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## The association between perceived stress and diet quality in women of childbearing age: A systematic review

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### Abstract

Poor diet quality is a major cause of maternal obesity and associated with adverse metabolic effects for mother and offspring. Psychological stress can increase intake of unhealthy dietary choices (e.g. highly palatable, energy dense diet), but no study has investigated the association between stress and diet quality in women of childbearing age.

This systematic review of the association between psychological stress and diet quality used the PEO (Population, Exposure, and Outcome) model.

Medline, CINAHL, Scopus, Cochrane Library, Web of Science, and Scencedirect were searched (October 2018 - January 2019). From 139,552 hits, 471 papers were screened, but only 8 studies met our inclusion criteria: English language, stress (exposure) measured in combination with diet quality (outcome), healthy women (18–49 years of age (population)). Data extraction was determined by the PEO. Quality assessment used CASP tool for Cohort studies.

The review included eight studies from USA (n = 6), Egypt (n = 1), and Iran (n = 1). The six cross-sectional and two longitudinal studies were published between 2011 and 2017 and had a total of 3,982 participants. Studies were heterogeneous in methods: three used food frequency questionnaires to assess dietary intake while the others used 24-hour dietary recalls. Diet quality was measured using different indices: Alternate Healthy Eating Index (n = 2), Healthy Eating Index (n = 2), Dietary Approach to Stop Hypertension (DASH) Diet Index (n = 2), Dietary Quality Index- Pregnancy (n = 2), and Dietary Guideline Adherence Index (n = 1). Only one study used three diet quality indices. No study explored dietary patterns using factor analysis and other statistical techniques. Most studies used the perceived stress scale to measure stress; however, there were differences regarding the use of this scale to form a continuous or categorical variable (with varying cut-off scores) perceived stress, whereas no study reported biological response to stress. Outcomes also varied in direction of association; no association (n = 4), negative association (n = 3), mixed results (n = 1).

This review is the first to systematically examine association between stress and diet quality in women of childbearing age; there was heterogeneity in measures of diet quality and study designs. Future studies that explore diet quality/patterns should include both diet indices and factor analysis and additionally measure biological markers of both dietary intake and stress.

### Conflict of Interest

There is no conflict of interest