



## **Effective Specialized Instructional Support Services *Research Brief***

**The mission of the National Alliance of Pupil Services Organizations (NAPSO) is to ensure all students have the supports, services and skills necessary to succeed in school and life.**

NAPSO is a coalition of national professional organizations whose members provide and support a variety of school-based prevention and intervention services to assist students in becoming effective learners and productive citizens. NAPSO organizations represent over a million members, including school counselors, school nurses, psychologists, school psychologists, social workers and school social workers; occupational therapists, physical therapists, art therapists, dance/movement therapists, and music therapists; speech-language pathologists; audiologists; teachers, students, parents, and administrators. NAPSO promotes interdisciplinary practice and cooperation, and advocates for ensuring access to quality specialized instructional support services (i.e., pupil services and related services under ESEA and IDEA, respectively) for all students.

### **Specialized Instructional Support Personnel Perform Critical Tasks in Schools**

- Supporting effective teaching and improved student learning and facilitating collaboration among school staff, families, and the community
- Providing a variety of prevention and intervention services in schools that promote effective classroom learning and teaching
- Working with teachers and administrators to develop a positive school climate, improving classroom management skills, providing behavioral interventions to reduce discipline infractions, improving school safety, and removing barriers to learning
- Providing educational programs and activities that support student learning and teaching, including consultation with teachers and families, assessments linked to instruction, individual and group counseling, problem-solving instruction, and remedial interventions
- Collaborating with teachers and school staff to ensure students receive high quality instruction responsive to the diverse and developmental needs of all students, creating a continuum of support services for all students, and providing various instructional strategies to facilitate learning in all classrooms
- Participating, as members of the school team, in professional development to ensure high quality learning
- Fostering collaboration not only between general and special education, but also between community and schools and schools and parents

### **Art Therapy Services**

Art therapy services in the school setting can be tailored to support academic and social/emotional requirements. Students in individual art therapy may work toward improved cognitive growth, emotional control, the mastery of sensory-motor skills, and positive adjustment to the classroom experience. School art therapy services have been successfully used to facilitate students' ability to function as effectively as possible within the academic environment.

- ❖ **Art therapy services implemented for students in a ninth-grade English classroom of an urban high school were successful in reducing drop-out rates, decreasing school failure, and improving students' attitudes about school, family, and self.**
  - Rosal, M., McCulloch-Vislislis, S., & Neese, S. (1997). Keeping students in school: An art therapy program to benefit ninth grade students. *Art Therapy: Journal of the American Art Therapy Association*, 14(2), 30-36.
- ❖ **A 12-year-old female whose academic performance decreased after her parents divorced received art therapy treatment, which focused on problem solving and self-concept. Art therapy was found to be a**

useful school-based intervention, as results indicated a notable increase in both self-concept and academic performance.

- Pleasant-Metcalf, A. & Rosal, M. (1997). The use of art therapy to improve academic performance. Art Therapy: Journal of the American Art Therapy Association, 14(1) 23-29.
- ❖ **Twenty-five elementary school children who were victims of the Los Angeles earthquake in 1994 received art therapy services, which were instrumental in accessing the children's internal processes and helping them return to normal functioning.**
  - Roje, J. (1995). LA earthquake in the eyes of children: Art therapy with elementary school children who were victims of disaster. Art Therapy: Journal of the AATA, 12(4), 237-243.
- ❖ **Art therapy treatment implemented with two boys who had similar classroom behavior disorders was found to be effective in altering locus of control and in improving behavior.**
  - Rosal, M. (1993). Comparative group art therapy research to evaluate changes in locus of control in behavior disordered children. The Arts in Psychotherapy, 20(3) 231-241.
- ❖ **Pregnant adolescent females from economically and socially disadvantaged environments participated in a comprehensive treatment program enhanced by art therapy, which provided them with opportunities for positive self-growth.**
  - Stiles, G. & Mermer-Welly, M. (1998). Children having children: Art therapy in a community-based early adolescent pregnancy program. Art Therapy: Journal of the AATA, 15(3), 165-176.
- ❖ **A group of university professors helped graduate art therapy students and special education students facilitate the total educational, emotional, and physical development of the children in their classes.**
  - Bloomgarden, J. & Schwartz, D. (1997). Creative art therapy/ Special education in higher education: Toward an interdisciplinary model. Art Therapy: Journal of the AATA, 14(4), 279-281.

### Dance/Movement Therapy Services

Since 1974 Dance/movement therapists have provided services to children in regular and special education classes in schools and agencies across the country. Dance/movement therapy is used to enhance learning, improve physical skills, and address emotional and social difficulties through the nonverbal medium. Increasing these aspects of a child's development assists children to take full advantage of the learning environment. Research supports the unique contribution of Dance/movement therapy to children, families, and teachers.

- ❖ **Dance/movement therapy techniques utilized to foster parenting skills resulted in positive changes in awareness of nonverbal interaction, increased quality of interactions, and increased coping skills to aid in infant-parent conflict.**
  - Murphy, J. (1998). Nonverbal interventions with infants and their peers. American Journal of Dance Therapy, 20, #1.
- ❖ **Reports indicate at-risk pre-school children with attention difficulties who received dance/movement therapy over 6 months increased their attention duration in desk, group, and gross motor activity. Attention during table tasks increased in 98% of children and group tasks attention improved for 82% of children.**
  - Dulicai, D., (1996). American Dance Therapy Association Research Panel Presentation.

- ❖ **Dance/movement therapy sessions were offered within a comprehensive health program in regular classrooms to foster coping mechanisms for dealing with bullying. Students reported increased ability to mediate with peers and gained positive solutions to bullying.**
  - Beardall, N. (2001) *Confronting Intolerance and Bullying*, Comprehensive Health Program, Oak Hill Middle Schools, Maine.
- ❖ **Dance/movement therapy sessions were integrated into the curriculum of children in regular and special education classes after a successful pilot project in Madison, WI. Reduction of violence and better resolution of conflict assisted children to feel safe and secure.**
  - Kornblum, R. (2000). *Disarming the playground: Violence prevention through movement and pro-social skills*. Woods & Barnes Publishing.
- ❖ **A study measuring test anxiety in 29 university students reported significantly reduced anxiety in students receiving dance/movement therapy as compared with the control group.**
  - Erwin-Grabner, Goodill, Hill & Dristen. (1999). *American Journal of Dance/Movement Therapy*, Vol. 21, No. 1.
- ❖ **Methods of evaluating children's developmental milestones using DMT principles and relating them to changes in behavior are defined.**
  - Cohen, Susan, 2000. *Dance/Movement therapy for principles into child life practice*, Vol. 2, No 2, Fall.
- ❖ **An eight-year research project describes the use of measuring progress of child development through the use of this movement profile.**
  - Loman, S., Kestenberg Amighi, J., Lewis, P. & Sossin, K.M., 1999. The meaning of movement: Developmental and clinical perspectives of the Kestenberg movement profile.
- ❖ **Successful measurement of educational progress of children in a multi-cultural setting.**
  - Wengrower, Hilda. 2001. Arts therapies in educational settings: An intercultural encounter. *The Arts in Psychotherapy*, Vol 28 (2): 109-115.

### Music Therapy Services

Music Therapy is an established health profession in which music is used to address physical, emotional, cognitive, behavioral and/or social functioning. Music therapy can facilitate development in communication and sensori-motor skills, promote learning and skill acquisition, stimulate attention, and increase motivation to participate more fully in other aspects of the educational setting. Recognized as a related service, music therapy serves as an integral component in helping the child with special needs attain educational goals identified by his/her IEP team, either through direct or consultant services.

- ❖ **Music therapy for children with autism spectrum disorders engages and fosters their capacity for flexibility, creativity, variability and tolerance of change, creating a balance with the more structured and behaviorally driven education required in school settings. Music therapy interventions are an effective method for increasing joint attention skills.**
  - Gold, C. & Wigram, T. (2006). Music therapy for autistic spectrum disorder. *Cochrane Database of Systematic Reviews*. Issue 1
  - Reitman, M.R. (2005) Effectiveness of music therapy interventions on joint attention in children diagnosed with autism: a pilot study. *Psy.D.* 169 p.

- Wigram, T. (2002). Indications in music therapy. British Journal of Music Therapy, 16(1):11-28.
- ❖ **Research demonstrates the efficacy of music used in the curriculum to enhance literacy skills. Musical cueing is effective to improve word recognition, logo identification, print concepts and prewriting skills of children in early intervention programs. Shared reading paired with song rehearsal of text facilitates greater text accuracy than spoken rehearsal with kindergarten students.**
- Colwell, CM. (1994). Therapeutic applications of music in the whole language kindergarten. Journal of Music Therapy, 31(4), 238-247.
  - Register, D. (2001). The effects of an early intervention music curriculum on pre-reading/ writing. Journal of Music Therapy, 38(3), 239-248.
  - Standley, J., & Hughes, J. (1997). Evaluation of an early intervention music curriculum for enhancing pre-reading/writing skills. Music Therapy Perspectives, 15, 79-86.
- ❖ **Selected verbal language and speech skills are enhanced through music activities in special education populations. Musical presentation of new vocabulary words results in an increased number of words learned and transferred in elementary school-age children. Music is effective as a prompt and reinforcer to increase verbal response in preschool-age children with limited verbal communication.**
- Braithwaite, M. & J. Sigafos (1998). Effects of social versus musical antecedents on communication responsiveness in five children with developmental disabilities. Journal of Music Therapy, 35(2), 88-104.
  - Buday, E.M. (1995). The effects of signed and spoken words taught with music on sign and speech imitation by children with autism. Journal of Music Therapy, 32(3), 189-202.
- ❖ **An overall positive direction is noted in meta-analytic reviews of the literature on the subject of music therapy and autism in terms of an array of outcomes related to both therapeutic and specific educational goals.**
- Whipple, J. (2004). Music in intervention for children and adolescents with autism: a meta-analysis. Journal of Music Therapy. 41(2):90-106. (Listed as accepted in Database of Abstracts of Reviews of Effects Centre for Reviews and Dissemination, 2007.)
  - Standley, J.M. (1996). A meta-analysis on the effects of music as reinforcement for education/therapy objectives. Journal of Research in Music Education. 44(2), 105-133.
- ❖ **Music-facilitated interactions and structured instrument playing are effective techniques for improving social skills and problem solving skills in school-age populations.**
- Bryan, T., Sullivan-Burstein, K., & Mathur, S. (1998). The influence of affect on social-information processing. Journal of Learning Disabilities. 31(5), 418-426.
  - Kern, Petra. Wolery, Mark. Aldridge, David. (2007). Use of Songs to Promote Independence in Morning Greeting Routines for Young Children with Autism. Journal of Autism and Developmental Disorders. 37(7), 1264-1271.
  - Ulfarsdottir, L., & Erwin, P. (1999). The influence of music on social cognitive skills. The Arts in Psychotherapy. 26(2), 81-84.
- ❖ **Research supports the use of music to structure and organize information in order to increase learning and retention of number concepts. Sequential verbal information, such as telephone numbers and multiplication tables, set to melodic and rhythmic patterns are more effectively memorized and recalled than through non-music presentation.**
- Claussen, D., & Thaut, M. (1997). Music as a mnemonic device for children with learning disabilities. Canadian Journal of Music Therapy, 5, 55-66.
  - Peterson, D. A., Thaut, M. H., Sena, K. M., O'Shea, G., & McIntosh, G. C. (2005). Music modulates neural network synchronizations in verbal learning. Proceedings Society for Neuroscience. 192.20.

- Thaut, M. H., Peterson, D. A., & McIntosh, G. C. (2005). Temporal entrainment of cognitive function: Musical mnemonics induce brain plasticity and oscillatory synchrony in neural networks underlying memory. *Annals of the New York Academy of Sciences*, 1060, 243–254.
- Wolfe, D., & Hom, C. (1993). Use of melodies as structural prompts for learning and retention of sequential verbal information by preschool students. *Journal of Music Therapy*, 30(2), 100–118.

### **Occupational Therapy Services**

School-based occupational therapy focuses on helping students engage in important learning activities, or “occupations,” needed to participate successfully in school activities and routines. Services include evaluation and assessment, intervention, prevention, and health and wellness promotion, and address students’ underlying motor, process and communication/interaction skills and their impact on performance. Occupational therapists work with students individually and in small groups and consult with parents, teachers and other school personnel to help raise student achievement and school success.

#### **❖ A variety of occupational therapy interventions may improve children’s handwriting skills.**

- Weintraub, N., Yinon, M., Hirsch, I., & Parush, S. (2009). Effectiveness of sensorimotor and task-oriented handwriting intervention in elementary school-aged students with handwriting difficulties. *OTJR: Occupation, Participation & Health*, 29(3), 125-134. Retrieved from CINAHL database.
- Mackay, N., McCluskey, A., & Mayes, R. (2010). The Log Handwriting Program improved children’s writing legibility: A pretest–posttest study. *American Journal of Occupational Therapy*, 64, 30–36.
- Ratzon, N. Z., Efraim, D., & Bart, O. (2007). A short-term graphomotor program for improving writing readiness skills of first-grade students. *American Journal of Occupational Therapy*, 61, 399–405.
- Case-Smith, J. (2002). Effectiveness of school-based occupational therapy intervention on handwriting. *American Journal of Occupational Therapy*, 56, 17–25.

#### **❖ Occupational therapists have unique skills valuable to transition planning, particularly in areas of daily living skills, work, and leisure, and community participation.**

- Kardos, M., & White, B. P. (2005). The role of the school-based occupational therapist in secondary education transition planning: A pilot survey. *American Journal of Occupational Therapy*, 59, 173–180.
- Kardos, M. R., & White, B. P. (2006). Evaluation options for secondary transition planning [Electronic version]. *American Journal of Occupational Therapy*, 60, 333–339.
- Michaels, C. A., & Orentlicher, M. L. (2004). The role of occupational therapy in providing person-centered transition services: Implications for school-based practice. *Occupational Therapy International*, 11(4), 209-228.

#### **❖ Interventions using sensory integration strategies can be effective in reducing behaviors that interfere with function and participation.**

- Hall, L., & Case-Smith, J. (2007). The effect of sound-based intervention on children with sensory processing disorders and visual–motor delays. *American Journal of Occupational Therapy*, 61, 209–215.
- Miller, L. J., Coll, J. R., & Schoen, S. A. (2007). A randomized controlled pilot study of the effectiveness of occupational therapy for children with sensory modulation disorder. *American Journal of Occupational Therapy*, 61, 228–238.
- Smith, S. A., Press, B., Koenig, K. P., & Kinnealey, M. (2005). Effects of sensory integration intervention on self-stimulating and self-injurious behaviors. *American Journal of Occupational Therapy*, 59, 418–425.

#### **❖ Occupational therapy treatment can help improve children’s visual-motor skills.**

- Dankert, H. L., Davies, P. L., & Gavin, W. J. (2003). Occupational therapy effects on visual-motor skills in preschool children. *American Journal of Occupational Therapy*, 57, 542–549.

- Gomi, C. F., Taras, H. & Granet, D. B. (2007). Can occupational therapy improve vision skills associated with reading/writing? *Journal of AAPOS*, 11(1), 79.

❖ **Occupational Therapy interventions can be beneficial to children with and without disabilities.**

- Bazyk, S., Michaud, P., Goodman, G., Papp, P., Hawkins, E., & Welch, M. A. (2009). Integrating occupational therapy services in a kindergarten curriculum: A look at the outcomes. *American Journal of Occupational Therapy*, 63, 160–171.
- Bundy, A. C., Luckett, T., Naughton, G. A., Tranter, P. J., Wyver, S. R., Ragen, J., Singleton, E., & Spies, G. (2008). Playful interaction: Occupational therapy for all children on the school playground. *American Journal of Occupational Therapy*, 62, 522–527.

❖ **Occupational therapists' knowledge of and skill with the psychosocial and social participation needs of people position them to be critical members of the team for addressing the mental health needs of children in school settings.**

- Milliken, B., Goodman, G., Bazyk, S., & Flinn, S. (2007). Establishing a case for occupational therapy in meeting the needs of children with grief issues in school-based settings. *Occupational Therapy in Mental Health*, 23(2), 75-100.
- Chu, S. & Reynolds, F. (2007) Occupational therapy for children with attention deficit hyperactivity disorder (ADHD), part 2: A multicentre evaluation of an assessment and treatment package. *British Journal of Occupational Therapy*, 70(10), 439-448.
- Barnes, K. J., Vogel, K. A., Beck, A. J., Schoenfeld, H. B., & Owen, S. V. (2008) Self-regulation strategies of children with emotional disturbance. *Physical & Occupational Therapy in Pediatrics*, 28(4), 369-387. DOI 10.1080/01942630802307127

### Psychological Services

Psychologists and school psychologists provide services to children, adolescents, families, and school staff by drawing on their expertise in the science and practice of both psychology and education. They provide a range of psychological services including assessment; intervention; prevention; crisis preparation and response; individual, group, and family counseling; teacher consultation; health promotion, and program development and evaluation. Their special focus is the developmental processes of children and youth within the context of schools, families, and other systems.

❖ **A review of more than 200 school-based research studies on the impact of interventions to promote social and emotional skills in children and adolescents between the ages of five and 18 revealed an 11% improvement in achievement test scores.**

- Collaborative for Academic, Social, and Emotional Learning. (2008). *Social and emotional learning (SEL) and student benefits: Implications for the Safe Schools/Health Students core elements*. Chicago, IL: Author.

❖ **Interventions that strengthen students' social, emotional, and decision-making skills also positively impact their academic achievement, both in terms of higher standardized test scores and better grades.**

- Fleming, C. B., Haggerty, K. P., Brown, E. C., Catalano, R. F., Harachi, T. W., Mazza, J. J., & Gruman, D. H. (2005). Do social and behavioral characteristics targeted by preventive interventions predict standardized test scores and grades? *Journal of School Health*, 75, 342-349.

❖ **School psychologists and other qualified psychologists work with parents to encourage effective parenting and discipline strategies, and there is substantial research evidence for the effectiveness of interventions designed to prevent the development of aggressive and antisocial behavior and related problems.**

- National Research Council and Institute of Medicine. (2009). *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities*. Washington, DC: The National Academies Press.
- ❖ **School-based early childhood programs that provide educational and family-support services to low-income children are associated with a wide range of positive outcomes, including higher rates of school completion, higher levels of educational attainment, lower rates of depressive symptoms, and lower rates of felony arrests in adulthood.**
  - Reynolds, A. J., Temple, J. A., Ou, S.-R., Robertson, D. L., Mersky, J. P., Topitzes, J. W., & Niles, M. D. (2007). Effects of a school-based, early childhood intervention on adult health and well-being. *Archives of Pediatrics & Adolescent Medicine*, *161*, 730-739.
- ❖ **School mental health services in elementary schools have been found to reduce special education referrals; improve aspects of the school climate; and reduce conduct disorder behavior, attention deficit/hyperactivity, and depression among children with severe emotional and behavioral problems.**
  - Bruns, E. J., Walrath, C., Glass-Siegel, M., & Weist, M. D. (2004). School-based mental health services in Baltimore: Association with school climate and special education referrals. *Behavior Modification*, *28*, 491-512.
  - Hussey, D. L., & Guo, S. (2003). Measuring behavior change in young children receiving intensive school-based mental health services. *Journal of Community Psychology*, *31*, 629-639
- ❖ **Consultation yields positive results such as remediating academic and behavior problems for children in school settings; changing teacher's and parent's behavior, knowledge, attitudes, and perceptions; and reducing referrals for psycho-educational assessments.**
  - MacLeod, I. R., Jones, K. M., Somer, C. L., & Havey, J. M. (2001). An evaluation of the effectiveness of school-based behavioral consultation. *Journal of Educational and Psychological Consultation*, *12*, 203-216.
  - Reddy, L. A., Barboza-Whitehead, S., Files, T., & Rubel, E. (2000). Clinical focus of consultation outcome research with children and adolescents. *Special Services in the Schools*, *16*, 1-22.

### **School Counselor Services**

Professional school counselors develop comprehensive school counseling programs that promote and enhance student learning, utilize data to improve program implementation and identify students in need, and ensure all students are college/career-ready. Above all, school counselors are student advocates who work cooperatively with other individuals and organizations to promote the development of children, youth, and families in their communities. School counselors, as members of the educational team, consult and collaborate with teachers, administrators, and families to assist students to be successful academically, vocationally, and personally.

- ❖ **Comprehensive school counseling programs serve as a “central contributing factor to student academic success,” and also positively impact school safety and post-secondary outcomes.**
  - Lapan, R.T., Gysbers, N.C., & Petroski, G.F. (2001). Helping seventh graders be safe and successful: A statewide study of the impact of comprehensive guidance and counseling programs. *Journal of Counseling and Development*, *79*, 320-330.
  - Lapan, Gysbers & Sun. (1997). The impact of more fully implemented guidance programs on the school experiences of students: A statewide evaluation study.
  - Otwell, P. S., & Mullis, F. (1997). Academic achievement and counselor accountability. *Elementary School Guidance and Counseling*, *31*, 343-348.
- ❖ **Elementary school students do better on both national tests of academic knowledge and on state tests of academic achievement when there is a comprehensive developmental school counseling program in their school.**

- Sink, C.A. & Stroh, H.R. (2003). Raising achievement test scores of early elementary school students through comprehensive school counseling programs. Professional School Counseling, 6(5), 350-364.
- ❖ **School-based programs designed to decrease students' aggressive behavior show considerable success in impacting behaviors, related feelings of safety, and disciplinary events.**
  - Wilson, S. J., Lipsey, M.W., & Derzon, J.H. (2003). The effects of school-based intervention programs on aggressive behavior: A meta-analysis. Journal of Consulting and Clinical Psychology, 71, 136-149.
- ❖ **School counseling practices improve social skills of students, particularly those who are at risk. Social skills training also has a positive effect on children with learning disabilities.**
  - Whiston, S.C., & Sexton, T. L. (1998). A review of school counseling outcome research: Implications for practice. Journal of Counseling and Development, 76, 412-425.
- ❖ **Students who participate in career development curriculum show significantly more understanding of career possibilities, more future orientation, and greater self-efficacy and increased school engagement.**
  - Dimmitt, C. (2007). The Real Game evaluation results. Washington, DC: America's Career Resource Network.
  - Lapan, R.T., Gysbers, N.C. Hughey, K. & Arni, T.J. (1993). Evaluating a guidance and language arts unit for high school juniors. Journal of Counseling and Development, 71, 444-451.
- ❖ **Career development strategies that are implemented by school counselors serve to prevent school drop out.**
  - Herring, R. D. (1998). Career Counseling in Schools: Multicultural and Developmental Perspectives.
- ❖ **School counselors play a significant role in the career planning of high school students. Studies show that career planning interventions by school counselors have a positive effect on students' career development/career plans and that services are effective for a wide range of students, including children with learning disabilities and minorities.**
  - Whiston, S.C., & Sexton, T. L. (1998). A review of school counseling outcome research: Implications for practice. Journal of Counseling and Development, 76, 412-425.
- ❖ **Career development programs and interventions by school counselors have been found to have a positive effect on the career goals, career planning skills, and attendance of students.**
  - Herring, R. D. (1998). Career Counseling in Schools: Multicultural and Developmental Perspectives.
- ❖ **Career development programs promote student academic achievement, career development, and more supportive school climates.**
  - Herring, R. D. (1998). Career Counseling in Schools: Multicultural and Developmental Perspectives.
- ❖ **School counselors can help students develop a "college mindset" to consider post-high school education options.**
  - Fallon (1997). The school counselor's role in first generations students' college plans. The School Counselor, 44, 384-393.
- ❖ **School counselors are also instrumental in the school to work transition.**

- Blustein, D., Phillips, S., Jobin-Davis, K., Finkelberg, S., & Roarke, A. (1997). A theory-building investigation of the school-to-work transition. The Counseling Psychologist, 25, 364-402.

### **School Social Work Services**

School social workers provide direct mental health services to students, including one to one counseling, group work, classroom presentations, crisis intervention, and assessment. School social workers work as part of a multidisciplinary team in providing special education services and determining eligibility for special education and related services. They work closely with other school personnel and consult with individual teachers and groups of teachers on issues related to behavior management, classroom management, and special concerns about individual students.

#### **❖ School social workers help schools adopt, implement, and evaluate positive behavior support and response to intervention initiatives.**

- Frey, A.J., Park, K. Ferrigno, T. & Korfhage, T. (in press). The social validity of program-wide positive behavior support. *Journal of Positive Behavior Supports and Interventions*.
- Frey, A., Lingo, A., & Nelson, C. M. (in press). Positive behavior support and response to intervention in elementary schools. In H. Walker, M. K. Shinn & G. Stoner (Eds.), *Interventions for Achievement and Behavior Problems: Preventive and Remedial Approaches (Vol. 3rd)*: National Association for School Psychologists.
- Frey, A. (2009) Positive behavior supports and interventions in early childhood education. *National Head Start Association Dialog*, 12, 71-74.
- Frey, A. J., Boyce, C. A., & Tarullo, L. B. (2009). Implementing positive behavior support in Head Start. In W. Sailor, G. Dunlap, G. Sugai & H. F. Horner (Eds.), *Handbook of Positive Behavior Support: Special issues in clinical child psychology* (pp.125-148). New York: Springer.
- Frey, A., Young, S., Gold, A., & Trevor, E. (2008). Utilizing positive behavior support to achieve integrated mental health services. *National Head Start Association Dialog*, 11, 135-156.
- Frey, A.J., Faith, T., Elliott, A., & Royer, B. (2006). Evaluation of a positive behavior support model within Head Start, *School Social Work Journal*, 30, 22-44.

#### **❖ School social workers embrace evidence-based practice.**

- Kelly, M.S., Raines, J.C., Stone, S. & Frey, A. (2010). *School social work: An evidence-informed framework for practice*. Oxford University Press, Inc., New York.

#### **❖ School social workers help students succeed in school by increasing the connection between the student's family and school personnel. Family outreach and case management services provided by school social workers are associated with positive academic progress for students in school.**

- Bowen, N. K. (1999). A role for school social workers in promoting student success through school-family partnerships. *Social Work in Education*, 21, (1), p 34-47.
- Henderson, A. T., & Berla, N. (Eds.). (1994). *A new generation of evidence: The family is critical to student achievement*. Washington, DC: National Committee for Citizens in Education.
- Kellaghan, T., Sloane, K., Alvarez, B., & Bloom, B.S. (1993). *The home environment and school learning: Promoting parental involvement in the education of children*. San Francisco: Jossey-Bass.

#### **❖ School social work services can be cost effective in the reduction of problem behaviors and school exclusion. School social workers initiate programs to improve children's social development and reduce challenging behaviors.**

- Butcher, D. A. (1999). Enhancing social skills through school social work interventions during recess: gender differences. *Social Work in Education*, 21, (4), p. 249-262.
- Bagley, C. & Pritchard, C. (1998). The reduction of problem behaviors and school exclusion in at-risk youth: an experimental study of school social work with cost-benefit analyses. *Child and Family Social*

Work, 3, 219-226. De Anda, D. (1999). Project peace: The evaluation of a skill-based violence prevention program for high school adolescents. *Social Work in Education*, 21, (3), p. 137-147.

- Whitfield, Gary (1999). Validating school social work: An evaluation of a cognitive-behavioral approach to reduce school violence. *Research on Social Work Practice*, 9, (4) p. 399-246.
- Woody, D. (2001). A Comprehensive School-Based Conflict-Resolution Model. *Children in Schools*, 23, (2), p. 115-119.
- Olweus, D. (1992). Bully/victim problems among school children: Basic facts and effects of a school-based intervention program. In D.J. Pepler & K.H. Rubin (Eds.), *The Development and Treatment of Childhood Aggression* (pp.411-448). Hillsdale, NJ: Lawrence Erlbaum.
- Bailey-Dempsey, C. & Reid, W. (1996). Intervention design and development: A case study. *Research on Social Work Practice*, 6, (2), p. 208-228.
- Frey, A. (2008). Mental health services in Head Start. *National Head Start Association Dialog*, 11, 173-186.
- Diehl, D., & Frey, A. J. (2008). Evaluation of a community-school social work model. *School Social Work Journal*, 32, 1-20.
- Frey, A.J. & Nichols, N. G. (2003). Intervention practices for children with emotional or behavioral disorders: Using research to inform school social work practice. *Children & Schools*, 25 (2), 97-104.
- Frey, A.J. (2001). Educational Placement for Children with Emotional and Behavioral Disorders: Past, Present, and Future. *Journal of School Social Work*, 11(2).
- Frey, A.J. (2001). Educational placement for children with behavioral and/or emotional disorders: Overlooked variables contributing to placements in restrictive settings. *Journal of School Social Work*, 11(1), 51-66.

❖ **School social workers address school policy issues.**

- Antle, B., Frey, A.J., Barbee, A., Frey, Grisham-Brown, J., Cox, M & Frey, S. (2008). Child care subsidy and program quality revisited. *Early Education and Development*, 19, 560-573.
- Frey, A. & Wilson. M. (2009). The reintegration of public schools. *Children & Schools*, 31, 79-86.
- Frey, A.J., Lingo, A., & Nelson, C.M. (2008). Positive Behavior Support. A call for leadership. *Children & Schools*, 30, 5-14.
- Frey, A.J. & Walker, H.M. (2005). Education policy for children, youth, and families. In J. M. Jenson and M.W. Fraser's *Social policy for children & families: A risk and resilience perspective*. Sage.
- Frey, A.J. (2002). Predictors of placement recommendations for children with emotional or behavioral disorders. *Behavioral Disorders*, 27(2), 126-136.

❖ **The presence of a school social worker at Individual Family Service Plan meetings resulted in more family assessment and family-centered data on the Individual Family Service Plan.**

- Sabatino, C. A. (2001). Family-Centered Sections of the IFSP and School Social Work Participation, *Children & Schools*, 23, 4, p. 241-252.

### **School Nurse Services**

School nurses are extensions of the public health system and a vital component of the care of children with chronic health conditions and disabilities. School nurses provide risk management of student health and safety; health promotion and disease prevention; episodic care of student illness and injury; and case management related to chronic health conditions and academic access. A significant proportion of health care in the United States is provided daily in schools. Many of the children school nurses see are not served by the traditional health care system. School nurses connect students to CHIP, and families to Medicaid. They help many of the school children who live every day in the margins of society to connect to a medical home. Often times, the school nurse provides the only health care accessible to some school aged children.

❖ **School nurses influence attendance, which influences achievement and graduation rates.**

- Repeated studies have identified that school nurses reduce absenteeism (Maughan, 2003.) and the literature shows a higher nurse-to-student ratio is related to better attendance rates (Pennington & Delaney, 2008).
  - African- American students with asthma in schools with full time school nurses, missed significantly fewer school days than children in school with part time nurses (Telljohann, Dake, & Price, 2004).
  - School nurses are significantly less likely to dismiss a student from school early than non-licensed personnel (Pennington & Delaney, 2008; Wyman, 2005).
- ❖ **Through case management of chronic illness, school nurses play a pivotal role in the health and well-being of children and contribute to improved health and education outcomes.**
- School nurses case management of asthma resulted in significantly more students with needed medication at school (Taras, Wright, Brennan, Campana & Lofgren, 2004) and fewer exacerbations resulting in visits to the school nurse office (Erickson, Splett, Mullett, Jensen, Belseth, 2006; Splett, Erickson, Belseth, & Jensen, 2006).
  - School nurses caring for children with diabetes resulted in better monitoring of blood glucose levels and a lower A1c and were more likely to detect low blood glucose levels (Nguyen, Mason, Sanders, Yazdani, & Hetulla, 2008).
- ❖ **School nurses are an essential arm of public health promoting wellness and preventing injury.**
- Registered nurses in schools are correlated with increasing immunization rates (Ferson, MJ, Fitzsimmons, G, Christie, D, & Woollett, H, 1995; Salmon et al., 2005).
  - Salmon et al. (2005) found parents were significantly less likely to request an exemption from immunizations than school personnel without health care training. Unlicensed school personnel were unaware of the seriousness of vaccine-preventable diseases, as well as the susceptibility of the unimmunized children (Salmon et al., 2004).
- ❖ **School nurses are among the specialized instructional support services personnel beneficial to the mental health of students.**
- School nurses spend 32% of their time providing mental health services (SAMHSA, 2005).

### **Speech-Language Pathology Services**

Speech-language pathologists provide services for students with speech, language, and swallowing disorders and provide services to students with other disabilities such as learning disabilities, autism, cerebral palsy, and mental retardation/developmental disabilities. Other important roles for speech-language pathologists involve collaborating with teachers to develop and provide intervention strategies to enhance literacy skills and intervention to improve social communication skills for all students.

- ❖ **Teachers and parents recognize the benefits of speech-language pathology services.**
  - ❖ **Speech-language pathology services are an important determinant of students' eventual communicative functioning.**
  - ❖ **Caseload characteristics appear to play a role in influencing student outcomes. Larger caseloads limit the range of service delivery options.**
- American Speech-Language-Hearing Association. (2000). National Data Report 1999–2000: National Outcomes Measurement System. Rockville, MD.
  - Russ, S., Chiang, B., Rylance, B., & Bongers, J. (2001). Caseload in special education: An integration of research findings. *Exceptional Children*, 67(2), 161–172).
- ❖ **Research supports a link between instructional group size and student engagement for students with moderate disabilities.**

- American Speech-Language-Hearing Association. (2002). A workload analysis approach for establishing speech-language caseload standards in the schools. Technical report. Rockville, MD.
- Algozzine, B., Hendrickson, J., Gable, R., & White, R. (1993). Caseloads of teachers of students with behavioral disorders. Behavioral Disorders, 18, 103–109.
- Thurlow, M., Ysseldyke, J., Wotruba, J., & Algozzine, B. (1993). Instruction in special education classrooms under varying student-teacher ratios. Elementary School Journal, 93(3), 305–321).

❖ **A relationship exists between instructional group size and academic achievement.**

- Algozzine, B., Hendrickson, J., Gable, R., & White, R. (1993). Caseloads of teachers of students with behavioral disorders. Behavioral Disorders, 18, 103–109.
- Gottlieb, J., & Alter, M. (1997). An evaluation study of the impact of modifying instructional group sizes in resource rooms and related service groups in New York City. New York: New York University. (ERIC Document Reproduction Service No. ED 414 373).
- Thurlow, M., Ysseldyke, J., Wotruba, J., & Algozzine, B. (1993). Instruction in special education classrooms under varying student-teacher ratios. Elementary School Journal, 93(3), 305–321).

❖ **Evidence suggests that students served in smaller instructional groups have improved performance and achievement. Smaller size instructional groups allow more opportunities to practice verbal communication. Communication skills appear to be positively influenced by small treatment group size.**

- American Speech-Language-Hearing Association. (2002). A workload analysis approach for establishing speech-language caseload standards in the schools. Technical report. Rockville, MD.
- McCabe, J., Jenkins, J., Mills, P., Dale, P., Cole, K., & Pepler, L. (1996). Effects of play group variables on language use by preschool children with disabilities. Journal of Early Intervention, 20(4), 329–340.

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