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## CASELOADS AND JOB DEMOGRAPHICS OF ADAPTED PHYSICAL EDUCATORS IN THE UNITED STATES<sup>1</sup>

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*Summary.*—This study examined adapted physical educators' caseloads, service delivery modalities, and the amount of direct and indirect instructional time provided to students with disabilities in general physical education. The participants were a national sample of 139 certified adapted physical educators, 100 women and 39 men, representing 31 states. Certified adapted physical educators were defined as physical educators who passed the Adapted Physical Education National Standards Exam. The sample completed a web-based survey and had a return rate of 34%. The participants typically worked 41.2 hr. per week and allocated 52.3% of their time to direct and 13.8% of their time to indirect services. Students on the caseloads received on average 32 min. of instruction per week. For direct services, 27% of the participants reported serving preschool students, 72% elementary school students, 57% middle or junior high school students, and 59% secondary or high school students. For indirect services, 16% of the participants reported serving preschool students, 55% elementary school students, 41% middle and junior high school students, and 38% secondary or high school students. The participants carried a mean caseload of 51 students, with 42 students served directly and nine students served indirectly. The two factors that possibly influenced the participants' caseloads include students' grade level and policies within each state or school district. The findings are compared to the national job analysis (Kelly & Gansneder, 1998).

The number of children with disabilities receiving special education and related services has steadily grown since the passage of the Education for All Handicapped Children Act in 1975, currently known as the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA of 2004). These mandates recognize that, to the extent possible, all children with disabilities are entitled to a free appropriate public education that emphasizes special education and related services [20 U.S.C. 1400(d) (1)(A)]. Special education was defined as specially designed instruction, at no cost to parents, to meet the unique needs of a child with a disability, including instruction in physical education [20 U.S.C. 1401(602)(25)(B)]. The inclusion of physical education in the definition of special education highlighted the importance of physical education for children with disabilities. It also identified physical education as a direct service that must be provided to all students who qualify for special education services as

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opposed to related services, such as physical or occupational therapy, that are required only when they are needed for a child.

In order to ensure high quality special education instruction for students with disabilities, the IDEIA of 2004 mandated specific requirements for special educators to be "highly qualified" in the core academic subjects in which they provide direct instruction. However, the definition did not specify who is highly qualified to provide physical education services to students with disabilities. The definition was left to the individual state certification requirements based on the assumption that these currently existed (Kelly, 2006). Although by 1991, 14 states implemented an endorsement or certification in adapted physical education, the majority of states have not defined qualification criteria for teachers (Kelly, 1991). As a result, it was feared that many students with disabilities were not receiving appropriate physical education services, mandated by the law, because these services, when provided, were being provided by professionals with little or no training in adapted physical education. Adapted physical education was defined in this study as physical education that has been adapted or modified, so that it is appropriate for both students with and without disabilities.

The lack of qualification criteria for physical education teachers led the National Consortium for Physical Education and Recreation of Individuals with Disabilities (NCPERID) to develop Adapted Physical Education National Standards (APENS) and the APENS examination (Kelly, 2006). One of the steps in the development of the APENS was to conduct a national job analysis survey (Kelly & Gansneder, 1998). The purpose of the survey was to determine educational degrees, teaching experience, job demographics, roles and responsibilities, caseloads, and preparation of teachers providing physical education services to students with disabilities.

Participants were a stratified sample of 293 teachers who were currently providing either direct or indirect physical education services to students with disabilities in their school or district. Findings indicated that the sample represented experienced and well-educated teachers who on average served 4.4 schools and 103.8 students each week. The teachers reported providing direct services to 68% and indirect services to 32% of students on their caseload. For both direct and indirect services, the teachers reported working with all age groups and degrees of disability. The findings also revealed that the teachers were contracted to work on average 36.1 hr. per week ( $SD=6.9$ ). Within their typical workweek, they spent on average 52% of their time providing direct services ( $M=18.7$  hr.,  $SD=10.7$ ), 26% of their time providing indirect services ( $M=9.5$  hr.,  $SD=10.4$ ), 38% of their time performing outside responsibilities ( $M=13.7$  hr.,  $SD=12.7$ ), and

15% of their time traveling between schools ( $M=5.5$  hr.,  $SD=5.1$ ). Each student on the teachers' caseloads received on average 16 min. of either direct or indirect physical education instruction a week. These findings were similar to those reported by Dillon and Sherrill (2003).

Results of the national job analysis (Kelly & Gansneder, 1998) indicated that the teachers carried relatively high caseloads ( $M=103$ ) and that their students received a relatively small amount of physical education instruction a week ( $M=16$  min.). The size of teachers' caseloads has always been a primary concern in the provision of special education services (Russ, Chiang, Rylance, & Bongers, 2001). Special education research suggests that large caseloads impede the teachers' abilities to provide adequate services to their students and minimize opportunities for individualization and academic success (Moody, Vaughn, Hughes, & Fisher, 2000).

Since the national job analysis, the special education field has experienced significant changes in the ways in which services are provided to children with disabilities. Increasingly, children with disabilities are served in inclusive settings, and special educators are more likely to work in itinerant indirect-service delivery roles (Odom, Horn, Marquart, Hanson, Wolfberg, Beckman, *et al.*, 1999). The same shift in the service delivery modalities was evidenced in physical education services (Heikinaro-Johansson, Sherrill, French, & Huuhka, 1995; Block & Conatser, 1999; Lienert, Sherrill, & Myers, 2001; Lytle & Collier, 2002). With the implementation of APENS and the current trend toward inclusive education, it is important to examine the changes in the adapted physical educators' job demographics. Therefore, the purpose of the present study was to conduct a 13-yr. follow-up survey to examine current adapted physical educators' caseloads, service delivery modalities, and the amount of direct and indirect instructional time they provide to students with disabilities in physical education.

## METHOD

### *Participants*

The participants were 139 teachers (100 women, 39 men) from 31 states in the USA. Only those who were APENS certified and reported currently providing physical education services to students with disabilities were included in the study. The sample was limited to these teachers since the study aimed to assess effects of the implementation of APENS on teachers' caseloads and job demographics.

### *Instrumentation*

The survey instrument was adapted from the instrument used in Kelly and Gansneder (1998), which consisted of 31 items. The current survey was web based and limited to 16 items that specifically collected infor-

mation for this study's objectives. The survey was divided into three sections. The first section was composed of three numeric and three multiple-response items, and gathered information on participants' demographics (i.e., age, sex, and state in which they were teaching), undergraduate and graduate degrees and majors, and teaching experience. The second section gathered information on participants' job demographics. This section was composed of seven numeric items and one multiple-response item and asked about the number of students served, percentage of students served directly and indirectly, number of students who could benefit from physical education services but were not currently being served, program levels served, number of hours worked, and job responsibilities. The third section was added to the original instrument to gain insight as to whether the participants viewed the amount of direct and indirect physical education instruction provided to students with disabilities as adequate or inadequate. This section was composed of two five-point Likert-type scale items ranging from 5: Strongly agree to 1: Strongly disagree (e.g., "The amount of instructional time allocated for direct physical education services in my school or district is adequate to meet the physical education needs of the students I serve as part of my caseload").

The current instrument was assessed for content validity by a panel of six experts. All experts' comments were addressed prior to the survey administration. Test-retest reliability was assessed on a sample of 33 teachers from the same population. The test-retest correlation coefficients per item ranged between .77 and 1.00, with a mean of .89.

### *Procedure*

The NCPERID supplied a list of 757 teachers who had passed the AP-ENS exam. To verify contact information and participant eligibility, an initial letter was sent to all teachers on the list via e-mail and mail with two subsequent follow-up mailings as suggested by Dillman, Eltinge, Groves, and Little (2001). The initial letter asked the teachers if they were interested in the study and verified that they were currently APENS-certified and provided either direct or indirect physical education services to students with disabilities in the U.S. From the original mailing list, 479 teachers could not be located or did not reply to the initial letter, 45 responded that they were not currently providing physical education services to students with disabilities, and 52 reported they were working at the college or university level. The resulting sample of 180 teachers was subsequently sent a link to a web-based survey in January 2006. Although 160 teachers completed the survey, 21 of these teachers were subsequently removed from the sample because they either failed to answer the questions regarding their caseload or reported that they had no students with disabilities on

their caseload. Therefore, the current results are based upon responses of 139 teachers representing 31 States in the U.S. and a response rate of 34%.

### Data Analysis

Descriptive statistics, means, standard deviations, and ranges were calculated for all numeric survey items. Frequency distributions and percentages were calculated for all nominal survey items. Some of the percentages in the results were greater than 100% because the survey allowed for multiple responses. To compare the teachers' caseloads, service delivery modalities, and the amount of physical education instruction provided to students with disabilities, the current data were compared with data reported in Kelly and Gansneder (1998).

### RESULTS

The mean age of the sample ( $N = 139$ ) was 41.2 yr. ( $SD = 10.61$ , range = 23–61). The sample reported a total mean of 13.7 yr. ( $SD = 9.43$ , range = 0–30) of full-time, for-pay teaching experience in preschool to Grade 12 physical education. Of the total years of physical education teaching experience, the sample reported a mean of 11.4 yr. ( $SD = 8.51$ , range = 1–30) of experience teaching students with disabilities in physical education. All of the participants reported teaching at multiple education levels, with 39% reporting teaching at the preschool level, 86% at the elementary level, 70% at the middle or junior high school level, and 70% at the secondary or high school level.

A summary of the participants' undergraduate and graduate degrees and major areas of study is provided in Table 1. Overall, the sample possessed higher degrees in education with all participants reporting bachelor's degrees, 83% reporting master's degrees, and 3% reporting doctoral degrees, in three areas: (a) adapted physical education, (b) physical education, and (c) other. Table 1 shows that a majority of the sample (73%) had an undergraduate degree in physical education and approximately half (49%) of the sample had a graduate degree in adapted physical education.

Caseload was defined in this study as the total number of students who have physical education on their individualized education program, and to whom the teacher provided direct or indirect services. The case-

TABLE 1  
PARTICIPANTS' DEGREES AND MAJOR AREAS OF STUDY

Major	Bachelor Degree		Master's Degree		Doctoral Degree	
	<i>n</i>	% of total	<i>n</i>	% of total	<i>n</i>	% of total
Total	139	100	116	83.45	4	2.88
Adapted Physical Ed.	8	5.76	68	48.92	2	1.44
Physical Ed.	101	72.66	19	13.67	0	0
Other	30	21.58	29	20.86	2	1.44

load question was composed of two parts. In the first part, the participants were asked to report the total number of students with disabilities they served each week. In the second part, they were asked to divide this total number into two categories: the number of students served directly and the number of students served indirectly. The direct services were defined as providing specially designed individualized or group physical education instruction to students with disabilities who have physical education on their individualized education program. Indirect services were defined as assistance (consultation, collaboration, or supervision) of general educators or special educators, who then provide direct physical education instruction to students with disabilities.

The data indicated that, on average, the participants had a weekly caseload of 50.5 students ( $SD=41.1$ , range=3–300). Direct services were provided to 41.4 students ( $SD=36.4$ , range=0–220) and indirect services were provided to 9.1 students ( $SD=27.6$ , range=0–300). The caseload data were further collapsed into six caseload-size categories. The percentage of the participants reporting numbers in each caseload-size category is shown in parentheses: 1–50 (64%) students, 51–100 (25%) students, 101–150 (8%) students, 151–200 (1%) students, 201–250 (1%) students, and 251–300 (1%) students. It should be noted that there was enormous variation in the caseload sizes reported across the 31 states represented in the study. The largest caseloads were reported in the states of Indiana (146 students), Pennsylvania (110 students), Ohio (108 students), and Georgia (96 students).

Participants were also asked if there were additional students in their district who could benefit from either direct or indirect physical education services. They indicated that, on average, 37.8 students ( $SD=65.8$ , range=0–350) could benefit from the services, but were not currently being served. Of this total, the teachers reported that 22.2 students ( $SD=44.01$ , range=0–300) could benefit from direct services and 19.8 students ( $SD=39.67$ , range=0–200) could benefit from indirect services. The reason these values total to more than 37.8 students is that a couple of teachers indicated that some students could benefit from both direct and indirect adapted physical education services. When combining the average number of students who could benefit from the services ( $n=37.8$ ) with the actual number of students currently being served ( $n=50.5$ ), it is possible that the average teacher could have a caseload of 88.3 students.

The results also showed that the teachers were contracted to work, on average, 37.9 hr. per week, but routinely worked 41.2 hr. per week. Within their typical workweek, teachers spent, on average, 52% of their time (i.e., 21.6 hr.) providing direct services and 13.7% of their time (i.e., 5.6 hr.) providing indirect services. The remaining time (32%) was devoted to administrative responsibilities (13% or 0.32 hr.), nonadapted PE teaching respon-

sibilities (13% or 0.31 hr.), and outside work responsibilities (6% or 0.14 hr.). Seven percent of teachers reported not providing any direct services, and 28% reported not providing any indirect services to students on their caseloads. More than half (57%) of the participants reported not performing any outside work responsibilities, and 17% reported not performing any administrative responsibilities.

Participants were also asked to indicate the age groups of the students they served. All reported serving multiple educational levels. The data indicated that 27% of the participants reported providing direct services to preschool students, 72% to elementary school students, 57% to middle or junior high school students, and 59% to secondary or high school students. For indirect services, 16% of the participants reported serving preschool students, 55% elementary school students, 41% middle and junior high school students, and 38% secondary or high school students.

While the survey did not ask the teachers to report the actual amount of instructional time that was provided to their students, it is possible to calculate an estimate as was done by Kelly and Gansneder (1998). The estimate is based on the ratio between the amount of instructional time the teacher has per week and the number of students on his or her caseload. To estimate how much physical education instruction each student on the average caseload would receive, the average total direct and indirect instructional time was summed (21.6 hr. + 5.8 hr., 27.2 hr.  $\times$  60 = 1,632 min.) and the result was divided by the average caseload (50.5 students). The result (1,632 min.  $\div$  50.5 students = 32.3 min.) suggested that, on average, each student on the teacher's caseload was receiving only 32.3 min. of physical education instruction each week, which is 19.4 hr. (36 wk.  $\times$  32.3 min.) of instruction each year.

Participants were also asked to rate their perception regarding the amount of time they spent providing physical education services to students with disabilities using a 5-point Likert-type scale with anchors 5: Strongly agree and 1: Strongly disagree ["The amount of instructional time allocated for direct (indirect) APE services in my school or district is adequate to meet the physical education needs of the students I teach as part of my caseload"]. Overall, the participants appeared satisfied with the amount of time that was allocated for direct ( $M=3.40$  hr.,  $SD=1.27$ ) and indirect services ( $M=3.25$  hr.,  $SD=1.09$ ). For direct services, 19% strongly agreed, 40% agreed, 11% were undecided, 19% disagreed, and 10% strongly disagreed. For indirect services, 10% strongly agreed, 37% agreed, 29% were undecided, 16% disagreed, and 8% strongly disagreed.

#### DISCUSSION

The purpose of the present study was to conduct a 13-yr. follow-up survey to examine current adapted physical educators' caseloads, service



delivery modalities, and the amount of direct and indirect instructional time they provide to students with disabilities in physical education. The first national job analysis (Kelly & Gansneder, 1998) was administered in the spring of 1993 to 293 teachers who served students with disabilities in physical education classes. The current survey was administered in the spring of 2006 to 139 teachers who were additionally certified according to the Adapted Physical Education National Standards (APENS). To become a nationally certified adapted physical educator, a person must meet the following requirements: (a) hold a bachelor's degree and a valid state license to teach physical education, (b) complete 12 credits of course work in adapted PE, (c) complete a minimum of 200 hr. of supervised teaching experience with students with disabilities in physical education, and (d) pass the APENS exam. The current results should be interpreted cautiously since they are based on a relatively small sample of 139 teachers from 31 states reflecting an overall return rate of 34%.

When compared to the findings of Kelly and Gansneder (1998), the current findings indicated a marked reduction in caseload size from 104 to 51 students and an increase in instructional time students with disabilities received in physical education per week (from 16 to 32 minutes). Although these are very positive developments, some teachers still reported unacceptably large caseloads and others reported that many additional students in their school district could benefit from additional physical education services but were not currently receiving them. Interestingly, most of the participants perceived the amount of instructional time allocated for direct or indirect physical services in their school or district as adequate to meet the needs of students on their caseload. Caution should be taken in the interpretation of the teachers' perception ratings as they could be affected by factors such as social desirability. The teachers might have been biased to answer on the positive side because, professionally, it is their responsibility to provide an adequate amount of services to students on their caseloads. It would be interesting to see whether the findings would have changed if the teachers were provided with empirical data describing the actual amount of services their students receive.

Similarly to Kelly and Gansneder (1998), the study showed a huge variability in teachers' caseloads and, consequently, in the amounts of physical education instructional time provided to students with disabilities. Many factors might have contributed to this variability. For example, continuous evidence exists that teachers provide more direct or indirect services to elementary school-age students than to other age groups (Kelly & Gansneder, 1998; Lytle & Collier, 2002). One may assume as children get older, they more often enter general education settings and, therefore, do not need as many services. However, a review by Block and Obrusnikova

(2007) clearly indicated that students in upper grades do not always feel included and experience frustrations and social isolation in such settings. While direct services may not always be desirable in these settings, it becomes essential for special and general educators to effectively collaborate with adapted physical education specialists to meet the needs of all students (Lytle & Collier, 2002).

Another factor that might have contributed to the caseload variability is the size of the state or the caseload policies within each state (Russ, *et al.*, 2001; Jackson, 2003). Detailed analysis indicated that most participants who reported large caseloads provided services in states with relatively large school districts. Caseload policies within each state remain inconsistent depending on many factors such as state budgets and availability of qualified personnel, which may affect the state caseload sizes (Russ, *et al.*, 2001). Larger caseloads may simultaneously increase the amount of time spent in meetings and other administrative responsibilities. This could increase instructional group sizes and minimize opportunities for individualization and academic success (Moody, *et al.*, 2000). Given the estimate that the average student on the teachers' caseloads only received 32 min. of physical education instructional time a week, every effort should be made to reduce these caseloads so that the teachers can better address their students' physical education needs.

### *Implications and Applications*

The current research provides empirical directions for policymakers, administrators, and educators attempting to formulate consistent caseload policies in their states and school districts. The survey should be replicated on a larger sample so that the findings could be generalized to the population. In fact, the population should be expanded to all teachers providing physical education services to students with disabilities, not just those who are APENS certified, so that we can assess the differences in job demographics between those two groups. Future investigators should also use a qualitative approach (e.g., personalized interview or field notes) to yield a richer view of the factors that contribute to caseload variability in the population or the impact of caseloads on student performance or teacher attrition. This information could assist teacher preparation programs in designing curricula or professional organizations in providing effective professional development activities and developing more effective recruitment strategies.

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*Accepted October 21, 2009.*

Caseloads and Job Demographics of Adapted Physical Educators in the United States<sup>1</sup>

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## Caseloads and Job Demographics of Adapted Physical Educators in the United States

## Summary

This study examined adapted physical educators' caseloads, service delivery modalities, and the amount of direct and indirect instructional time provided to students with disabilities in general physical education. The participants were a national sample of 139 certified adapted physical educators, 100 women and 39 men, representing 31 States. Certified adapted physical educators were defined as physical educators who passed the Adapted Physical Education National Standards Exam. The sample completed a web-based survey and had a return rate of 34%. The participants typically worked 41.2 hr. per week and allocated 52.3% of their time to direct and 13.8% of their time to indirect services. Students on the caseloads received on average 32 min. of instruction per week. For direct services, 27% of the participants reported serving preschool students, 72% elementary school students, 57% middle or junior high school students, and 59% secondary or high school students. For indirect services, 16% of the participants reported serving preschool students, 55% elementary school students, 41% middle and junior high school students, and 38% secondary or high school students. The participants carried a mean caseload of 51 students, with 42 students served directly and nine students served indirectly. The two factors that possibly influenced the participants' caseloads include students' grade level and policies within in each state or school district. The findings are compared to the national job analysis (Kelly & Gansneder, 1998).

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The participants were 139 teachers (100 women and 39 men) from 31 states of the USA. Only those who were APENS certified and reported currently providing physical education services to students with disabilities were included in the study. The sample was limited to these teachers since the study aimed to assess effects of the implementation of APENS on teachers' caseloads and job demographics.

### *Instrumentation*

The survey instrument was adapted from the instrument used in Kelly and Gansneder (1998), which consisted of 31 items. The current survey was web-based and limited to 16 items that specifically collected information for this study's objectives. The survey was divided into three sections. The first section was composed of three numeric and three multiple-response items and gathered information on participants' demographics (i.e., age, sex, and state in which they were teaching), undergraduate and graduate degrees and majors, and teaching experience. The second section gathered information on participants' job demographics. This section was composed of seven numeric items and one multiple-response item and asked about the number of students served, percentage of students served directly and indirectly, number of students who could benefit from physical education services but were not currently being served, program levels served, number of hours worked, and job responsibilities. The third section was added to the original instrument to gain insight whether the participants viewed the amount of direct and

indirect physical education instruction provided to students with disabilities as adequate or inadequate. This section was composed of two five-point Likert-type scale items ranging from 5=strongly agree to 1=strongly disagree (e.g., The amount of instructional time allocated for direct physical education services in my school or district is adequate to meet the physical education needs of the students I serve as part of my caseload).

The current instrument was assessed for content validity by a panel of six experts. All experts' comments were addressed prior to the survey administration. Test-retest reliability was assessed on a sample of 33 teachers from the same population. The test-retest correlation coefficients per item ranged between .77 and 1.00, with a mean of .89.

### *Procedure*

The NCPERID supplied a list of 757 teachers who had passed the APENS exam. To verify contact information and participant eligibility, an initial letter was sent to all teachers on the list via e-mail and mail with two subsequent follow-up mailings as suggested by Dillman, Eltinge, Groves, and Little (2001). The initial letter asked the teachers if they were interested in the study and verified that they were currently APENS-certified and provided either direct or indirect physical education services to students with disabilities in the U.S. From the original mailing list, 479 teachers could not be located or did not reply to the initial letter, 45 responded that they were not currently providing physical education services to students with disabilities, and 52 reported they were working at the college or university level. The resulting sample of 180 teachers was subsequently sent a link to a web-based survey in January 2006. Although 160 teachers completed the survey, 21 of these teachers were subsequently removed from the sample because they either failed to answer the questions regarding their caseload or reported that they

had no students with disabilities on their caseload. Therefore, the current results are based upon responses of 139 teachers representing 31 States in the U.S. and a response rate of 34%.

### *Data Analysis*

Descriptive statistics, means, standard deviations, and ranges were calculated for all numeric survey items. Frequency distributions and percentages were calculated for all nominal survey items. Some of the percentages in the results were greater than 100% because the survey allowed for multiple responses. To compare the teachers' caseloads, service delivery modalities, and the amount of physical education instruction provided to students with disabilities, the current data were compared with data reported in (Kelly & Gansneder, 1998).

### Results

The mean age of the sample ( $n = 139$ ) was 41.2 yr. ( $SD = 10.61$ , range = 23–61). The sample reported a total mean of 13.7 yr. ( $SD = 9.43$ , range = 0–30) of full-time, for-pay teaching experience in preschool to Grade 12 physical education. Of the total years of physical education teaching experience, the sample reported a mean of 11.4 yr. ( $SD = 8.51$ , range = 1–30) of experience teaching students with disabilities in physical education. All of the participants reported teaching at multiple education levels, with 39% reporting teaching at the preschool level, 86% at the elementary level, 70% at the middle or junior high school level, and 70% at the secondary or high school level.

A summary of the participants' undergraduate and graduate degrees and major areas of study is provided in Table 1. Overall, the sample possessed higher degrees in education with all participants reporting bachelor's degrees, 83% reporting master's degrees, and 3% reporting doctoral degrees, in three areas: (a) adapted physical education, (b) physical education, and (c)

other. Table 1 shows that a majority of the sample (73%) had an undergraduate degree in physical education and approximately a half (49%) of the sample had a graduate degree in adapted physical education.

Caseload was defined in this study as the total number of students who have physical education on their individualized education program, and to whom the teacher provided direct or indirect services. The caseload question was composed of two parts. In the first part, the participants were asked to report the total number of students with disabilities they served each week. In the second part, they were asked to divide this total number into two categories: the number of students served directly and the number of students served indirectly. The direct services were defined as providing specially designed individualized or group physical education instruction to students with disabilities who have physical education on their individualized education program. Indirect services were defined as assistance (consultation, collaboration, or supervision) of general educators or special educators, who then provide direct physical education instruction to students with disabilities.

The data indicated that on average the participants had a weekly caseload of 50.5 students ( $SD = 41.1$ , range = 3–300). Direct services were provided to 41.4 students ( $SD = 36.4$ , range = 0–220) and indirect services were provided to 9.1 students ( $SD = 27.6$ , range = 0–300). The caseload data were further collapsed into six caseload-size categories. The percentage of the participants reporting numbers in each caseload-size category is shown in parentheses: 1–50 (64%) students, 51–100 (25%) students, 101–150 (8%) students, 151–200 (1%) students, 201–250 (1%) students, and 251–300 (1%) students. It should be noted that there was enormous variation in the caseload sizes reported across the 31 states represented in the study. The largest

caseloads were reported in the states of Indiana (146 students), Pennsylvania (110 students), Ohio (108 students), and Georgia (96 students).

Participants were also asked if there were additional students in their district who could benefit from either direct or indirect physical education services. They indicated that on average 37.8 students ( $SD = 65.8$ , range = 0–350) could benefit from the services, but were not currently being served. Of this total, the teachers reported that 22.2 students ( $SD = 44.01$ , range = 0–300) could benefit from direct services and 19.8 students ( $SD = 39.67$ , range = 0–200) could benefit from indirect services. The reason these values total to more than 37.8 students is that a couple of teachers indicated that some students could benefit from both direct and indirect adapted physical education services. When combining the average number of students who could benefit from the services ( $n = 37.8$ ) with the actual number of students currently being served ( $n = 50.5$ ), it is possible that the average teacher could have a caseload of 88.3 students.

The results also showed that the teachers were contracted to work on average 37.9 hr. per week, but routinely worked 41.2 hr. per week. Within their typical workweek, teachers spent on average 52% of time (i.e., 21.6 hr.) providing direct services and 13.7% of time (i.e., 5.6 hr.) providing indirect services. The remaining time (32%) was devoted to administrative responsibilities (13% or 0.32 hr.), non-adapted PE teaching responsibilities (13% or 0.31 hr.), and outside work responsibilities (6% or 0.14 hr.). Seven percent of teachers reported not providing any direct services and 28% reported not providing any indirect services to students on their caseloads. More than half (57%) of the participants reported not performing any outside work responsibilities and 17% reported not performing any administrative responsibilities.

Participants were also asked to indicate the age groups of the students they served. All reported serving multiple educational levels. The data indicated that 27% of the participants reported providing direct services to preschool students, 72% to elementary school students, 57% to middle or junior high school students, and 59% to secondary or high school students. For indirect services, 16% of the participants reported serving preschool students, 55% elementary school students, 41% middle and junior high school students, and 38% secondary or high school students.

While the survey did not ask the teachers to report the actual amount of instructional time that was provided to their students, it is possible to calculate an estimate as was done by Kelly and Gansneder (1998). The estimate is based on the ratio between the amount of instructional time the teacher has per a week and the number of students on his or her caseload. To estimate how much physical education instruction each student on the average caseload would receive, the average total direct and indirect instructional time was summed (21.6 hr. + 5.8hr., 27.2 hr. x 60 = 1,632 min.) and the result was divided by the average caseload (50.5 students). The result (1,632 min. ÷ 50.5 students = 32.3 min.) suggested that on average each student on the teachers' caseload was receiving only 32.3 min. of physical education instruction each week, which is 19.4 hr. (36 wk. × 32.3 min.) of instruction each year.

Participants were also asked to rate their perception regarding the amount of time they spent providing physical education services to students with disabilities using a 5-point Likert-type scale with anchors 5=Strongly agree and 1=Strongly disagree ("The amount of instructional time allocated for direct (indirect) APE services in my school or district is adequate to meet the physical education needs of the students I teach as part of my caseload.") Overall, the

participants appeared satisfied with the amount of time that was allocated for direct ( $M = 3.40$  hr.,  $SD = 1.27$ ) and indirect services ( $M = 3.25$  hr.,  $SD = 1.09$ ). For direct services, 19% strongly agreed, 40% agreed, 11% were undecided, 19% disagreed, and 10% strongly disagreed. For indirect services, 10% strongly agreed, 37% agreed, 29% were undecided, 16% disagreed, and 8% strongly disagreed.

### Discussion

The purpose of the present study was to conduct a 13-year follow up survey to examine current adapted physical educators' caseloads, service delivery modalities, and the amount of direct and indirect instructional time they provide to students with disabilities in physical education. The first national job analysis (Kelly & Gansneder, 1998) was administered in the spring of 1993 to 293 teachers who served students with disabilities in physical education classes. The current survey was administered in the spring of 2006 to 139 teachers who were additionally certified according to the Adapted Physical Education National Standards (APENS). To become a nationally certified adapted physical educator, a person must meet the following requirements: (a) hold a bachelor's degree and a valid state license to teach physical education, (b) complete twelve credits of course work in adapted PE, (c) complete a minimum of 200 hours of supervised teaching experience with students with disabilities in physical education, and (d) pass the APENS exam. The current results should be interpreted cautiously since they are based on a relatively small sample of 139 teachers from 31 states reflecting an overall return rate of 34%.

When compared to the findings of Kelly and Gansneder (1998), the current findings indicated a marked reduction in caseload size from 104 to 51 students and an increase in

instructional time students with disabilities received in physical education per week (from 16 to 32 min). Although these are very positive developments, some teachers still reported unacceptably large caseloads and others reported that many additional students in their school district could benefit from additional physical education services but were not currently receiving them. Interestingly, most of the participants perceived the amount of instructional time allocated for direct or indirect physical services in their school or district as adequate to meet the needs of students on their caseload. Caution should be taken in the interpretation of the teachers' perception ratings as they could be affected by factors such as social desirability. The teachers might have been biased to answer on a positive side because, professionally, it is their responsibility to provide adequate amount of services to students on their caseloads. It would be interesting to see whether the findings would have changed if the teachers were provided with empirical data describing the actual amount of services their students receive.

Similarly to Kelly and Gansneder (1998), the study showed a huge variability in teachers' caseloads and, consequently, in the amounts of physical education instructional time provided to students with disabilities. Many factors might have contributed to this variability. For example, continuous evidence exists that teachers provide more direct or indirect services to elementary school-aged students than to other age groups (Kelly & Gansneder, 1998; Lytle & Collier, 2002). One may assume as children get older, they more often enter general education settings and, albeit, do not need as many services. However, review by Block and Obrusnikova (2007) clearly indicated that students in upper grades do not always feel included and experience frustrations and social isolation in such settings. While direct services may not always be desirable in these



settings, it becomes essential for special and general educators to effectively collaborate with adapted physical education specialists to meet the needs of all students (Lytle & Collier, 2002).

Another factor that might have contributed to the caseload variability is the size of the state or the caseload policies within each state (Russ, *et al.*, 2001; Jackson, 2003). Detailed analysis indicated that most participants who reported large caseloads provided services in states with relatively large school districts. Caseload policies within each state remain inconsistent depending on many factors such as state budgets and availability of qualified personnel, which may affect the state caseload sizes (Russ, *et al.*, 2001). Larger caseloads may simultaneously increase the amount of time spent in meetings and other administrative responsibilities. This could increase instructional group sizes and minimize opportunities for individualization and academic success (Moody, *et al.*, 2000). Given the estimate that the average student on the teachers' caseloads only received 32 min. of physical education instructional time a week, every effort should be made to reduce these caseloads so that the teachers can better address their students' physical education needs.

### *Implications and Applications*

The current research provides empirical directions for policymakers, administrators, and educators attempting to formulate consistent caseload policies in their states and school districts. The survey should be replicated on a larger sample so that the findings could be generalized to the population. In fact, the population should be expanded to all teachers providing physical education services to students with disabilities not just those APENS-certified, so that we can assess the differences in job demographics between those two groups. Future investigators should also use a qualitative approach (e.g., personalized interview or field notes) to yield a

richer view of the factors that contribute to caseload variability in the population or the impact of caseloads on student performance or teacher attrition. This information could assist teacher preparation programs in designing curricula or professional organizations in providing effective professional development activities and developing more effective recruitment strategies.

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*Accepted October 21, 2009.*

Table 1. Participants' Degrees and Major Areas of Study

Major	Bachelor degree		Master's degree		Doctoral degree	
	<i>n</i>	% of total	<i>n</i>	% of total	<i>n</i>	% of total
Total	139	100	116	83.45	4	2.88
Adapted Physical Ed.	8	5.76	68	48.92	2	1.44
Physical Ed.	101	72.66	19	13.67	0	0
Other	30	21.58	29	20.86	2	1.44