Your Therapy Source News

Digital magazine for pediatric occupational and physical therapists.

Issue 30 - September 2011

www.YourTherapySource.com

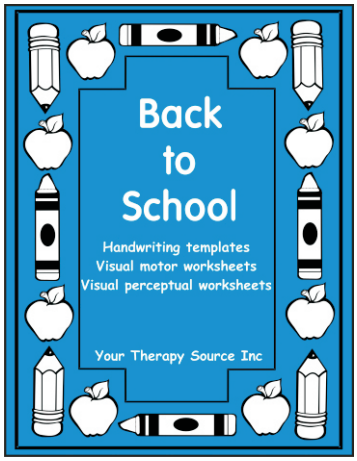
Back to School Activities

Print and Create Fine Motor Projects - Back to School

Download of a set of 10 fine motor projects to complete with a back to school theme.

List Price for electronic book: $4.99

www.YourTherapySource.com/fmbacktoschool



Back to School Handwriting Activities

Get over 30 pages of back to school handwriting templates, visual motor and visual perceptual worksheets.

List Price for electronic book: $4.99

www.YourTherapySource.com/backtoschool

Sensory Motor Activities for Fall

Download of 30+ sensory motor activity ideas with a Fall theme.

List Price for electronic book: $4.99

www.YourTherapySource.com/fallactivities

Autism Research

Neurofeedback and Autism

Developmental Medicine and Child Neurology published a review of current studies on neurofeedback and autism. The results indicated that the evidence does not support the use of neurofeedback in the treatment of autism. The researchers also found that any improvements noted from neurofeedback may have been addressing a co morbid diagnosis of attention deficit hyperactivity disorder symptoms rather than symptoms from autism. They did conclude that the review was limited because of a lack of suitable studies due to small sample sizes, short durations, insufficient control groups and a lack of variability.

Reference: MARTIN HOLTMANN, SABINA STEINER, SARAH HOHMANN, LUISE POUSTKA, TOBIAS BANASCHEWSKI and SVEN BÖLTE Neurofeedback in autism spectrum disorders.

Article first published online: 14 JUL 2011 | DOI: 10.1111/j.1469-8749.2011.04043.x

Motor Stereotypies

A literature review was performed on motor stereotypies defined as "diverse range of movements, behaviours, and/or vocalizations that are repetitive, lack clear function, and sometimes appear to have a negative impact upon an individual's life". Motor stereotypies commonly occur in children with autism. The review indicated that the purpose of motor stereotypies remained unknown but it may be to maintain arousal. Behavioral treatments for motor stereotypies seem to be the most effective but they are difficult to implement in children younger than 7 years old.

Reference: BARRY, S., BAIRD, G., LASCELLES, K., BUNTON, P. and HEDDERLY, T. (2011), Neurodevelopmental movement disorders – an update on childhood motor stereotypies. Developmental Medicine & Child Neurology. doi: 10.1111/j.1469-8749.2011.04058.x

ADHD, Asperger Syndrome and Motor Skills

Recent research evaluated the motor skills of 36, eight to twelve year old boys (12 with ADHD, 12 with Asperger Syndrome and 12 typically developing peers). The Physical and Neurological Examination for Subtle Signs was used to evaluate the boys and the following was examined: 1) total speed of timed activities, 2) total overflow, and 3) total dysrhythmia. The results indicated: the boys with Asperger Syndrome performed more slowly that the boys with ADHD or the control group and "total dysrhythmia differentiates Attention-deficit hyperactivity disorder and Asperger syndrome children from controls".

The researchers concluded that dysfunction of the fronto-striatal-cerebellar networks may be the physiopathological basis for the differences.

Reference: Augusto Pasini MD, PhD et al. (2011) Motor examination in children with Attention-Deficit/Hyperactivity Disorder and Asperger Syndrome. Acta Paediatrica Accepted for publication August 8, 2011. DOI: 10.1111/j.1651-2227.2011.02436.x

Upper Extremity Function and Spastic Cerebral Palsy

A recent study looked at upper limb deformities, upper limb function and its relation to gross motor function. The researchers analyzed data from 234 children with spastic cerebral palsy. The results indicated the following:

* 70.5% had a limitation in forearm supination

* 62.8% had problems with wrist and finger extension in at least one limb

* Thumb-in-palm deformity of at least one hand was found in 47.0% of patients

* Swan neck deformity was the most common finger deformity

* "the degree of upper limb deformity was significantly related to the GMFCS level in children with bilateral CP, but not in children with unilateral CP"

* limitation in forearm supination was the most common in children with spastic cerebral palsy

Reference: Park ES, Sim EG, Rha DW. Effect of upper limb deformities on gross motor and upper limb functions in children with spastic cerebral palsy. Res Dev Disabil. 2011 Aug 5. [Epub ahead of print]

Video Analysis App

If you have an iPhone you have to check out this simple video analysis application called Time Motion. This app is very useful to record an activity and analyze it. Here is what you need to do to use it (and it is FREE!!!!)

Step 1: Download the Time Motion app from Apple.

Step 2: Take a video of what you want to analyze. Try to video in landscape mode (camera turned sideways). For this example, I wanted to evaluate how often a child was toe walking. I only took a short clip (you would want to video for longer to get more data).

Step 3: Tap on the Time Motion app. Tap the lowercase i button to set what you are observing. For our video it is set for "heels" and "toes".

Step 4: Tap the video button. Choose the video that you previously recorded. To begin recording data just tap one of the buttons to start - either heels or toes. The video will start playing and you simply tap "heels" or "toes" depending upon what the child is doing throughout the video.

Step 5: When the video is over it will automatically provide you with the data. Here is the data from our video.

Step 6: You can email the data or take a screen shot of it to print out (press the power button and home button at the same time to take a screen shot).

Step 7: Document progress. If you took a longer video, this is a much more accurate way to document progress versus a therapist simply observing and guessing. Also, you can demonstrate small progress.

Here are some different ideas to analyze:

1. Child's behavior in classroom following sensory diet interventions versus no sensory diet interventions.
2. Percentage of time child can sit upright in wheelchair for table top task.
3. Percentage of time child uses mobility aids without verbal cueing.
4. Percentage of time child participates in physical education without assistance.
5. Percentage of time child writes using proper pencil grip.

The ideas are endless...

Hot Topics

Gait Assessment and Duchenne Muscular Dystrophy

Journal of Child Neurology published research on the gait assessments of children with Duchenne Muscular Dystrophy with long distance walking. Overall, the children with Duchenne muscular dystrophy exhibited significantly lower stride velocity and a less smooth trunk movement. When comparing the children with milder symptoms of Duchenne's to children with more moderate symptoms, the milder symptom group showed significantly higher values for cadence and stride velocity. Trunk smoothness was also better in the mild group versus the moderate group.

Reference: Raluca Ganea, MSc et al. Gait Assessment in Children With Duchenne Muscular Dystrophy During Long-Distance Walking. Published online before print July 15, 2011, doi: 10.1177/0883073811413581 J Child Neurol July 15, 2011 0883073811413581

Home Treadmill Training and Spina Bifada

Recent research was published on a home treadmill training program for children with spina bifada. Eighteen children were assigned to the experimental group who participated in a 12 week, 2 times per week, home based progressive treadmill training program. The 14 children in the control group had their usual care for the 12 weeks. The home based treadmill training program resulted in significant changes in the 6 minute walking tests, peak speed, gross energy consumption and VO2peak. Long term results (3 months post intervention) were still seen with ambulation but only a short term effect with VO2peak.

Reference: Janke F. de Groot et. al. Randomized Controlled Study of Home-Based Treadmill Training for Ambulatory Children With Spina Bifida Neurorehabil Neural Repair September 2011 25: 597-606, first published on March 17, 2011 doi:10.1177/1545968311400094

Functional Performance and Achondroplasia

Developmental Medicine and Child Neurology published research on the functional performance of 35 Australian children, ages 3-7, with achondroplasia. The Functional Independence Measure for Children (WeeFIM-II) was used at 3, 5 or 7 years old. Improvements in function were noted from 3-5 years of age. Milestones were delayed across all ages and domains. The children with achondroplasia required more assistance with self care and mobility skills. Social skills were an area of strength. The researchers concluded that occupational, physical and speech therapists should try to help children and families to become more independent.

Reference: PENELOPE JANE IRELAND et al. Functional performance in young Australian children with achondroplasia. Developmental Medicine and Child Neurology. Article first published online: 12 AUG 2011 | DOI: 10.1111/j.1469-8749.2011.04050.x

More Hot Topics

Postural Control in Standing

Here is an interesting open access research article on the postural control of children in standing. Using a force plate and a visual focus, the researchers examined the changes in postural control in 7-11 year olds and adults. The results indicated that postural stability improved linearly from 7-10 years old, stabilized somewhat at 10-11 years old and then increased to reach the adults level.

The authors discuss that the age range of 7-11 years old is a critical period of improvements in postural stability and processing visual/ vestibular information. One aspect of the study included adding vibration to the subject's ankle to alter somatosensory information. The younger children exhibited increased center of pressure velocity with the vibration and the velocity decreased with age. The authors concluded that only the adults could compensate by predominately using vision to maintain postural control in standing when the vibration was added at the ankles.

The researchers recommend further studies to examine the adolescent period and children with disabilities such as cerebral palsy and ADHD.

You can read the full article here - http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0019697.

Reference: Cuisinier R, Olivier I, Vaugoyeau M, Nougier V, Assaiante C (2011) Reweighting of Sensory Inputs to Control Quiet Standing in Children from 7 to 11 and in Adults. PLoS ONE 6(5): e19697. doi:10.1371/journal.pone.0019697

Doodling and Science

A recent study indicated that students who drew or doodled while learning had improved memory recall over students who did not. The researchers reported that students applied more effort when they drew pictures to indicate they understood text that they previously read. This appears to be especially helpful during science class to motivate and engage students.

Nice study to refer to if generating educational based goals for why a student needs to learn how to draw or doodle.

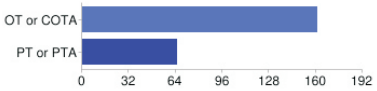
Reference: Drawing to Learn in Science, Science 26 August 2011: Vol. 333 no. 6046 pp. 1096-1097. DOI: 10.1126/science.1204153

Inclusive Art Booklet

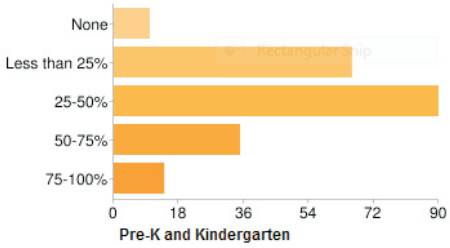
Here is an awesome, free resource from Crayola entitled "Creative Art Experiences for Children with Special Needs". This booklet is great for ideas and tips. It would make a wonderful resource for any art teacher or elementary school teacher who works in an inclusive environment. If parents are looking for ideas for at home they can find plenty here. The topics include: Create an Arts-Encouraging Environment, Drawing Explorations, Painting Activities, Modeling and Sculpting Techniques, Outdoor Art Experiences and Benefits of Art Exploration. You can download the booklet here - http://www.crayola.com/educators/media/successGuides_specialNeeds.pdf .

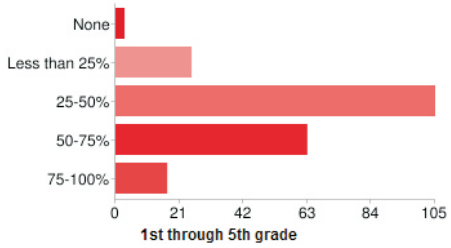
Survey Results - Types of Caseloads

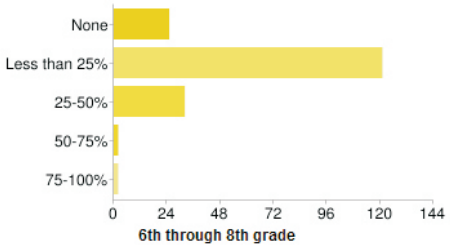
QUESTION #1:
Are you a pediatric OT/COTA or PT/PTA? Please click on pediatric OT or pediatric PT?
161 OT/COTA's responded
65 PT/PTA's responded

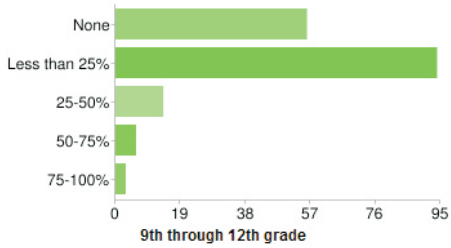


QUESTION #2:
Estimate what the percentage of your caseload is in each grade level.

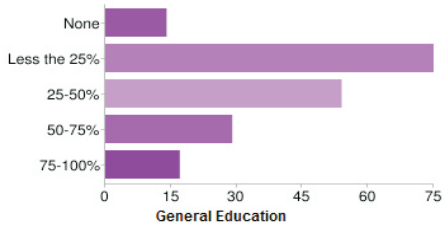


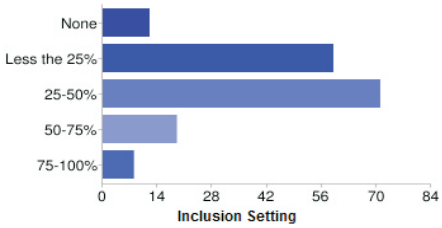


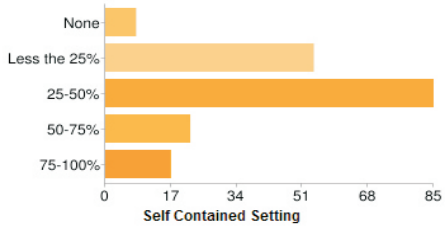


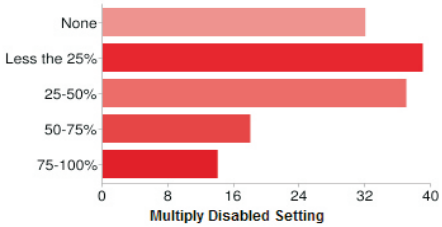


QUESTION #3:
Estimate what the percentage of your caseload is in each setting.









[Answer the current survey on the economy at www.YourTherapySource.com/survey]

On the Web...

Unsung Heroes Grant

ING has started accepting applications for the ING Unsung Heroes Awards Program. This application is due on April 30, 2012. Here is some info from their website:

> "The ING Unsung Heroes® program recognizes those classroom heroes who take teaching to new heights and make learning fun. Each year, ING presents 100 grants totaling $240,000 to help fund innovative classroom projects nationwide".

The grants are for teachers or individuals classified as staff in a public or private accredited school. So if you have a project you would like to start to help children learn why not apply?

Get more info at ING Unsung Heroes - http://ing.us/about-ing/citizenship/childrens-education/ing-unsung-heroes

Build A Bear Grant Money

What child does not like Build A Bear? Well, now therapists might like Build A Bear even more than the children. They are offering grant money for:

> "direct support for children in the areas of health and wellness such as childhood disease research foundations, child safety organizations, and organizations that serve children with special needs"

.You must be a tax exempt organization who applies for the grant before October 28, 2011. They offer grants between $1000 and $10,000.

You can get more information on the Build A Bear website - http://www.buildabear.com/shopping/contents/content.jsp?catId=400002&id=700010 .

Adapting Books

Found this excellent resource on ideas to adapt books for children with disabilities from the North Carolina Assistive Technology Program. There are tips on simple low tech suggestions and more high tech suggestions. Worth a look if you interact with any individuals with disabilities. Read The A-Z of Adapting Books for Children with Disabilities - http://cmsweb1.loudoun.k12.va.us/50910068152053/lib/50910068152053/revA-Z%20of%20Adapting%20Books.pdf.

Handwriting Tips for Low Vision or Blind

Heard on Twitter about this informative article from @VisionAware. The article offers tips and techniques on how to keep your handwriting skills and signing your name if you are losing or lost your vision. They offer excellent pictures on how to make raised line paper. Many of the tips may be helpful for children who have difficulty with spacing as well. Well worth a look! Read Signing Your Name and Handwriting in You are Low Vision or Blind - http://www.visionaware.org/writing-tips-low-vision-vision-impaired

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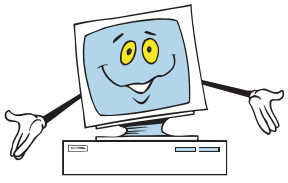
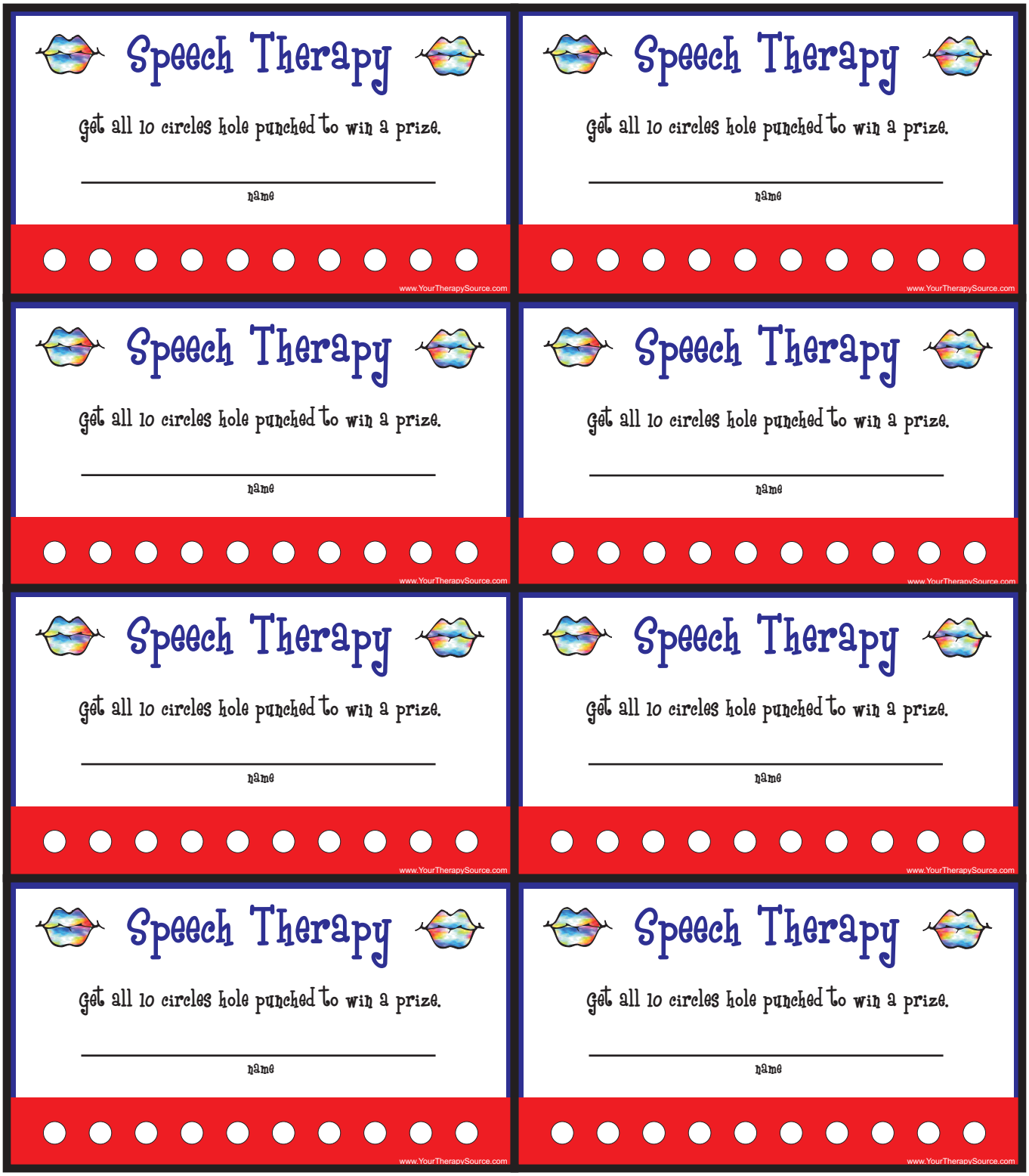


Directions for Occupational Therapy Punch Cards: Print out the cards. Cut out and provide the child with one card. Establish what each circle indicates i.e. following rules in therapy, completing home exercise program, reaching goals, etc. Each time the child completes the established activity, use a hole punch to remove a white circle. After 10 circles have been punched out give the child a reward.

Directions for Physical Therapy Punch Cards: Print out the cards. Cut out and provide the child with one card. Establish what each circle indicates i.e. following rules in therapy, completing home exercise program, reaching goals, etc. Each time the child completes the established activity, use a hole punch to remove a white circle. After 10 circles have been punched out give the child a reward.

Directions for Speech Therapy Punch Cards: Print out the cards. Cut out and provide the child with one card. Establish what each circle indicates i.e. following rules in therapy, completing home exercise program, reaching goals, etc. Each time the child completes the established activity, use a hole punch to remove a white circle. After 10 circles have been punched out give the child a reward.



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The Reward card for

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get all 10 circles hole punched to win a prize.

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name

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The Reward card for

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get all 10 circles hole punched to win a prize.

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