

Effect of clinic experience on pre-service professionals perceptions of applied special needs services

Efeitos da experiência clínica na percepção de profissionais do pré-atendimento na utilização de serviços especiais

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Abstract – With the understanding that the attitudes and expectations a teacher carries into the classroom directly affect student achievement, this study was administered to evaluate the cognitive affect that clinical experience incorporating individuals with disabilities had on pre-service exercise science professionals. University Students with and without experience in an adapted clinical environment were given surveys covering attitudes and perceptions towards classroom atmosphere, teachers' instructional techniques, inclusion, and self-efficacy. Data were analyzed and used to determine pedagogical implications. Findings suggest that pre-service educators tend to feel unprepared and ill-equipped to work in an inclusive educational environment. Therefore, pre-service teacher programs should ideally include coursework in adaptive education and experiential components such as practicum, field experience, and clinical experience. In addition, a school-university collaborative relationship can facilitate beneficial outcomes to future educators as well as special needs populations.

Key words: Inclusion; Attitude; Clinic experience.

Resumo – Considerando que as atitudes e expectativas que o professor tem na sala de aula afetam diretamente o desempenho do aluno, este estudo teve como objetivo avaliar o efeito cognitivo da experiência clínica acumulada no atendimento com sujeitos portadores de necessidade especiais por profissionais de ciências do exercício. Estudantes universitários com e sem experiência em atividades laborais adaptadas participaram do estudo. Foram fornecidas informações que abrangiam as atitudes e percepções sobre o ambiente da sala de aula, orientações pedagógicas, inclusão e autoeficácia. Os resultados foram analisados e usados para implicações pedagógicas. Os resultados sugerem que os pré-educadores tendem a sentir-se despreparados e mal equipados para trabalhar em um ambiente educacional de inclusão. Portanto, os programas colaborativos de formação de pré-professores deveriam contemplar os cursos de formação educacional, com experiências práticas para o atendimento em ambientes de inclusão social, tais como estágio, experiência de campo e experiência clínica. Além disso, os cursos escola-universidade podem oportunizar experiências que facilitem os resultados benéficos para futuros educadores, bem como a atuação junto a populações com necessidades especiais.

Palavras-chave: Atitudes; Inclusão; Experiência clínica

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INTRODUCTION

In recent years there has been much consideration placed on inclusion in research. However, the theoretical and practical implications that a new era of inclusive education brings a need for more invasive inquiries¹. One such area in need of further investigation is teacher preparation. Shippen and associates² reference multiple studies³⁻⁵ that indicate that preservice teachers feel their teacher training didn't sufficiently prepare them for work with special needs populations in a general classroom setting. Specifically significant in teacher preparation is the construct of learning environments that pre-service teachers are educated in. Effective teacher education learning environments ideally initiate deeper learning approaches, which in turn lead to a stronger teacher self-efficacy⁶. In a four year cross sectional study performed on preservice teachers, Newman and associates⁷ found that additional responsibilities placed on subjects resulted in a shift from high efficacious beliefs to ones of inadequacy and frustration. Further research suggests that the overall effectiveness and success of inclusion based programs is contingent on teachers' perceptions of students with disabilities, their attitudes towards inclusion, and their overall self efficacy⁸.

Institutes of higher education need specially developed, environmentally appropriate, and logistically practical teacher education programs that supply future educators with the necessary knowledge base and educational attitudes to teach special needs students. They need to prepare preservice teachers to be effective in an inclusive educational setting. Certain fields of study, such as physical education, require additional teacher preparation due to federal mandates PL 94-142⁹, specifically identifying the discipline and its pedagogical implications with inclusion¹⁰. Research has shown that field experience work with special needs populations has a greater impact on instilling positive attitudes towards inclusion than adapted coursework unaccompanied with an applied concepts constituent¹¹.

Considering the aforementioned concepts, the purpose of this study was to examine perceptual and attitudinal differences between preservice professionals receiving adapted physical education coursework and those receiving said coursework with a clinical experience component (incorporating individuals with disabilities).

METHODS

A total of 30 university students took part in the

study. All subjects were enrolled in one of the following programs; Physical Education, Exercise Physiology, Pre-Physical Therapy, or Sport Study. 11 participants were enrolled in Group 1 (G1), the control group, while 19 participants were enrolled in Group 2 (G2), the intervention group.

G1 received a semester coursework in adapted physical education without a clinical component. The class included lectures, discussions, assignments, tests, etc. based on the text book.

G2 received the same classroom instructions of adapted physical education coursework plus a weekly clinical component. For 10 of the 16 weeks the participants of the G2 were required to take part in a 1 hr and 30 min. clinical session that took place on Friday mornings. Public school children ranging in ages from 6 to 18, and consisting of a wide variety of disabilities (that included but were not limited to: disturbance/behavioral disorders, specific learning/cognitive disabilities, mild-moderate MR, moderate-severe MR, MS, and Varying degrees of Autism), were bussed to the university. Each university student (the participant) was assigned one child to mentor for the entire program. Five of the 10 weeks the mentors were required to create lesson plans incorporating swimming activities as a primary focus. For the remaining 5 weeks the subjects were expected to create lesson plans incorporating gym activities (e.g. tennis) as the primary focus. The mentors also wrote summaries after each session with the child. And a final clinical report was also composed to summarize the experience of 10 clinical sessions.

Survey

At the conclusion of each trial, groups (G1 and G2) were given the Preservice Professional Perspectives on Inclusion Questionnaire (P³IQ), a survey that was modified from Prevailing Attitudes about Inclusion¹² and the inclusion checklist developed by Smith, Polloway, Patton, and Dowdy¹³. The questionnaire consists of 13 Likert scale¹⁴ questions covering 4 different categories: Inclusion's inference on Classroom Atmosphere, Inclusion's inference on Teaching and Instruction (Perceptions on Teacher), Individual Attitudes Towards Mainstreaming, and Self Efficacy. The category relating to Classroom Atmosphere Covered 4 questions, while the remaining categories each had 3 questions. Each question asked participants to rate their perspective of a statement on a scale from 1 to 5 (1-Strongly Disagree, 2-Disagree, 3-Unsure, 4-Agree, 5-Strongly Agree). Participants Scores were totaled, and

means for each of the 4 categories were calculated in both groups. T-tests were administered to compare the two groups on these variables.

RESULTS

Analysis of the (P³IQ) data revealed no significant difference between the control group (G1) and the intervention group (G2) when looking at the categories relating to Inclusions Effect on Teaching and Instruction (Perceptions on Teacher) or Attitudes Towards Mainstreaming.

The salient data from the study was present in both the Classroom Atmosphere category and the Self-Efficacy category. Differences in the comparison of G1 and G2 for said categories were observed at $P < 0.05$ respectfully. Classroom Atmosphere's Mean score for G1 was 14.09, while G2's mean for the same category was 12.73. For the Self Efficacy category G1 had a mean of 11.45, while G2 had a mean of 9.84. It should also be noted that the p value of the Self Efficacy category came in at 0.050 and was considered significant due to the next decimal place over from five recording 0. See table 1 and figure 1.

Table 1. Group Comparison. Classroom Atmosphere category and the Self Efficacy category

Groups	Classroom Atmosphere	Perception on Teacher	Attitudes Towards Inclusion	Self Efficacy
Control (11)	14.09	9.36	11.63	11.45
Intervention (19)	12.73	9.73	11.05	9.84
T Value	1.77*	-.54	-.95	1.70*

* $p \leq .05$

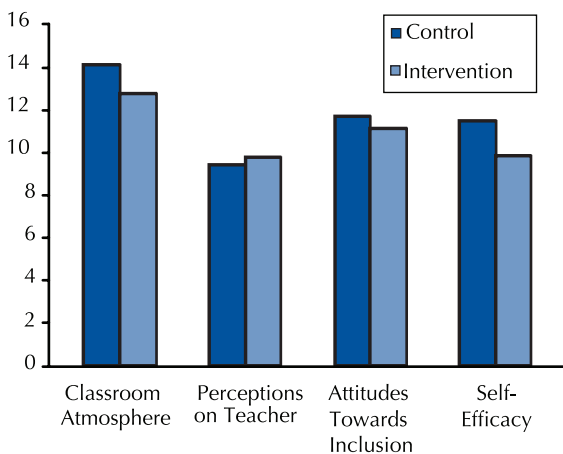


Figure 1. Means compared by category

DISCUSSION

While the data collection presented in this study did demonstrate significance between groups, the overall findings should still be interpreted with a certain degree of discretion. There were several factors present that limit the generalization of information obtained through the inquiry. First, there was an inequality of observations performed in each group. Additionally, prior experience with individuals with disabilities was not taken into account. Finally, the participants used were part of a class (established Group) and therefore limited random sampling. Considering that perceptions on inclusion were assessed, the fact that the clinical experience consisted of only individuals with disabilities and was therefore not an inclusive environment should also be noted. Otherwise, ethical and conventional analytical processes were administered, and the information acquired can add to the existing body of knowledge concerning pre-service teacher education, and inclusive educational practices.

Our original expectations were concentrated on monitoring the improvements that clinical experience had on the overall perceptions, attitudes, and self-efficacy beliefs of pre-service professionals enrolled in an adapted physical education course. The intention was to establish unique and alternative pedagogical practices that could be added to the methodologies used in teacher education. This initial theory was consistent with additional research findings, and suggested future research domains^{1,11-15}.

Of the four categories observed, the two which displayed significance (Classroom Atmosphere and Self-Efficacy) did not attend to the primordial hypothesis. Both categories saw reductions in mean scores after the clinic. The only category which showed any increase in means from control to intervention groups was Perception on Teacher. However, analysis of the disparity revealed $P > .05$ and therefore not significant. The largest reduction in mean score was observed in participants Self-efficacy. Considering that this finding was inconsistent with aspects of previous research¹¹, the inference could be made that students had unrealistic or inadequate understandings and expectations regarding working with individuals with special needs, and working in inclusive educational environments. However, Nolan et al.¹¹ did indicate that university courses with field experience components did have a greater effect on pre-service educators, than coursework alone,

a finding consistent within the current study. An inference could then also be made that the first hand experience involving special needs populations could have presented the participants with an overload of responsibilities, or responsibilities that they did not have teacher education training in. The 10 week clinic experience working with children with disabilities could have helped the participants understand that there were a lot to learn in the real world. This Conclusion is consistent with the work of Newman, Lenhart et al.⁷. The Lowest P value ($P < 0.043$) was observed in the Classroom Atmosphere category. This difference in attitudes could be attributed to the fact that the participants received clinical experience with only special needs students and did not receive experience in an inclusion based program⁸.

CONCLUSIONS

The conclusions gathered from this research highlight the importance of several aspects relating to pre-service teacher education and inclusion. First, pre-service educators tend to feel unprepared and ill-equipped to work in an inclusive educational environment; secondly, pre-service teacher programs should ideally include coursework in adaptive education and experiential components (Practicum, field experience, clinical experience); and thirdly, a school-university collaborative relationship can facilitate beneficial outcomes to future educators, as well as special needs populations. Conversely, the results show variance with the findings that attitudes towards inclusion in pre-service teachers can be improved through further preparation within coursework, collaborative and inclusive field experiences, and personal experience with successful individuals with disabilities.

Suggestions for Future Research

Implications obtained from this study draw attention to the incorporation of experiential components into the pedagogical strategies used in pre-service educator programs. Clearly practical experience within a teacher education program plays an influential role in the development of future educators' (1) attitudes towards students with disabilities and (2) their self-efficacy. However, the style and structure of empirical components, the practical application within university educator programs, and the result of said programs/components need further inquiry. Research parameters

utilizing larger sample sizes, alternative qualitative methodologies, and longer durations of observation, would be beneficial to pre-service teacher education and its existing body of research.

REFERENCES

1. Lambert C, Curran CM, Prigge DJ, Shorr D. Addressing inclusion in an era of education reform: dispositions of secondary and elementary pre-service educators in the pipeline. *Educ J Database* [on-line]. 2005; Available from: <http://www.eric.ed.gov> [2010 feb 5].
2. Shippen ME, Crites SA, Houchins DE, Ramsey ML, Simon M. Preservice teachers' perceptions of including students with disabilities. *Teacher Educ Special Educ* 2005;28(2):92-9.
3. Jobling A, Moni KB. I never imagined I'd have to teach these children: Providing authentic learning experiences for secondary preservice teachers in teaching students with special needs. *Asia-Pacific J Teacher Educ* 2004;32(1):5-22.
4. Kirk, R. H. The link between university coursework and preservice teachers' attitudes toward students with special learning needs. *Coll Student J* 1998; 32(1):153-157.
5. Goodlad JI, Field S. Teachers for renewing schools. In Goodlad JI, Lovitt TC. Editors. *Integrating general and special education*. New York: Merrill; 1993. p. 229-252.
6. Gordon C, Debus R. Enhancing learning approaches in an undergraduate teacher education program. *Educ J Database* [on-line]. 2001. Available from: <http://www.eric.ed.gov> [2010 feb 5].
7. Newman C, Lenhart L, Moss B, Newman D. A four-year cross-sectional study of changes in self-efficacy and stages of concern among pre-service teachers. *Education Journal Database* [on-line]. 2000; Available from: <http://www.eric.ed.gov> [2010 feb 5].
8. Elhoweris H, Alsheikh N. Teachers' attitudes toward inclusion. Paper presented at the New York State Federation of the Council for Exceptional Children, Albany, NY. *Educ J Database* [on-line]. 2004; Available from: <http://www.eric.ed.gov> [2010 feb 5].
9. Auxter D, Pyfer J, Zittel L, Roth K. *Principles and methods of adapted physical education*. 11th Ed. McGraw Hill Companies. 2010.
10. Pangrazi RP. *Dynamic physical education for elementary school children*. 14th ed. San Francisco, CA: Benjamin Cummings; 2004.
11. Nolan J, Duncan C, Hatton V. Comparison of pre-service physical educators' attitudes toward individuals with disabilities before and after adapted physical course work. Paper presented at the Annual Meeting of the Association of Teacher Educators, Orlando, FL. *Educ J Database* [on-line]. 2000; Available from: <http://www.eric.ed.gov> [2010 may 15].
12. Hammond H, Ingalls L. Teachers' attitudes toward inclusion: survey results from elementary school teachers in three southwestern rural school districts. *Rural Special Educ Q* 2003; Available from: http://findarticles.com/p/articles/mi_qa4052/is_200304/ai_n9201600/?tag=content;coll [2010 jul 25].

13. Smith TEC, Polloway EA, Patton JR, Dowdy CA. Teaching students with special needs in inclusive settings. Needham Heights, MA: Allyn & Bacon; 1995.
14. Borg WR, Gall MD. Educational research, 5th ed. White Plains, NY: Longman Inc; 1989.
15. Romano K, Chambliss C. K-12 teachers' and administrators' attitudes toward inclusive educational practices. Educ J Database [on-line]; 2000. Available from: <http://www.eric.ed.gov> [2010 jul 25].

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