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

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Introduction

- Poor diet quality is associated with adverse metabolic effects on mother and offspring.
- Psychological stress increases unhealthy dietary choices, but evidence pertinent to women of reproductive age remains unclear.
- This study systematically reviews the literature to determine the association between psychological stress and diet quality in women of reproductive age.

Methods

- o Medline, CINAHL, Scopus, Cochrane Library, Web of Science, and Sciencedirect were searched.
- o 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)).
- o Data extraction was determined by the PEO.
- o Quality assessment used CASP tool for Cohort studies.

Results

- The review included eight studies from USA (n=6), Egypt (n=1), and Iran (n=1).
- Six cross-sectional and two longitudinal studies with 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.
- No study explored dietary patterns using factor analysis and other statistical techniques.

Results (continued)

- Most studies used the perceived stress scale to measure stress
- 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).
- Meta-analysis revealed substantial heterogeneity and that stress was inversely correlated with diet quality (Fisher's Z value = - 0.22 (Cochran Q test P<0.01, I2 = 82%).

Author, Year	Stress Tool	Diet Quality Index	Association
Richardson et al. 2015	14-item PSS	HEI 2010	↔
Ferranti et al. 2013	14-item PSS	-AHEI -MD -DASH	↔
Isasi et al. 2015	10-item PSS	AHEI-2010	↓
El Ansari et al. 2015	4-item PSS	Dietary Guideline Adherence Index	↔
Valipour et al. 2017	12-item General Health Questionnaire	DASH	↔
Fowles et al. 2012	Prenatal Psychosocial Profile-Stress sub-scale	Dietary Quality Index-Pregnancy	↓
Fowles et al. 2011	Prenatal Psychosocial Profile-Stress subscale	Dietary Quality Index-Pregnancy	↓
Widaman et al. 2016	Wheaton Chronic Stress Inventory	HEI 2010	↔ In B S ↔ In B E

Conclusion

- This review is the first to systematically examine association between stress and diet quality in women of childbearing age.
- 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.