



# A Methodological Review of Confidence Measurement Scales for Dietitians Working with Individuals



Kerryn Buttenshaw, APD<sup>\*</sup>; Jane Shakespeare-Finch, PhD; Susan Ash, PhD, FDAA<sup>‡</sup>

## ARTICLE INFORMATION

### Article history:

Submitted 8 January 2017  
Accepted 12 April 2017  
Available online 9 June 2017

### Keywords:

Dietetics  
Continuing professional development  
Evaluation  
Confidence  
Self-efficacy

2212-2672/Copyright © 2017 by the Academy of Nutrition and Dietetics.  
<http://dx.doi.org/10.1016/j.jand.2017.04.014>

<sup>\*</sup>APD=Accredited Practising Dietitian (certified in Australia).

<sup>‡</sup>FDAA=Fellow, Dietitians Association of Australia.

## ABSTRACT

Confidence is frequently used to assess practitioner effectiveness, and its evaluation requires valid and reliable domain-specific tools. However, the quality of existing measures is unknown. This review identifies studies measuring dietitians' confidence in working with individuals; assesses psychometric (measurement) qualities of relevant tools; and identifies areas for future research. Seven electronic databases, the internet, and reference lists were searched to identify the development or use of relevant confidence measurement scales. A quality assessment of psychometric properties was conducted using guidelines developed by Terwee and colleagues. Of the 15 measures reviewed, 4 were subject to factor analysis. Overall, content validity was strong. However, many measures rated poorly due to lack of factor analysis, inadequate sampling, or poor reporting. Of the dietetics-specific instruments, the Dietetic Confidence Scale and Nutrition Counselling Self-Efficacy Scale received the best ratings. The General Self-Efficacy Subscale also rated highly due to validation with the general population. This article highlights the need for dietitians to incorporate evidence-based methods into practice evaluation and instrument development. Dietitians need an awareness of the terminology and key criteria used to evaluate instrument quality to effectively collaborate with statisticians and scale development experts, and critically evaluate the quality of existing measures. Future scale development and reporting must incorporate psychometric evaluation, such as factor analysis, which should be used to explore and/or confirm scale dimensionality. There is broad scope for future methodological research with existing and new measures for nutrition and dietetics practitioners.

J Acad Nutr Diet. 2017;117:1396-1412.

CONFIDENCE IS AN IMPORTANT FACTOR IN PRACTITIONER performance,<sup>1</sup> and is frequently measured in outcome evaluation.<sup>2-5</sup> Confidence measurement in dietetics and health care education is complicated by several factors.<sup>6</sup> First, there are multiple definitions and terms utilized.<sup>7</sup> Commonly, the terms *self-efficacy*, *confidence*, and *professional confidence* are used interchangeably, and sometimes with clinical or self-perceived competence. Confidence is often used as a synonym or colloquial term for self-efficacy. Bandura<sup>8</sup> defines perceived self-efficacy as a person's judgment about their ability to plan and carry out actions to

accomplish a certain level of performance with whatever skills they have. Perry's<sup>9</sup> concept analysis of confidence in nursing highlighted the subjective, dynamic nature of confidence as being based on "one's perspective, role, self-esteem, sense of efficacy, sense of self and experiences related to the context or setting." Similarly, Holland and colleagues<sup>6</sup> distinguishes that professional confidence "involves self-awareness of one's beliefs about their capability to achieve desired results, and also how these beliefs influence a practitioner's ability and role and scope of practice both individually and in the context of the broader healthcare environment." In the health care education literature, self-efficacy tends to refer to task- or skill-based assessments, whereas confidence tends to refer to self-efficacy assessments that are broader in scope or domain.<sup>6,7</sup>

In contrast, self-perceived competence is a practitioner's judgment about their level of performance, and whether they possess the ability to perform "competently." The initial attainment of competence, that is, when a practitioner has knowledge, skills, and attitudes to practice safely and effectively or competently,<sup>10</sup> is often linked to competency standards. Conceptually, self-assessments of competence differ

The Continuing Professional Education (CPE) quiz for this article is available for free to Academy members through the MyCDRGo app (available for iOS and Android devices) and via [www.eatrightPRO.org](http://www.eatrightPRO.org). Simply log in with your Academy of Nutrition and Dietetics or Commission on Dietetic Registration username and password, go to the My Account section of My Academy Toolbar, click the "Access Quiz" link, click "Journal Article Quiz" on the next page, then click the "Additional Journal CPE quizzes" button to view a list of available quizzes. Non-members may take CPE quizzes by sending a request to [journal@eatright.org](mailto:journal@eatright.org). There is a fee of \$45 per quiz (includes quiz and copy of article) for non-member Journal CPE. CPE quizzes are valid for 1 year after the issue date in which the articles are published.

from confidence measures because self-perceived competence focuses on a practitioner's judgment about their ability to perform competently or meet minimum standards of practice,<sup>10</sup> whereas assessments of professional confidence or self-efficacy aim to measure an individual's belief in their capability to achieve results<sup>6,8</sup> or performance<sup>11</sup> that may go beyond competence (eg, proficiency or expert level). However, as stated previously, there is much overlap in concepts and a distinct lack of clarity in the literature. The key element in all three concepts (confidence, self-efficacy, and self-perceived competence) is the practitioner's belief in their capacity to achieve a desired result or level of performance.<sup>8</sup> In this article, the term *confidence* will be used to encompass the three concepts.

Research in health care education investigates two distinct populations, practitioners and students. This review does not include nutrition and dietetics students because there are concerns about the validity and utility of assessing confidence in health care students.<sup>12-16</sup> Further research is needed to delineate the inter-relationship between general self-efficacy, professional confidence, and clinical competence in both practitioners and students, as the strength and direction of these relationships may differ.<sup>12</sup>

There is also ambiguity about the most effective way to measure confidence. Bandura<sup>8</sup> asserts self-efficacy measures should be domain-specific or task-specific. Continuing professional development evaluations often use global measures of self-efficacy; that is, one to two questions. These global measures should be interpreted with caution, as they often lack reliability and content validity.<sup>17</sup> In recent years, health care educators have begun to incorporate more robust measures of practitioner confidence.<sup>18,19</sup> Psychology,<sup>20</sup> nursing,<sup>21</sup> and medicine<sup>22</sup> have a long history of assessing practitioner confidence. In contrast, in dietetics the bulk of methodological research is focused on patient measures.

Given the interest in measuring practitioner confidence and the need for high-quality domain-specific evaluation tools in dietetics, this article aims to identify studies measuring nutrition and dietetics practitioners' confidence in working with individuals; assess the psychometric qualities of relevant tools; and identify areas for future research.

## METHODS

A literature search was conducted using the following databases: Ebscohost (Medline, CINAHL, ERIC, Education Source, PsychInfo, PsychExtra, PsychTest, Academic Search Elite); Embase; Cochrane Library; Johanna Briggs; Proquest; and PubMed. Subject searches were performed using MeSH (Medical Subject Headings) and keywords. Initial searches were conducted to determine the most effective combination of search terms. As a result, "nutrition" and "allied health" were excluded from the final subject search because they yielded thousands of irrelevant results. "Attitudes of health personnel" did not yield additional relevant results. The final search terms were: (*confidence* or *self-efficacy* or "*self efficacy*" or *competence*) AND (*dietitian\** or *dietician\** or *dietetic\** or *nutritionist\**) AND (*scale* or *questionnaire\** or *tool* or *measure\** or *survey\** or *test* or *psychometric\** or *instrument\** or "*factor analysis*" or "*principal components analysis*"). The secondary search consisted of reference lists from relevant studies and Google Scholar.

## Inclusion Criteria

Peer-reviewed articles and theses, including self-report measures (rating scales) of nutrition and dietetics practitioners' self-efficacy, confidence, or self-perceived competence about working with individuals, published in any language between 1979 and December 2016 were identified. While the primary aim was to identify instruments that were psychometrically validated, the eligibility criteria were intentionally broad to capture all possible instruments. Studies that contained multiple health professional groups were included if the results for nutrition and dietetics practitioners were reported separately.

## Exclusion Criteria

Measures with fewer than three items were considered "global measures" and were excluded due to concerns regarding reliability and content validity.<sup>8</sup> Measures only tested on students were also excluded for reasons discussed earlier. The specific phenomenon of interest was dietitians' confidence in working with individuals, therefore, instruments related to research,<sup>23</sup> evidence-based practice,<sup>24</sup> leadership,<sup>25</sup> and public health<sup>26-28</sup> were excluded, as were scales<sup>29-33</sup> measuring "Perceived Behavioral Control" and other components of the theory of planned behavior.<sup>34</sup> Conference abstracts and articles without sufficient detail about scale development were also excluded because they did not provide enough detail for assessment.

## Data Extraction and Quality Assessment

The literature search, data documentation, and quality assessment were performed by the lead investigator, and then reviewed by a second investigator. Any ambiguities or disagreements were resolved through discussion. Guidelines used to extract data and assess study quality were based on those developed by Terwee and colleagues.<sup>35</sup> This framework has been used extensively to evaluate the psychometric quality (measurement quality) of health instruments.<sup>36,37</sup> The measurement quality of each tool was rated using Terwee and colleagues' quality criteria. Table 1 details the scoring criteria. Figure 1 contains additional explanation of these criteria and relevant terminology. As per guidelines by Terwee and colleagues, scores were compiled into a summary table, but an overall score was not calculated.<sup>35</sup>

## RESULTS

### Literature Search and Study Selection

Figure 2 details the results of the database searches. Secondary searches yielded an additional 34 records. After 445 duplicates were removed, another 987 were excluded based on title and abstract screening. The remaining 93 studies were assessed for eligibility using the stated criteria.

### Description of Included Studies and Rating Scales

Table 2 provides a qualitative overview of included studies, instruments reviewed, and psychometric characteristics (psychological measurement properties). In total, 24 studies reported on 15 different measures. Eight instruments were developed<sup>1,39-44</sup> or used<sup>45-48</sup> with dietitians, nutritionists, or dietetic technicians. For the remaining instruments, dietitians were part of larger studies involving health, allied health

Download English Version:

<https://daneshyari.com/en/article/5568602>

Download Persian Version:

<https://daneshyari.com/article/5568602>

[Daneshyari.com](https://daneshyari.com)