

LITERATURE REVIEWS

Title: Reducing Disordered Eating Behaviors through Health Education: A Narrative Review

Kuziel S

Background: Disordered eating behaviors (DEBs) include loss of control eating (LOC-eating), food restriction and dieting, and binge eating. While these behaviors alone do not meet diagnosis for an eating disorder, DEBs are associated with negative health outcomes such as obesity and eating disorders (Neumark-Sztainer, et. al., 2007). Can these unhealthy behaviors be reduced through Health Education (HE) interventions? Which HE strategies are most effective at reducing DEBs?

Research Objective: To review the available literature on HE interventions focused on reducing DEBs and to determine which strategies are most effective.

Methods: A PubMed search using the term “disordered eating health education” was conducted with text availability limited to “Free Full Text.” Inclusion criteria were: 1. At least one outcome measured was a DEB, 2. A major component of the intervention or control group was education about DEB, and 3. Intervention was not a treatment program for participants with diagnosed eating disorders. The interventions in these studies included: single session HE, multi-session HE, family-based interpersonal psychotherapy (ITP), family-based HE, media literacy HE, theater arts HE, group ITP, and an online HE intervention. Several types of DEBs were measured in these studies: LOC-eating, binge eating, restriction, and symptoms of eating disorders.

Results: Sixty articles were identified in the search; five met inclusion criteria. Four of the five studies concluded the HE intervention produced statistically significant decreases in at least one measurement of DEB. Three studies found the HE intervention had long-term (beyond immediate post-intervention) reductions in DEBs. Three single-sex programs had more statistically significant decreases in DEB measures than the two co-ed programs included in this review.

Conclusions: Findings from this review suggest, depending on the strategies used, there are long-term benefits from addressing these behaviors through HE. From this review, the identified strategies that may be the most effective when creating a disordered eating HE intervention are 1. single-sex participants, 2. multi-session format, 3. in-person, group setting, and 4. a focus on reducing thin-ideal internalization. Narrowing the text availability to Free Full Text only was a limitation to this review. Further research is necessary and future literature reviews should: 1. not be limited to Free Full Text, 2. examine the efficacy of online-only programs, and 3. directly compare results of DEB measures, including SCOFF, EAT-26, and the Dutch Restrained Eating Scale.

The Sensory and Scientific Lessons of Hydro-ethanolic Extractions of *Angelica archangelica*: A Narrative Review

Missenda M, Miller B, Rosenthalis A

Background: The practice of herbal medicine making today is a combination of tradition and modern science. Traditional assessment of taste and smell informs practitioners' understanding of therapeutic efficacy. Such organoleptic qualities can align with classes of phytochemicals as identified through scientific methods. The purpose of this review is to determine if *Angelica archangelica* is an appropriate selection for upcoming research experiments to create an evidence-based methodology to scientifically validate traditional extraction methods and organoleptic assessment, thus filling the gap in the literature to scientifically support practices used for centuries to make herbal medicine. *Angelica archangelica* is a promising specimen for our research as it has a characteristic sensory profile that offers a good safety profile and multiple potential organoleptic and phytochemical markers for identifying changes in quality and potency.

Research Objectives: Determine the appropriateness of *angelica* for organoleptic assessment of potency by 1) identifying *angelica*'s key phytochemicals and extraction methods and 2) identifying *angelica* organoleptic qualities associated with therapeutic use to create an organoleptic lexicon.

Methods: A PubMed and Google Scholar search using the term "*Angelica archangelica*/chemistry"[Mesh] was conducted. Inclusion criteria required the description of extraction for the root, fruit or seed using ethanol or distillation and analysis of constituents. In addition to the scientific research historical traditional literature including pharmacopoeias and materia medicas were searched for organoleptic qualities and methods of extraction.

Results: Thirty-seven published papers were reviewed with thirteen meeting inclusion criteria. The primary marker compounds extracted from *A. archangelica* root were monoterpenes (α -pinene, δ -3-carene, and limonene), furanocoumarins (imperatorin, phellopterin, isoimperatorin, oxypeucedanin, bergapten, xanthotoxin) and simple coumarins (Umbelliferone, Oshtenol, and Osthol). Extraction methods varied the percentage alcohol and procedures used to isolate constituents.

The organoleptic descriptors from the historical and scientific literature for taste was described as sweetish, and pungent with secondary bitterness. The powdered root has characteristic odors with terpenic qualities related to the α -pinene and a bottom musk-like note associated with macrocyclic lactones present.

Conclusion: Additional systematic research to further link monoterpenes and coumarins with sensory qualities more broadly is indicated. This review of the traditional and scientific literature provides validation for selecting *Angelica archangelica* by providing organoleptic and phytochemical attributes in line with traditional extraction methods as understood through historical and scientific research. The results of this review provided important linkage between specific sensory and constituent qualities, supporting the lexicon for our next phase of research which is ultimately to scientifically validate traditional practices of extraction and assessment.