

Improving Information-Seeking Behaviors and Knowledge Bases for
Thesis Students in the Applied Behavior Analysis Graduate Program and
Students in the Rehabilitation and Mental Health Counseling Graduate Program

Video 1: Transdisciplinarity: Planning a literature review across fields of study

This video addresses research techniques to follow when a topic crosses traditional borders of disciplines, also known as transdisciplinary research.

This is a team-based approach greatly increases the chances of the translation of research into practice as knowledge is generated into action. Transdisciplinarity provides an integration of perspectives in the identification, formulation, and resolution of what needs to become a shared problem.

To do a thorough job, the researcher must know how to search the literature in all fields that address the topic being studied.

Let's consider an example: Feeding disorders in children ages 0-3. First, what questions come to mind? Who has the problem and who causes the problem? Can it be resolved by change in behavior? Has it been done successfully? Is education a key factor in treatment? What is the frequency of this condition? Is the incidence different in various cultures? Is this condition fatal?

Think about what disciplines might address these questions. Pediatric medicine, Nursing, Nutrition, Rehabilitation, Counseling, Education, Clinical Psychology, and Applied Behavior Analysis are only a few of the viable routes to explore.

Each of these disciplines has a unique language, epistemology, method, assessment, test and measure, and service.

These are only a few of the items that are considered in a transdisciplinary approach.

After thinking about feeding disorders in children from a transdisciplinary approach, we come up with the following four populations:

1. Children who have bottling problems, chewing, swallowing, gagging, coughing or who have trouble breathing during feeding;
2. Children with delayed development or specific disabilities associated with poor growth;
3. Children with behavior problems during feeding;
4. Children with genetic conditions impairing oral motor functions.

The first step is to acquire an overview of the topic. To do so, we'll start with two disciplines: Pediatric Medicine and Psychology. This leads us to the selection of our databases.

We start at the FMHI Research Library homepage and select Databases. Here, you may choose to enter the name of a database, if you know it, or you may select Subject and then pick out one of the disciplines listed on the left-hand side. A list of sub-categories appears to the right. Choose the subject MEDICINE. There are 47 article databases. If you choose the subject, PSYCHOLOGY, there are 26 article databases. Be sure to click the GO button on the right to advance to the list of database names. The content of each database can be determined by selecting the (i) icon located on the right of the screen under Actions. Doing so brings up a description of the database that also includes the disciplines it covers. We choose PubMed and PsycINFO (OVID) as our databases.

Both PubMed (aka Medline) and PsycINFO (OVID) cover disciplines such as Communication Sciences and Disorders, Medicine, Nursing, Public Health, Psychology, Rehabilitation and Mental Health Counseling, Physical Therapy and a few others that may be relevant to feeding disorders in children 0-3 years of age. Both provide abstracts and access to selected full-text. Both databases also provide a "Related Articles" or "More Articles like This" feature that can save a lot of digging when you find a definitive article for your research. Both also allow the easy export of bibliographic information into citation management packages, such as EndNote, RefWorks, or ProCite, which are very useful for tracking your articles, formatting your bibliography, and inserting citations when writing your papers. We will come back to bibliographic software in another video. However, when working in disciplines outside of our specific areas of study, both databases provide an online thesaurus that we can use to become familiar with the semantic worlds of MEDICINE and PSYCHOLOGY.

A thesaurus uses controlled vocabulary. A controlled vocabulary, for our purposes, is the language of a discipline. It tracks when a word or phrase becomes 'established' in a discipline (e.g., 1998), provides a definition, synonyms and shows where the word or phrase is located vis-à-vis broader and

narrower terms. Also, by using the subject headings in the database, you will benefit from the work of a librarian who has already collected various related terms under one subject heading, including a heading that may have not previously come to mind.

In PubMed, the thesaurus is known as the MeSH, or Medical Subject Headings. To access MeSH, select the SEARCH dropdown box on the left, and select MeSH and then type in your term 'Feeding disorder.' MeSH returns two: 'Feeding and Eating Disorders of Childhood' and 'Nutrition Disorders'. Introduced in 1998, 'Feeding and Eating Disorders of Childhood' specifically addresses 'Mental disorders related to feeding and eating that are usually diagnosed in infancy or early childhood'. 'Nutrition Disorders' focuses primarily on 'Disorders caused by nutritional imbalance, either over-nutrition or under-nutrition'.

In PsycINFO, the *Thesaurus of Psychological Index Terms* provides the controlled vocabulary of psychology. When you type in 'feeding disorders,' there is a term called exactly that. When you click on the '(j)' icon, you discover the term was introduced in 2009. 'Feeding disorders' is defined as 'Feeding disturbance manifested by persistent failure to eat adequately, with significant failure to gain weight or significant loss of weight over at least 1 month. Not associated with gastrointestinal or other medical condition. Onset is before 6 years of age.' You will also learn that a related term is 'Dysphagia,' introduced in 2003, which means 'difficulty swallowing.' We will come back to this term in a moment.

Note how PubMed and PsycINFO formulated definitions for the concept of 'feeding disorders.' PubMed articulated it as a mental, not physical disorder; PsycINFO articulated it not as a medical condition. The assumption in PsycINFO is that it is a psychological [mental] disorder.

If we search MeSH for 'Dysphagia,' you are directed to 'Deglutition Disorders,' defined as 'Difficulty in SWALLOWING which may result from neuromuscular disorder or mechanical obstruction' and gives two distinct physical conditions: oropharyngeal dysphagia and esophageal dysphagia. This is very different from PsycINFO, which gives the brief description 'difficulty swallowing.' When you search PubMed for 'Deglutition Disorders,' you retrieve over 30,000 articles. In PsycINFO, 'Dysphagia' retrieves just over 150.

In both PubMed and PsycINFO, however, you will need to limit the age of the population under study to children 0-3. Otherwise, you will end up with abstracts addressing swallowing disorders across the life span. In PubMed, you would limit using 'All Infant: birth-23 months,' 'Newborn: birth-1 month',

'Infant: 1-23 months', and 'Preschool Child: 2-5 years' and 'Humans'. In PsycINFO, using the LIMITS feature, you select age groups 120 Neonatal <birth to age 1 mo>; 140 Infancy <age 2 [mo] to 23 months>, and 160 Preschool age <age 2 to 5 years>. Using limits, the PubMed search retrieves over 4000 articles, while the PsycINFO search is reduced to just under 20 relevant articles. If we further limit by English, the PubMed search drops to just over 3000 articles, of which 400+ articles are review articles.

But what if our focus is a behavioral perspective? 'Feeding disorders' is right on target as a search but what else exists? You might try the phrase 'feeding behavior.' In PubMed, 'feeding behavior was introduced in 1969 and is defined as 'Behavioral responses or sequences associated with eating including modes of feeding, rhythmic patterns of eating, and time intervals.' Adding the two terms 'feeding behavior' and 'deglutition disorders' together with limits mentioned above, just over 70 items are retrieved such as 'Behavioral conceptualization, assessment, and treatment of pediatric feeding disorders.' That looks good.

In PsycINFO, 'feeding behavior' is mapped to 'Animal Feeding Behavior' -- not such a good match. Try 'Eating Behavior,' which gives you over 5000 hits. Limiting that by the infant to children categories above, you reduce the search to around 1000 articles. Limiting to English brings you to a slightly smaller group. Limiting further with a range of years, such as the last five years, reduces the search to under 800.

Another way to become conversant with the vocabulary of a discipline is to look at the subject headings (controlled vocabulary) held within the record. In PubMed, you select MEDLINE in the 'Search' display field and look for 'MH,' shorthand for medical subject headings. In PsycINFO, click on 'Complete Reference' to see the list of subject headings.

After I read the abstract, I then check the other options. In PubMed, I can see 'Related Articles' and 'Reviews' (other literature review articles). In PsycINFO, I check out its related records feature, entitled FIND SIMILAR, and the FIND CITING ARTICLES, to see who else is interested in this article and where the research has gone. I follow the same process, examining the subject headings to see what other terms would be useful for my research. I also look at the bibliography of this particular paper to review the sources cited and to look for other disciplines. After reviewing the records of the two searches, I decide to hone in on effective behavioral interventions for parents to assist their children who have feeding disorders.

By searching in the databases identified by the first-guess method applied earlier, and by using the controlled vocabulary, i.e., 'mapping' option, in MeSH and the *Thesaurus of Psychological Index Terms*, the researcher will find paths into other disciplines that shed light on the chosen topic. Reading the abstract is a quick way to determine whether the article is on topic as well as to retrieve the subject headings by examining an expanded record (MEDLINE format or Complete Reference format).

Remember, planning a search strategy across several disciplines is an essential step in the completion of a thorough literature review. You never know what you will find, so search frequently. Keep your search targeted. It may be, as you review literature across disciplines, you may revise your topic or hone in on specific aspects, such as my decision to more closely examine behavioral interventions for children with eating disorders.

As a 'helping' professional you will be part of a larger team of professionals providing care to individuals across the life span. Each person brings a wealth of knowledge and specific expertise to improve a client's quality of life, to provide targeted services, or to help re-integrate an individual with disabilities into his or her community. Being conversant with other professional vocabularies increases your ability to work effectively, not only with clients, but also with your future colleagues and researchers.

Here is a final piece of advice: plan to spend several sessions researching the literature that is important for your research. Think about the search terms you will use before you start searching, and record your search terms and the history as you search. From time to time, check with your advisor, your professor, or a librarian to clarify your search direction. We want you to use your time efficiently and to succeed!

Contact us at FMHILibrary@usf.edu

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