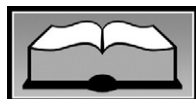


Original Research



Meets Learning Need Codes 3000, 4000, 4120, and 4180. To take the Continuing Professional Education quiz for this article, log in to ADA's Online Business Center at www.eatright.org/obc, click the "Journal Article Quiz" button, click "Additional Journal CPE Articles," and select this article's title from a list of available quizzes.

Nutrition Knowledge: A Mediator between Socioeconomic Position and Diet Quality in Australian First-Time Mothers

EMILY R. McLEOD; KAREN J. CAMPBELL, PhD, GradDip Diet, GradDip Health Ed, MPH; KYLIE D. HESKETH, PhD

ABSTRACT

Background Mothers are important role models for eating and are gatekeepers of food in the home. An understanding of maternal dietary behaviors could assist in the promotion of healthy eating for both mother and child.

Objective To investigate the independent contribution of socioeconomic position to nutrition knowledge and diet quality, and the contribution of nutrition knowledge to diet quality; and to assess nutrition knowledge as a mediator between socioeconomic position and diet quality.

Subjects/setting Subjects included first-time Australian mothers residing in Melbourne, Australia (n=527).

Design Cross-sectional data from the Melbourne InFANT (Infant Feeding, Activity, and Nutrition Trial) Program.

Methods A self-completed validated food-frequency questionnaire recorded dietary intake during the past year and a diet quality score was developed. Maternal education was used to classify socioeconomic position. Regression analyses were undertaken to assess associations between socioeconomic position and nutrition knowledge score; socioeconomic position and diet score; and nutrition knowledge score and diet score. Baron and Kenny's ap-

proach to mediation analyses was used to assess nutrition knowledge as a mediator.

Results Overall maternal diet quality was poor, with average diet quality scores of 52.4, 52.9, and 57.1 out of a possible 80, in the low, medium, and high socioeconomic groups, respectively. Maternal diet quality was significantly better in mothers of high socioeconomic position as compared with the low socioeconomic position group ($P<0.001$). Overall nutrition knowledge was found to be quite high, with mean nutrition knowledge scores of 12.5, 12.7, and 13.7 out of a possible 17, in the low, medium, and high socioeconomic groups, respectively. Maternal nutrition knowledge was found to partly mediate the association between socioeconomic position and maternal diet quality.

Conclusions Poor maternal dietary quality may have implications for both mother and child, and socioeconomic position and nutrition knowledge are likely to be important. Effective interventions to support mothers to achieve healthy diets for themselves and their families are needed.

J Am Diet Assoc. 2011;111:696-704.

E. R. McLeod is a research dietitian, K. J. Campbell is a senior research fellow (Public Health), and K. D. Hesketh is a research fellow, Centre for Physical Activity and Nutrition Research (C-PAN), School of Exercise and Nutrition Sciences, Deakin University, Burwood, Victoria, Australia.

Address correspondence to: Karen J. Campbell, PhD, GradDip Diet, GradDip Health Ed, MPH, Centre for Physical Activity and Nutrition Research, School of Exercise and Nutrition Sciences, Deakin University, 221 Burwood Highway, Burwood, Victoria, 3125, Australia. E-mail: karen.campbell@deakin.edu.au

Manuscript accepted: November 18, 2010.

Copyright © 2011 by the American Dietetic Association.

0002-8223/\$36.00

doi: 10.1016/j.jada.2011.02.011

Poor diet is considered an important risk factor for many noncommunicable diseases, including obesity, cardiovascular disease, and diabetes (1). Mortality and morbidity rates from these diseases show a marked socioeconomic gradient, with people of lower socioeconomic position experiencing higher rates than those who are more advantaged (2,3). Diet quality, defined by the level of adherence to dietary recommendations, has been shown to follow a similar socioeconomic gradient to health outcomes. For example, individuals of a lower socioeconomic position have been found to consume diets that are less varied (4), more energy-dense (5), and contain fewer fruits and vegetables (6,7) than those of higher socioeconomic position. These inequalities evident in diet quality across socioeconomic position have been identified as potential mediators of the socioeconomic health gradient (8).

It is known that parents play a pivotal role in fostering

dietary habits in their children and that early life is an important time for this (9). Mothers are of particular importance because they have been shown to spend considerably more time interacting with their children than do fathers, including during meal times, and they are also more likely to be the family food provider (10). Given this, maternal diet is likely to play a substantial role in shaping children's diets through role modeling of eating behaviors and by controlling the food made available within the home (9). The influence of maternal diet on child diet is confirmed by the direct associations reported between maternal and child diets (11,12).

Using mothers as a target audience for nutrition education campaigns has the potential to impact indirectly on the diets of children, as well as have a direct effect on their own diets. In addition, during the transition to motherhood, women are more connected to health and nutrition service systems and might be more receptive to nutrition information. This is particularly true for first-time mothers (13). There are limited data available that specifically describe the diets of mothers. The most recent Australian dietary survey, conducted in 1995, suggests most Australian women aged 19 years and older consumed diets that were not congruent with recommendations (14). A more recent study of >7,000 Australian women aged 25 to 30 years, conducted in 2003, found there was no difference in women's diet quality according to pregnancy status (15). Given this, it is likely that the diets of mothers mirror those of women in general, and that the socioeconomic gradient evident in Australian women's diets (16,17) will also be evident in mother's diets.

Dietary behaviors are determined by a wide range of factors. Individual-level factors, including socioeconomic position and nutrition knowledge are the focus of this study. As noted, the association between socioeconomic position and diet is well-documented. Nutrition knowledge has been shown to be associated with diet quality in a similar fashion to socioeconomic position, with individuals who have greater nutrition knowledge consuming healthier diets and exhibiting healthier food-purchasing behavior (18-20). Education level and socioeconomic position have important influences on nutrition knowledge (21,22), which has been shown to mediate the association between socioeconomic position and dietary quality (23). For example, a study conducted in the United States (n=4,356) found that the positive association between education level and diet quality varied according to nutrition knowledge and beliefs; in particular, among those with the poorest nutrition knowledge and beliefs, the relationship between education status and diet quality was nonsignificant ($P>0.05$), suggesting that nutrition knowledge provides the link between education level and diet quality (23). In addition, an Australian study conducted among 1,003 adults found socioeconomic differences in dietary knowledge to represent part of the pathway through which education attainment exerts its influence on diet, with the study demonstrating educational differences in nutrition knowledge to be significantly related to educational differences in food-purchasing behavior ($P\leq 0.0001$) (18).

The aims of this study are to describe the diet quality and nutrition knowledge of first-time mothers living in Melbourne, Australia; to investigate the independent

contribution of socioeconomic position to nutrition knowledge and diet quality, and the contribution of nutrition knowledge to diet quality; and, finally, to assess nutrition knowledge as a potential mediator of associations between socioeconomic position and diet quality.

METHODS

Study Design

Cross-sectional baseline data were obtained from a larger cluster randomized controlled trial, The Melbourne InFANT (Infant Feeding Activity and Nutrition Trial) Program, the protocol of which is described in detail elsewhere (24). The Melbourne InFANT Program is a study of the effectiveness of an early childhood obesity-prevention intervention delivered to first-time parents, focusing on parenting skills that support development of positive diet and physical activity behaviors in infancy. The study was conducted within the area of Greater Melbourne, Victoria, Australia. Baseline data were collected from June to December 2008.

Sample

Two-stage random sampling was used to gather participants for The Melbourne InFANT Program. Participants were primary caregivers attending first-time parents' groups, groups organized and run through Maternal and Child Health centers across Victoria. Stage one involved a random selection of 14 local government areas within a 60-km radius of Deakin University, Melbourne, Australia. Three low, eight mid, and three high socioeconomic areas were included in this sampling frame. In stage two, a proportional sample of existing first-time parents' groups were randomly selected within each of the 14 local government areas and informed written consent of group members was sought. Inclusion criteria included literacy in English and infant age younger than 4 months. Eighty-six percent of eligible parents consented to the study. Fathers (n=2) involved in The Melbourne InFANT Program were excluded from the current analyses; baseline data relating to the current study were available for 527 mothers.

Measures

Baseline data were collected from participating mothers through administration of a self-completed questionnaire. Of relevance to the current analyses were data pertaining to the mothers' socioeconomic and demographic details, dietary intake, and nutrition knowledge.

Socioeconomic and Demographic Data. Mothers reported their own and their infant's date of birth; exact age was calculated. Maternal marital status, country of birth, language spoken at home, education level, and employment status were also collected. Maternal educational attainment was used to classify mothers as low (12 years or less), medium (trade or certificate qualifications), or high (university degree or higher) socioeconomic position. Maternal education was chosen as a proxy for socioeconomic position as evidence suggests that of the three most commonly used indicators of socioeconomic position, ie, education, income, and occupation, education is the strongest

Download English Version:

<https://daneshyari.com/en/article/2654255>

Download Persian Version:

<https://daneshyari.com/article/2654255>

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