space, recreation yard, section room). The intervention group (*n* = 8) received responsibility-based instruction (i.e., TPSR) with the sport of soccer infused as the physical activity content (Pill, 2009). The control group (*n* = 8) received the usual physical training-based physical activity instruction. TPSR, with soccer infused, unit and lesson plans were developed and administered to the intervention group by the principal investigator (PI). The traditional physical training-based physical activity instructional lesson plans were developed and administered to the control group by one of the six juvenile correctional officers overseeing the group for that particular day.

TPSR cumulative progression levels of responsibility were slightly modified to use the already established color system of the ICARE program, but remained defined by TPSR. According to Hellison (2010) regarding the levels of Teaching Personal and Social Responsibility, "the levels are 'social constructions,' which simply means that you can modify them in all kinds of ways as long as you remain true to the underlying principles of Teaching Personal and Social Responsibility, including less is more" (2010, p. 32). The control group received the usual physical training-based physical activity instruction by a juvenile correctional officer (JCO) which heavily emphasized calisthenics and sprint intervals.

Eighteen individual lesson plans were developed with the TPSR strategies infused to remain consistent to its approach. As stated by Hellison (2010), "Day-to-day consistency in the use of the four themes and levels of responsibility is an essential feature of TPSR" (p. 41). A daily (e.g., lesson plan) format was developed to achieve consistency in the use of TPSR (see Figure 1).

Lesson Segment	Time	Description
Relational Time	5 - min	Brief individual interaction between instructor and student.
Awareness Talk	5 - min	Iterate, and reiterate, responsibilities to the group: • Respectful to the environment and those within it. • Participate up to capabilities. • Can sustain self-direction during physical activities. • Positively support peers.
Lesson Plan	30 - min	Individual activity: • Running and kicking • Moving toward a loose ball • Attacking • Defending Small group activity: • Kick in or throw into play • Team offense • Team defense Large group activity: Steal the bacon (Key word - Sportsmanship) • Two teams start outside boundaries • Players are assigned numbers • When player's number is called, they go in and get ball which is served by coach and try to score • 2 vs. 2 • 3 vs. 3
Group Meeting	5 - min	Residents' opportunity to discuss the days lesson, behaviors, instruction, etc.
Reflection Time	5 - min	Residents self-reflect on paper their behavior in accordance to the TPSR levels.

Figure 1. Example of a lesson during implemented during intervention utilizing the daily lesson format based from the Teaching Personal and Social Responsibility model. The daily lesson format included relational time, awareness talk, physical activity lesson, group meeting time, and reflection time.

The daily lesson plan format consisted of: (a) A *relational time*, which allowed brief one-to-one interaction between the principal investigator and the residents prior to the lesson; (b) An *awareness talk*, which was used to set the stage prior to the lesson and consisted of the PI reviewing the responsibility levels with the residents; (c) The *physical activity lesson*, which allowed residents the opportunity to practice responsibility during physical activity; (d) A *group meeting time*, which allowed time for residents to express ideas regarding the day's lesson with each other and the PI, and (e) A *reflection time*, which allowed time for residents to self-reflect and evaluate

their responsibility level attained during that day's lesson Hellison (2010).

During the lesson implementation, the PI placed a poster with TPSR levels integrated with the Individualized Comprehensive and Rehabilitative Engagement program terminology in plain view for the residents to refer to throughout the lesson (see Figure 2).

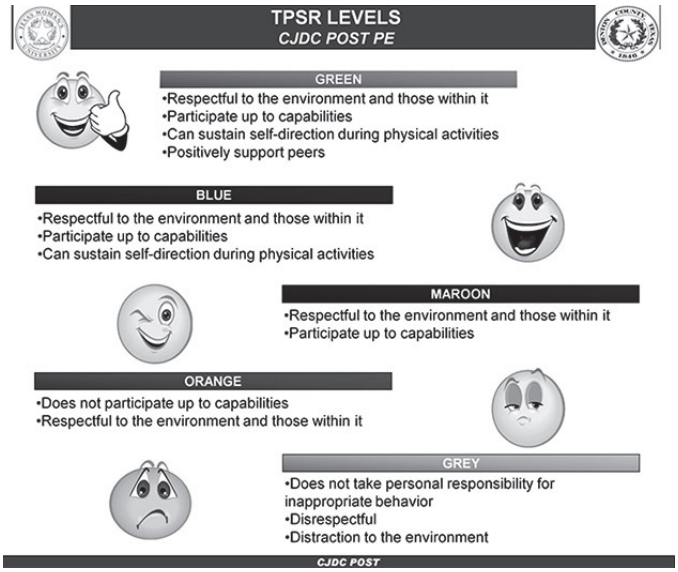

Figure 2. Poster with TPSR themes and strategies infused. TPSR terminology and responsibility levels were represented by the long-term residential program's behavioral color system and placed in clear view for residents to refer to during the intervention sessions.

During the awareness talk portion of the lesson plan format, the instructor discussed the level progression while using the poster as a visual aid for the residents. After each session, participants self-evaluated their responsibility level during the lesson by completing a self-evaluation form developed by the researcher (see Figure 3). Participants circled the appropriate color corresponding with their perceived performance (i.e., grey, orange, maroon, blue, green), as well as, provided a short description as to why they felt their behavior warranted their choice in color.

The procedure for the secondary purpose of this study, involved the principal investigator (PI) interviewing the juvenile correctional officers ($N = 6$) that observed the 6-week Teaching Personal and Social Responsibility intervention in action. The interviews were conducted one-on-one by the PI at a local coffee shop, as well as, within a classroom with sessions lasting approximately 30 minutes each. The interviews consisted of approximately 13 open-ended questions based from an interview guide.

Dependent Measures. The data sources for the primary purpose of this study were collected pre and post intervention and used to collect measures on post adjudicated youths' perception of personal and social responsibility, as well as health-related physical fitness. Personal and social responsibility perception measures were collected using a questionnaire developed by Li, Wright, Rukavina, and Pickering (2008). The *Personal and Social Responsibility Questionnaire* (PSRQ; Li et al., 2008) was designed to assess students' perceptions of personal and social responsibility in physical education.

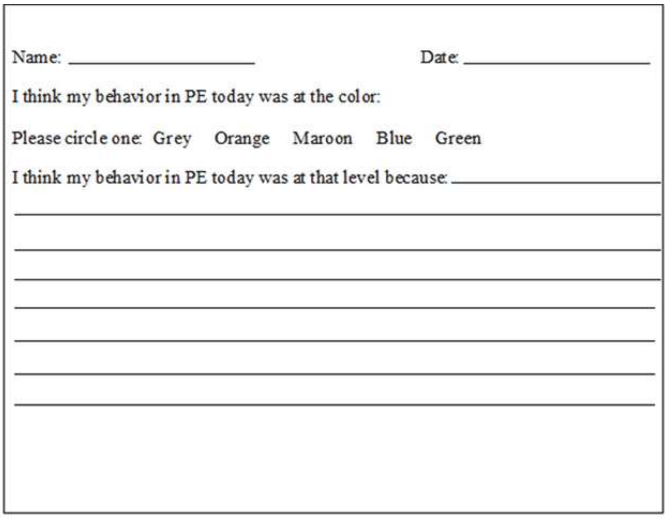

Figure 3. Perceived personal and social responsibility behavior self-evaluation form. Residents completed this form within their reflection time during the last 5 min of the responsibility-based instructional sessions by choosing their responsibility level (i.e., color) and explaining the rationale for their choice.

The Personal and Social Responsibility Questionnaire (PSRQ) is a self-administered 14-item questionnaire that takes approximately 10 minutes to complete. The PSRQ has been determined to have appropriate construct and content validity and was validated by a panel of experts, including the developer, in the Teaching Personal and Social Responsibility (TPSR) model (Li et al., 2008). Health-related physical fitness measures, specifically aerobic cardiovascular, upper body strength, and abdominal strength and endurance, were collected using the related FITNESSGRAM 8 physical fitness test items (Meredith & Welk, 1999).

The data sources for the secondary purpose of this study were semi-structured, face-to-face interviews of juvenile correctional officers (JCOs), as well as the self-evaluation form completed by each intervention group participant at the conclusion of responsibility-based session lessons. The JCO interviews were conducted by the PI with sessions lasting approximately 30 minutes. The interviews consisted of approximately 13 open-ended questions based from an interview guide. The interview guide was used to increase consistency across individual cases (i.e., JCOs). However, elaboration probes and follow-up questions were used (Patton, 2002). The residents randomly assigned to the intervention group completed self-evaluation forms after each session which consisted of a multiple choice and short answer section (see Figure 2). For example, participants were asked to choose the appropriate color corresponding with their perceived performance (i.e., grey, orange, maroon, blue, green), as well as to provide a short de-

scription as to why they felt their behavior warranted their chosen color.

Reliability and Quality. To establish intra-rater reliability, two trials of the specified health-related physical fitness test items used for the primary purpose of the study (i.e., Progressive Aerobic Cardiovascular Endurance Run; PACER, curl-up, push-up) were administered to a sample of seven ($N = 7$) female youth who were post adjudicated. The female youth were also residents of the County Juvenile Detention Center (CJDC) and were completing the Individualized Comprehensive and Rehabilitative Engagement (ICARE) program. However, they were assigned to separate sections and had no interaction with the male youth. The trials to establish intra-rater reliability were conducted with this population because of their post adjudication long-term status. The principal investigator (PI) wanted to establish intra-rater reliability prior to testing the intervention and control group participants. An Intraclass Correlation Coefficient (ICC; Portney & Watkins, 2009) was used for testing intra-rater reliability with multiple scores from the same rater (i.e., researcher). An ICC for the PACER, push-up, and curl-up of .96, .84, and .68 were obtained, respectively.

Six juvenile correctional officers' attitudes on responsibility-based physical education and/or activity instruction (i.e., method used during intervention) were analyzed as individual cases. Furthermore, the self-evaluation form for residents' perceived behavior served as a source for data triangulation (Patton, 2002). A peer researcher was also used during the data analysis. The peer researcher had an in-depth understanding of qualitative inquiry as demonstrated by their numerous publications, of which several were qualitative. An external auditor was also used during the data analysis procedure and had numerous publications, as well as led numerous doctoral dissertations and theses. The researcher was trained in qualitative interviewing methods during his doctoral academic tenure at his university.

Data Analysis

A two-way mixed ANOVA with one repeated factor on the second factor (i.e., time) was used to analyze the data collected with the pretest-post test control group design for the quantitative portion of the study. The outcome data were taken from the personal and social responsibility questionnaire (PSRQ) and health-related fitness scores that were measured both before and after the 6-week intervention.

The constant comparative method was used to systematically examine and refine variations in emergent and grounded concepts from juvenile correctional officers' interview data collected in the qualitative approach and portion of the study (Patton, 2002). Data were prepared by transcribing the interviews verbatim, organized by identifying key terms, reduced by developing phrases, codes, and categories, and generalized into themes (Miles & Huberman, 1994).

The visual analysis method was used to systematically examine the trend from self-evaluation data collected from the residents' perceived personal and social responsibility form for data triangulation during the qualitative portion of the study (Portney & Watkins, 2000). Data were assessed by computing a celeration and split-middle line (see Figure 3). The slope of the data was also determined to demonstrate the rate of change.

Results

A factorial repeated measures ANOVA was used to analyze outcome measures. There were two independent variables (IV) with two levels for group (i.e., between subjects factor) and two levels for time (i.e., within subjects factor). Analyses of the factorial ANOVA for each outcome measure (i.e., Personal and Social Responsibility Questionnaire, Progressive Aerobic Cardiovascular Endurance Run, curl-up, pushup) are reported here.

Primary

There was no significant effect of group for the Personal and Social Responsibility Questionnaire (PSRQ), PACER, or curl-up, indicating that scores from the intervention and control group participants were similar. However, there was a significant interaction effect between time and group, $F(1, 14) = 10.23$, $p < .05$, $r = .65$. This indicated that the amount of change in scores differed across time between the intervention and control group. To further understand this interaction, a simple effects analysis of the two-way interaction was performed. For the measure of pushups there was a significant difference among time on the control group pretest and post test scores. Based from the analysis, it is suggested that the intervention and the control group were similar for post pushups scores, but the control group changed at a faster rate than the intervention group.

Secondary

For the secondary purpose of this study and based on the analyses of the data, juvenile correctional officers' attitudes about responsibility-based physical education and/or activity instruction for post adjudicated youth was influenced by their observations of the implementation of the Teaching Personal and Social Responsibility (TPSR) model. Their attitudes regarding the use of TPSR for post adjudicated youth were captured in the following emergent themes: (a) responsibility-based program was an unanticipated success, (b) responsibility-based program facilitated residents' rehabilitation process, (c) traditional physical activity philosophy change needed, and (d) things needed to facilitate the traditional physical activity program change. In addition, the self-evaluation form completed by the residents directly after each intervention session displayed data that triangulated the influence of the Teaching Personal and Social Responsibility intervention on the JCOs' attitudes.

Responsibility-based program was an unanticipated success. This theme captured the essence of what most JCOs thought about responsibility-based instruction. They reported that their perspective changed from their initial less supportive response. The JCOs observed displays of positive social skills (e.g., participation, teamwork, encouragement) by the residents

which led them to believe that the residents accepted the responsibility-based instructional program.

Juvenile Correctional Officer's changed perspectives. Regarding impressions of the responsibility-based instructional program, William said that the staff had a hard time figuring out the Teaching Personal and Social Responsibility (TPSR) model of instruction at first. Charles provided an example of this initial response when he said, "I was very apprehensive at first." However, with the positive responses to the program by the residents, his initial impression was changed. He explained, "At first I was like there's no way this is going to fit. But, I was very much wrong. I was so wrong. I think the kids responded real well."

The JCO's reported they had a positive impression of the responsibility-based instructional program. As opposed to their traditional physical activity program that was limited in breadth, George thought the responsibility-based instructional program "was excellent for these kids" and that "it was positive for the [Individualized Comprehensive and Rehabilitative Engagement] program." In addition, John felt like the program was received positively by all involved. He said "the fact that it [responsibility-based instructional program] hit well... it really, like from staff and supervisors view of it and the kids' view of it, it was overall a success..."

Residents' social skills positively influenced. Many of the JCOs thought that residents' behavior became increasingly more social. William said the biggest change was "the way they worked together as a team." Charles offered a similar opinion and recognized the salience of teamwork with this population. He said, "They really were happy with putting forth their best effort...this difference between a gang and a team. And they were working together to do one common thing." With regard to residents' behavior prior to responsibility-based instructional program implementation, Jack said that there was a lot of "showboating and trash talking." He further explained that "now, they are so encouraging to each other." In support of this statement William explained how despite resistance from JCOs at times, the residents still insisted on displaying encouraging behavior. William stated:

> The kids get on to me asking if they can encourage other kids a lot more. And my answer is usually no because I like total silence, that's the way I run my section. But these kids actually always request 'can I encourage him to do this, can encourage him to do that,' and the majority of the time I say no, so I am at fault as well.

With regard to the team sport infused into the responsibility-based instructional program, John recognized that the residents grew in respect for one another "a little bit more." This was evident through their increased ability to resolve a conflict. Michael recalled an example of the residents' increased conflict resolution behavior. He stated that, "they were actually able to put their minds together and work it out." In addition, the importance for residents to develop social skills in order to resolve conflict was explained in the following way by Charles:

> It really helps these guys with conflict resolution. It's huge. They are used to thinking like 'the only way we can resolve this is with my hands, or my fists.' But now...they're like 'hey, it's just soccer, It's no big deal.' If they continue to learn these skills, I think they would be much more successful.

Perceived program embracement by residents. A vested affective interest by the residents influenced the attitude of the JCOs toward the perception that the residents embraced the responsibility-based instructional program. The residents started to generalize positive social behavior outside of the physical activity environment. This behavior became apparent when observing the intervention group compared with the control group.

Charles said "what I did see was more bonding outside of PE. Some of these kids actually started forming friendships and bonds. They saw how their peers were helping them succeed." In addition, the residents' affective behavior also caught the attention of the JCOs. William explained this observation:

> The things that they were taught working as a team carried with them into the section. One thing they did learn was encouraging others. In the section they could be crocheting, there could be a dominoes tournament, there could be a homework assignment, and you can see that they're encouraging more to each other. They are trying to be more helpful.

The difference in behavior, with regard to personal and social responsibility, displayed between the intervention and control group was noticeable by the JCOs. This difference contributed to influencing the JCOs' attitude that the implementation of responsibility-based instructional program was successful. William said that "you could see the difference."

Responsibility-based program facilitated residents' rehabilitation process. This theme captured the essence of why the JCOs thought responsibility-based instructional program was generally a success. The social focus of the program empowered the residents to take ownership in their rehabilitation. Responsibility-based instructional models, such as TPSR, that have an affective-focus can be conducive to the overall rehabilitation program.

"They are an active participant in their own rehabilitation." The integration of empowerment within a highly structured environment was a concern for some JCOs. Charles addressed this attitude by explaining, "...your [responsibility-based instructor] program allows them to be themselves and say, 'I'm here to...' they are an active participant in their own rehabilitation. That's important.

Working together "...that's key. That's the real key." William was impressed with the social benefit for residents after the implementation of responsibility-based instructional program. He explained, "I think that's the biggest thing I saw that you [implementing responsibility-based instruction] bring to the table is that your teaching these kids to work as a team rather than individuals that compete against everybody, and that's key. That's the real key."

Personal and social responsibility visual cue was effective guide. John noticed that one of the biggest differences was the implementation of a color value system. With the use of the color value system, residents had the opportunity to choose, as well as reflect on their level of behavior for that session's lesson. George thought the color chart used within the program was "pretty neat, and that it was a good guide for the residents in their sections, the classroom, and how they can use what they are learning outside of just that [physical activity environment]." John said, "I guess some of the stuff, if not the whole program [Teaching Personal and Social Responsibility] that you had would be a great benefit to the facility in general."

Traditional physical activity philosophy change needed. This theme captured the essence of JCOs' attitude toward their traditional physical activity program after being able to observe the responsibility-based instructional program. It became apparent that the traditional physical activity program more closely resembled a military style. The limited instructional experience by JCOs combined with the traditional military style may have perpetuated a behavior management focus ultimately reducing opportunity for affective skill acquisition for the residents. After comparing responsibility-based physical activity and the traditional physical activity, JCOs recognized the possibility that physical activity can serve as a medium in assisting the rehabilitation process for post adjudicated youth.

Behavior management is main focus. The traditional physical activity program focused mainly on behavior. As Jack explained, JCOs' role was "kind of maintaining any situations." In addition, William discussed a similar role for JCOs. He stated that JCOs' focus during the traditional physical activity program was to "look for behavior issues...look for contact issues...look for verbal issues."

"Rehabilitation instead of punishment." With having the opportunity to observe the responsibility-based instructional program, many JCOs changed their attitude about how their physical activity program should look, as well as the need to change their focus. George stated that, "we should lead them in the direction of teamwork or working together, sportsmanship. How to win, how to lose, developing their skills. Have fun at the same time and get something out of it...I believe that should be the main goal, rehabilitation, instead of punishment."

Things needed to facilitate the traditional physical activity program change. This theme captured the essence of JCOs' preferred facilitators on how to change their traditional program toward a responsibility-based program. JCOs reported that a professional that is not a part of the correctional staff serving in the capacity of an officer would be the most effective way to facilitate change toward a responsibility-based instructional program. In addition, they also stated that information in various forms, as well as, training would be an effective facilitator.

"Someone from the outside." JCOs felt that an outsider dynamic for facilitating change toward a responsibility-based instructional program is beneficial in several capacities. Charles discussed how residents are more likely to build trust for an individual that they feel has not come into the physical activity environment with prejudices and/or a behavior management focus. He stated that, "it was nice for them [residents] to interact with someone who is not viewed as staff or someone who is here to 'impinge upon my freedom'." In addition, JCOs felt that it would be beneficial for someone with an expertise to facilitate the program. With regard to responsibility-based instruction, William stated that, "I think it should come from someone who has an understanding...It shouldn't be someone from the inside." Similarly, John mentioned that he preferred "someone overlooking the whole thing." Charles explained that another reason for having a professional from the outside implement responsibility-based instruction was to uphold the integrity of security during physical activity.

Information and training. A less dependent facilitator for changing their traditional physical activity program toward a responsibility-based instructional program was discussed. Jack said that "training, orientation, something" that can be addressed during their meetings would be necessary for the guards to implement Teaching Personal and Social Responsibility (TPSR). John also felt that the juvenile correctional officers (JCOs) would need information in which they can refer to in order to implement the responsibility-based instructional program. He said, "I guess to supply them [JCOs] with resources and, I guess wisdom on how it works and how it doesn't work, you know, the ins and outs."

The post adjudicated youths' personal and social responsibility behavior self-evaluation data were used to triangulate the guards' perception of the responsibility-based instructional program. These data illustrate a positive trend across time for personal and social behavior perception of post adjudicated youth, substantiating JCOs' attitudes about the responsibility-based instructional program implemented within a secure correctional facility. Analyzing the data presented in Figure 4, post adjudicated youths perceived personal and socially responsible behavior was increasing at an average rate of 1.19 times per session.

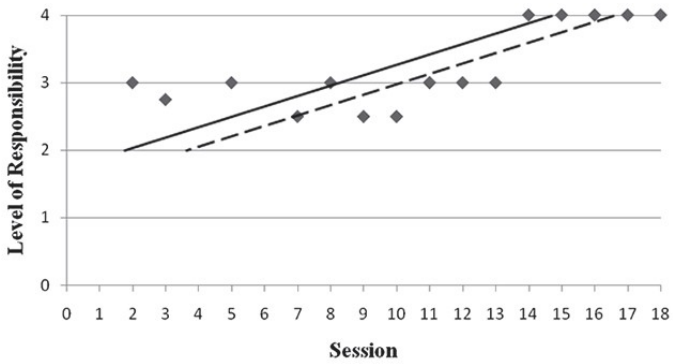

Figure 4. Celeration line adjusted to determine split-middle line. Split-middle line (diagonal dashed line) represents a middle point within the intervention phase (Portney & Watkins, 2000). Data reflects median scores based from the intervention groups' perceived personal and social responsibility behavior self-evaluation form. Data was not collected for session one, four, and six.

Discussion and Conclusion

The influence of a responsibility-based instructional program on the interpersonal, as well as, institutional structures of post adjudicated youth was the focus of this study. Results of the current study support previously reviewed qualitative studies regarding the feasibility of the Teaching Personal and Social Responsibility (TPSR) instructional model to change the attitudes of those who implement physical education and/or activity to at-risk or underserved youth (Debusk & Hellison, 1989). However, it is the first time that change in attitude of juvenile correctional officers toward its adoption as a preferred instructional model within a secured juvenile correctional facility has been demonstrated. The small sample size used within this study was not sufficient to detect significant differences among the personal and social responsibility perception mea-

sures of the intervention and control group. Nonetheless, it was demonstrated that the responsibility-based instructional program (i.e., Teaching Personal and Social Responsibility) may have influenced physical activity behavior at the institutional structure (i.e., juvenile correctional officers' attitude). Moreover, and within the framework of the social ecological model (SEM), the influence at the institutional structure holds promise for influencing physical activity behavior at the interpersonal structure. Although no statistically significant changes were detected at the interpersonal structure (i.e., resident personal and social responsibility perception), it was demonstrated through JCO observation, as well as, post session self-report forms that responsibility-based instruction may have influenced the affective behavior of the residents. The observed increase in affective behavior in the intervention group residents by the JCOs may have influenced the JCOs attitude toward expressing the need to change the traditional physical activity program to a responsibility-based physical activity program with an affective emphasis. This is concordant with the bidirectional relationship between the interpersonal and institutional structures as described within the social ecological model (SEM) framework.

Interpersonal Structure

No statistically significant difference was determined between the intervention and control group on personal and social responsibility perception scores. This finding suggests that responsibility-based instruction had no effect on residents' personal and social responsibility perception. This finding supports the literature related to physical activity for incarcerated youth and its effects on affective measures (Munson, 1988; Munson, Baker, & Lundegren, 1985).

Based from the findings of the quantitative phase of this study, there was no difference between the intervention and control group on health-related physical fitness scores. Munson et al., (1985) obtained similar results with 32 institutionalized juvenile delinquents where there were no significant difference on muscular fitness scores after a 7-week intervention that involved strength training combined with leisure counseling or informal discussion. For this study, this finding suggests that health-related physical fitness was not compromised for residents receiving physical activity instruction within the responsibility-based instructional program group. It is noteworthy that the responsibility-based instructional program was as effective as the traditional physical activity instructional program regarding physical fitness.

A significant interaction in this investigation between time and group was found. This suggests that the control group increased upper body strength at a greater rate than did the group receiving the intervention. Consequently, the upper body strength gains may have increased at a slower rate for participants in the responsibility-based group due to less emphasis on calisthenics and a greater emphasis on lower body activities. Another possible explanation for this finding was the control group's initial lower push-up score as compared to the intervention group.

Although Teaching Personal and Social Responsibility (TPSR) as an instructional approach was not superior based on the statistical results in this study, responsibility-based instructional physical activity (i.e., TPSR) from juvenile correctional officers' perceptions, as well as formative self-report data on the residents' personal and social responsibility perception provide a contrasting view. In this study, the residents' group perception of personal and social responsibility increased in trend at a rate of 1.19 times per session. This finding was determined clinically relevant and consistent with the findings of Hellison and Walsh (2002) who reported that in both personal and social development, responsibility models affect sense of responsibility and other outcome measures in underserved and at-risk youth. The positive trend displayed in the formative data for this study may suggest that residents' perceptions of personal and social responsibility behavior were being positively influenced.

Although statistical significance of the influence of the responsibility-based instructional program was not supported by the findings, the rate of change in behavior of residents receiving TPSR instructional model was strong enough to influence the attitude of juvenile correctional officers. JCOs' observations of the responsibility-based instruction (i.e., TPSR intervention) and its effect on residents' behavior within and outside of the physical activity environment influenced their attitude toward physical activity service provision at the facility. This result is aligned with the social ecological model (SEM), in which a bidirectional relationship between individual and contextual factors occurs as a product of multiple structures of influence (Bronfenbrenner, 1977).

Institutional Structure

The need to investigate the effects of physical activity on health-related behaviors for incarcerated populations has been suggested in the literature for over 20 years (Hitchcock, 1990). To date, few researchers have addressed this need, especially with the population of incarcerated and/or post adjudicated youth (Hilgenbrinck, 2003; Hilgenbrinck, Jackson, Silliman-French, Goode, & Nichols, 2010; Hilgenbrinck, French, Pyfer, & Irons, 2003; Jackson, Yun, Nichols, & French, 2008).

As an instructional approach, responsibility models based from Teaching Personal and Social Responsibility (TPSR) have influenced the attitude and perceptions of instructors (Buchanan, 2001; Debusk & Hellison, 1989). For this study, juvenile correctional officers believed that the responsibility-based instruction (i.e., TPSR) affected the residents' social behavior positively. JCOs' perceived that the residents receiving the responsibility-based instructional program were more encouraging to their peers. This is consistent with the findings of Debusk and Hellison (1989) who reported the impact of a self-responsibility model for delinquency prone youth results in more positive responses about helping others. This result also reinforces the findings of Wright, White, and Gaebler-Spira (2004) who reported that effective implementation of personal and social responsibility model can potentially increase positive social interactions. Juvenile correctional officers also believed that increased conflict resolution skills by the residents were a result of the TPSR instructional approach. Previous researchers have indicated that a responsibility model can impact personal and social development in the area of problem

solving, interpersonal relations, and communication skills (Hellison & Walsh, 2002).

Juvenile correctional officers believed that the Teaching Personal and Social Responsibility (TPSR) instructional approach involved the use of methods that were effective in getting residents to generalize pro social behavior outside of the physical activity environment. This is consistent with the findings of Wright and Burton (2008) who reported that one of the short term outcomes of a responsibility-based physical activity program was seeing the potential for transfer. JCOs gave examples of how, outside of physical activity time and within their sections or classrooms, residents referred back to the TPSR-based color chart that was specifically designed for their rehabilitative program. This result is consistent with previous findings (Watson, Newton, & Kim, 2003).

Juvenile correctional officers (JCOs) believed that the responsibility-based physical activity instructional program was more rehabilitative than their traditional physical activity program that resembled a boot camp. They gave examples of how the boot camp or military-styled program did not provide the same opportunity for social skill development and empowerment. In addition to the perceived lack of social skill development and empowerment opportunities, boot camps have been reported to have no more success at preventing recidivism than traditional incarceration (Willing, 2005). Furthermore, they recognized its potential to promote a positive learning experience, increase sense of ability and positive social interactions, as well as, relevance as a curriculum (Debusk & Hellison, 1989; Wright & Burton, 2008; and Wright, White, & Gaebler-Spira, 2004).

The JCOs in this study expressed a need for professional development training, materials, and/or experts from outside of the secure juvenile correctional facility to be able to successfully change their traditional physical activity program to a responsibility-based instructional approach. A consistent perception held by the JCOs was the need for having an expert who is trained in physical activity instructional methods, especially responsibility-based (i.e., Teaching Personal and Social Responsibility), to facilitate the program change. Previous researchers indicated that one of the juvenile correctional facility administrative staffs' perceived needs for physical activity programs was more staff (Hilgenbrinck et al., 2003). Findings of this study support the literature related to juvenile correctional facility physical activity program perceived needs. However, in this study these needs were reported by the JCOs, or instructors, rather than the administrators (Hilgenbrinck, 2003).

In conclusion, results from this study suggest that the physical activity behavior at the institutional structure of post adjudicated youth may be influenced by a responsibility-based physical activity program that utilizes an affective-focused physical education and/or physical activity instructional model (i.e., Teaching Personal and Social Responsibility; TPSR). Although preliminary results did not demonstrate a statistically significant difference at the interpersonal structure, the TPSR instructional model is a beneficial instructional approach that can positively influence physical activity behavior within a secured juvenile correctional facility at the institutional social ecological structural level. Overall, the results from this study contribute to the evidence-base for affective-focused physical activity instruction for the post adjudicated population.

Limitations

This study had several limitations. The small sample size may have decreased the ability to detect differences. The duration in which the intervention was implemented (i.e., 6 weeks) may have been insufficient to detect changes in personal and social responsibility. The physical activity content infused in TPSR for this intervention (i.e., soccer) was a collaborative sport and may influence the facilitation of increased social interaction and perception. The principal investigator (PI) as the instructor of the intervention group was not a member of the correctional staff and the PI's pedagogical experience may have had a positive or negative influence on results. Further research on responsibility-based physical activity instruction for adjudicated youth is recommended. It is now recommended to elaborate on the Teaching Personal and Social Responsibility instructional model for adjudicated youth by developing a multiple-site randomized study with longer intervention duration, to evaluate the benefit of such evidence-based interventions amongst secured juvenile correctional facilities in order to contribute to the evidence-base and to move toward ensuring quality physical education and/or activity for adjudicated youth.

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