INFINITY WALK METHOD: CLINICAL DOCUMENTATION AND RESEARCH

Use this check-list to help you narrow-down and define an initial topic for clinical documentation or research before beginning a formalized exploration of the usefulness of the Infinity Walk method within your own area of professional expertise.

☑ **Performance Areas ***

☐ Daily Living
☐ Socialization
☐ Functional Communication
☐ Functional Mobility

☐ Work/Productive Activities
☐ Educational Activities
☐ Vocational Activities
☐ Job Acquisition (interview skills)
☐ Work/Job Performance

☐ Play/Leisure Activities
☐ Exploration and Performance

☑ **Performance Context ***
☐ Chronological Age
☐ Developmental Age
☐ Life Cycle
☐ Disability Status
☐ Environment
☐ _____

☑ **Professional Context: (Expertise/Skills)**
☐ Occupational Therapist (OT; OTA)
☐ Vision Therapist (OD)
☐ Special Education Educator
☐ Speech/Language Specialist (SLP)
☐ School Nurse; Home Health Nurse (RN)
☐ School Counselor; Psychotherapist
☐ Health/PE Educator
☐ Physical Therapist (PT) - with Infinity WalkAbout rail
☐ _____

☑ **Focus of Documentation Validity/Reliability**
☐ Clinical Assessment Tool
☐ Treatment
☐ Prevention
☐ Maintenance
☐ Specialty area (e.g. fall prevention)

_____

* AOTA uniform terminology from
Am J Occup Ther 1994; 48: 1047-1054

☑ **Performance Skills ***

☐ Sensorimotor
☐ Sensory Awareness
☐ Sensory Processing
☐ Proprioceptive
☐ Vestibular
☐ Perceptual Processing
☐ Spatial Relations
☐ _____

☐ Neuromusculoskeletal
☐ Reflex
☐ Range of Motion
☐ Muscle Tone
☐ Endurance
☐ Postural Control
☐ Postural Alignment
☐ _____

☐ Motor
☐ Gross Coordination
☐ Bilateral Integration
☐ Motor Control
☐ Praxis
☐ Visual-Motor Integration
☐ _____

☐ Cognitive Integration
☐ Level of arousal
☐ Attention span
☐ Initiation of activity
☐ Termination of activity
☐ Memory
☐ Sequencing
☐ Concept formation
☐ Spatial operations
☐ Problem-solving
☐ Learning
☐ _____

☐ Psychosocial Skills
☐ Self-concept
☐ Social conduct
☐ Interpersonal skills
☐ Self-expression
☐ Coping skills
☐ Time management
☐ Self-control

SELECTING AN INITIAL INFINITY WALK RESEARCH TOPIC

Performance Area

(1) I am most experienced with _____
(2) I have most access to _____
(3) I am most interested in _____

Performance Context

(1) I am most familiar with clinical documentation of _____.
(2) I am most familiar with literature on _____.
(3) I am most familiar with research on _____ ___.

Professional Context

My expertise is in _____
_____
_____

Based on my above answers I would be most successful in an initial Infinity Walk research project that focuses on:

(1) Assessment of _____
(2) Treatment of _____
(3) Prevention of _____
(4) The specialty area of_____

What category of performance skills are you focusing in on?

____ Sensorimotor
____ Neuromusculoskeletal
____ Motor
____ Cognitive Integration
____ Psychosocial
____ Other _____

Pick one or more sub-categories of skills within the performance skill category that you just selected. Select sub-categories based on a combination of your clinical "intuition", expertise and experience that tells you that these specific skills would most likely be positively affected by the Infinity Walk method, given the you would personally do or oversee the training/treatment.

What are these sub-categories of performance skills? _____
_____
_____
_____

Do you have a professionally recognized way to quantify pre-post change in these parameters? If not, then reduce the sub-categories of performance further until they can be quantified.

As soon as you are confident that you know how to measure changes in the performance skills, you have identified you dependent variable(s)!

DEPENDENT VARIABLES: The sub-categories of performance skills that you will measure.

Define your dependent variable(s) in enough detail to know what you are going to use to measure them. Each line in the below table will result in only one statistical result (e.g. a number/ score / %). The same dependent variable or measure may be repeated in any number of rows. (E.g. You might measure one skill many ways; or, you might use one scoring system to interpret more than one performance skill, if appropriate.

MY DEPENDENT VARIABLE(S) (sub-categories of performance skills)	MEASUREMENT TO BE USED (results in a number, score, %, etc.)

INDEPENDENT VARIABLES

Now we will work backwards to define your independent variable. Your independent variable is not just "Infinity Walk" in general. It is something about Infinity Walk specifically. People will ask you "Does Infinity Walk work?" because we talk in generalities, but your answer, and your research, should be about specifics.

The independent variable is a specific aspect of Infinity Walk that must be carefully included and monitored to be sure that it is being effectively taught and practiced, even if other aspects of Infinity Walk get ignored. For instance, if you are interested in oculomotor changes then the aspects of Infinity Walk method that trains visual focus to the Point of Sensory Focus (PSF) is critical. (*See Sunbeck, 2002, pp. 93-96*) Your experimental design will include specifics about how to engage visual attention and focus towards the PSF (e.g., conversation, TV/video movie, flash cards, visual games).

In contrast, if you are a PT doing comparison research between the traditional parallel bars and the Infinity WalkAbout handrail system and your patients need to concentrate fully on the placement of each foot to maintain balance along the rail, then not only would adding an oculomotor task distract them from their primarily task, but it would also confound the research results. One would interfere with the other during early rehabilitation treatment.

Bottom line: Carefully select the specific aspects of Infinity Walk (independent variable) that you need to include in your study in order to get significant change in the specific performance skills you have selected (dependent variables), using the best choice of measurements available to you.

Writing Your Results in Specifics, not Generalities.
Your results and discussion section will emphasis all the specifics that must be repeated in order for someone else to get the same results. Obviously, "Research subjects did Infinity Walk 15 minutes a day for 5 weeks" is not enough information. The specific way in which you controlled your independent variable(s) made the difference between success and failure. Others need this same "insider" information. Your definition of how you are using Infinity Walk should be specific enough that it gives the reader as much information as they would have gained by being there with you; otherwise the can't recreate your results.

What you can say about your clinical and/or statistical success will depend on how you carried out the study. Stay specific to the conditions of your study, rather than tempt generalization. *E.g., For these 15 children, age 6-7, who have such and such circumstances, the Infinity Walk method when taught and practiced (as described above in detail) for 15 minutes, five times a week, for 6 weeks resulted in gains in __(specific)__ performance skill; reached __% statistical significance, etc. (Research is known for these long run-on sentences because the details are so important!)*

There is no greater acknowledgement of your efforts than having a colleague want to repeat your study, and even take it to another level by adding/changing some parameters/variables. You want them to be able to replicate your work, so be sure that you report in detail everything that you believed made the difference.

Sometimes it helps to think backwards. "If I don't get improvement in_____ performance skill, using _____ measurement, after I control for the many details that I feel are essential (list them), then where would it have gone wrong? What's missing? Is something confounding the results? Etc.

If you get your predicted results in individual Infinity Walk case studies, you will be able to repeat those results in research by carefully examining what specifics of the case studies really made the difference and then carefully control (protect) your study so that it does not get off track and lose the essence of what made the case studies so successful.

You can add as many independent and dependent variables and measurements to a study as long as they do not confound each other in a way that weakens the results so that they can't reach statistical significance.

If you strengthen your results by combining independent variables (different specific aspects of Infinity Walk) in one study, you just explain that your results are based on the combination of these specifics. For instance, Infinity Walking to a different movie every day would provide both a visual and auditory Point of Sensory Focus PSF.) Visual and auditory attention and performance skills get confounded, but this is ok as long as you report that your results are deliberately based on the combination. (Your independent variable would be Infinity Walking while looking at and listening to a movie, etc..)

Finally, include in your discussion section all your clinical insights that are not obvious by looking at statistical numbers. Your clinical experience of what was happening with the individuals you were working with is very valuable to the next clinician or researcher. Sometimes the numbers don't reveal important and useful information. The discussion section is the place to come out from behind the numbers and tell it like you experienced it. Give suggestions on how the design could be improved to get even better results. This is not putting down your effort, you are helping to build a pyramid of contributions to your field, in which you have played an important role.

WRITE YOUR INFINITY WALK INDEPENDENT VARIABLE IDEAS HERE:

_____

_____

_____

_____

HYPOTHESES

Now let's put it all together and create your first hypothesis. (You may have more than one.)

Follow this format:

"If I include/control the following aspects of Infinity Walk method (Ind. Var.), I expect that the following performance skill (Dep. Var) will show significant improvements when measured by (quantitative measure)."

HYPOTHESIS #1 _____

_____

_____

HYPOTHESIS #2 _____

_____

_____

ETC.:

RESEARCHING INFINITY WALK METHOD EFFECTIVELY AND EFFICIENTLY

The following order of researching Infinity Walk in your area of clinical specialty is recommended:

(1) First Research Study: Show that specific aspects of the Infinity Walk method positively affect one or more specific performance skill(s). Use:

(a) case study
(b) case study series
(c) controlled research

(2) Mid-Phase of Research Cycle: Show that "it"(Ind. Var.) is at least as effective as an accepted method commonly in use in your field by comparing the same specific performance skills.

(a) ----
(b) case study series
(c) controlled research

(3) Last Phase of Research Cycle: Show that it is more effective in some specific way that adds additional value to it as a clinical method. (e.g., more cost/time efficient; greater home-practice compliance; paraprofessionals and parents can be trained to be effective in facilitating the method).

(c) controlled research

WHERE TO START

CASE STUDY

Always start with case studies to give yourself time to perfect the consistency of your administration of treatment, assessment, etc. The case study helps you troubleshoot and select the best research design based on things you discover while doing them.

ASK YOURSELF: "What clients/patients/special needs students can I think of right now who would be good candidates for a case study based on my above answers"? _____

_____(For privacy, only write down initials or a private descriptor)

CASE STUDY SERIES

A number of individual case studies can point the way to designing an excellent research study. Continue documenting Infinity Walk successes in case study format while you gain clinical insight about the value of specific aspects of the method for the specific individuals you serve. Each person you work with will inspire new research ideas and fine-tune your research design.

Case studies series can be used as a pilot study that introduces your logic behind your research topic. Show that you can repeat the clinical results of your case studies before committing your time and effort to a controlled study. A small pilot using 8-10 individuals can be powerful if your % of success is close to 100% on even a single dependent variable. It is cause to design a more controlled study with the same variable (performance skill). Within that same study you can also explore other less clear variables. The success of your research rests on the primary performance skill that you have the highest confidence in. Your secondary exploratory variables add interest to the discussion section of your write-up and can become pilot data for your next study. Your research is a success if you can say with statistical confidence that specific controlled aspects of Infinity Walk method under your skill and guidance did indeed progress function in certain categories that you measured before and after training.

TRUE EXPERIMENTAL Design

When are you ready to design a carefully controlled Infinity Walk experiment? When you are sure that your hypothesis will lead to statistical significance if you carry out the study correctly. If you have reached of point of being able to predict the outcomes of case studies then you are probably ready. Pick the specifics of your experimental group, specific measurable performance skill(s), and the specific aspects of the Infinity Walk method that are necessary for the study's success. Do all this based on what succeeded in your case studies and you should end up with a good study. Remember a study that does not produce results is of little use. It does not forward the proper use of Infinity Walk; and it does not disprove its usefulness either. Usually, it is the study's design that is found at fault when no results are forthcoming. The controlled experiment phase is an excellent time to team up with someone with a professional background in research design and statistics in your field. Proper research needs time, effort, and usually some amount of money. Make it count. Produce an excellent publishable study that contributes to your field by guiding other professionals in the effective use of Infinity Walk.

:-) Deborah Sunbeck