BACKGROUND AND SIGNIFICANCE

- South Asians are individuals who originated from the Indian subcontinent including countries such as India, Pakistan, Bangladesh, Nepal, and Sri Lanka. There are approximately 3 million South Asian people residing in the US (US Census, 2012).
- Cardiovascular disease is one of the most predominant health risks and leading causes of death in the South Asian population (Prasad, Truong, Wu, & Turakhia, 2013).
- South Asians demonstrate a three to five times increased risk for cardiovascular disease compared to other ethnic origins (Enas & Senthilkumar, 2001).
- Although conventional risk factors account for a majority of cardiovascular diseases, genetic differences and socio-cultural aspects of diet make South Asians more prone to cardiovascular diseases (Gupta, Singh, & Verma, 2006).

PURPOSE OF THE STUDY

The purpose of this integrative literature review is to address the following research questions related to cardiovascular diseases in South Asians:
- To determine what genetic factors predispose South Asians to cardiovascular diseases.
- To assess the role of diet and lifestyle on prevalence of cardiovascular diseases in South Asians.

METHOD: INTEGRATIVE LITERATURE REVIEW

- Search using CINAHL, Ovid Medline, and PubMed databases.
- Keywords: South Asians, Asian Indians, cardiovascular disease (CVD), cholesterol, diet, lifestyle, genetic factors, obesity, abdominal obesity, cultural behaviors, physical activity.
- Inclusion Criteria
  - Research studies from 1998 to 2014
  - Available through OSF library resources
  - Studies with South Asian populations
- Exclusion Criteria
  - Publication without original data
  - Abstracts only
  - Written in a language other than English
- A total of 8 studies met criteria; five studies were non-randomized control studies and three were cohort observational studies.
- Ganong method (1987) was used to review the articles.

SYNTHESIS

- South Asians are at increased risk for cardiovascular diseases due to the presence of higher levels of lipoprotein (a), triglycerides, higher ratio of apolipoprotein B to apolipoprotein A-1, and lower levels of HDL (Anand et al., 2000; Bhalodkar et al., 2004; Kulkarni et al., 1999; Markovitz et al., 2005).
- Studies have also found that there is a significantly higher prevalence of small HDL and LDL particle concentrations in South Asians which leads to increased cardiovascular disease risk (Bhalodkar et al., 2004; Kulkarni et al., 1999; Superko et al., 2005).
- In addition, studies have identified that dietary patterns have a direct correlation to lower HDL levels and metabolic syndrome in South Asians (Gadgil et al., 2011; Hemmings et al., 2011, Garduno-Diaz & Khokhar, 2013).

IMPLICATIONS FOR NURSING

- Practice
  - Healthcare professionals need to understand the non-conventional risk factors that predispose South Asians to heart diseases and educate patients on these risk factors.
  - Stress the importance of routine lipid profile screening and early intervention in South Asians.
  - Identify unique risk factors and develop culturally specific clinical measures to reduce risk factors for heart diseases in South Asians.
  - Promote healthy eating habits with reduced carbohydrates and sugar intake and regular physical activity in South Asians.
- Research
  - Additional research is needed on a larger sample population, to provide important insights into the associations of genetics and dietary patterns in South Asians and cardiovascular diseases.
  - In addition, future studies with participants from multiple geographical areas, random sampling, and female participants are needed.
  - Studies comparing South Asian from the US and their counterparts from South Asian countries are needed to investigate if similar risk factors are present.
- Education
  - APN students must be educated on the disparities in risk factors that predispose South Asians to cardiovascular diseases.
- Policy
  - Payor policy should cover detailed lipid profile screenings in South Asians.
  - Payor policy should allow lipid screening for South Asians at younger ages.

REFERENCES


LIMITATIONS

- Four studies used a small sample size (< 100) which lowers the chances of statistical significance (Garduno-Diaz & Khokhar, 2013; Hemmings et al., 2011; Kulkarni et al., 1999; Markovitz et al., 1998).
- Four studies recruited only men as study participants, thus the significance of this finding in women is unclear (Bhalodkar et al., 2004; Gadgil et al., 2013; Hemmings et al., 2011; Superko et al., 2005).
- All studies used convenience sampling which limits the generalizability of the studies.

CONCLUSION

- Based on the findings, genetics, diet and lifestyle patterns have a direct correlation to increased prevalence of cardiovascular diseases in South Asians. However there is a knowledge gap that exists due to a limited number of studies exploring this population.
- Additional research is needed on a larger sample population, to provide important insights into the associations of genetics and dietary patterns in South Asians and cardiovascular diseases.

Genetics, Lifestyle, and Dietary Patterns: An Analysis of Risk Factors for Cardiovascular Diseases in South Asians

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