

A Thematic Analysis of Web Resources for Identifying Dietary and Social Behaviors that Increase the Levels of Depression, Anxiety, and Depression (DAS) in Adults and Adolescents in the U.S.

Paul Yu¹ and Amir Golmohamadi PhD[#]

¹West Chester University of Pennsylvania

[#]Advisor

ABSTRACT

Based on the current literature from nutrition culture and anthropological studies, there is a potential relationship between behavioral change intervention programs and improvement of quality of life. The purpose of this qualitative research project was to systematically obtain the preliminary data, required for developing an intervention that aims to reduce depression, anxiety, and stress (DAS) levels in people, and improve their quality of life. A thematic analysis of internet articles (news, academic, non-profit, commercial, and weblogs) were used to determine common themes in these resources with NVivo, a qualitative data analysis software. This research project was the first step towards systematically, designing a multi-disciplinary, nutrition/ behavioral change intervention, for the prevention of social, physical, and mental illnesses.

Introduction

Mental, physical, and social sicknesses are a major problem in the world today. Physical chronic illnesses are more tangible to people. For instance, obesity prevalence in the US is 20.6% among 12- to 19-year-olds.¹ The U.S. obesity prevalence was 42.4% in 2017 – 2018. However, mental illnesses may not be the topic of conversation as much as physical chronic diseases. We know that one in five (20%) of youth aged 9–17 years has a diagnosable mental health disorder that causes some degree of impairment; one in ten has a disorder that causes significant impairment, currently.² The most common mental illnesses in adolescents are anxiety, mood, attention, and behavioral disorders.² Diseases in childhood increase the chances of chronic disease in adulthood. Current health education needs reform to reduce physical and mental illness occurrence. A multi-disciplinary approach is needed. It has a different outcome than a single-method approach since the multidimensionality of nutrition science and practice solves the dynamic nature of complex health problems.³ The evidence-based publications of the Academy of Nutrition and Dietetics recommend that holistic (dietary, social, and mental) prevention approach is the most effective and affordable method to reduce the occurrence of chronic diseases across the life span.⁴ In fact, the international term for “nutrition education” is “social and behavioral change communication”.⁵ Risk factors and subsequent diseases can begin early in life; therefore, health promotion and disease prevention efforts are imperative for delaying premature death, improving quality of life, and lessening the economic burden on the health care system.^{4,6} A qualitative method (Thematic Analysis) is usually used, in the field of nutrition and dietetics, for gathering preliminary information on an evidence-based, holistic, intervention research.

A thematic analysis identifies, analyzes, and interprets patterns of meaning or themes in qualitative data.⁷ This technique can be used when an area of research is new and preliminary information is needed to inform quantitative research. The objective of this qualitative research study was seeking answers to the question: What dietary,

lifestyle, and social factors contribute to DAS, and/or decrease in quality of life? The outcome of this research gave us information necessary to perform a quantitative, data collection survey in the next step of research. An intervention and therapy are needed to replace missing support in people's lives.⁸

Objectives & Methods

This project contained the following three phases:

Phase 1 (weeks 1 and 2): Reviewed news, academic, non-profit, commercial, and weblogs articles.

A list of keywords, related to the research topic, were created based on the experiences that I have had, a holistic approach from a nutrition education standpoint, and scientific publications in nutrition and culture. My background and leadership skills, developed from being a gifted student and a first-generation Korean American immigrant, facilitated this process. Ten (10) behaviors were chosen for causing stress, anxiety, depression. Then, using the list of keywords, thirty (30) internet articles (news, academic, non-profit, commercial, and weblogs) were identified, for each of the ten behaviors, and reviewed for its suggested best practices on improving the quality of life amongst adolescents and adults. Toward the end of this phase, I completed an extensive NVivo training through West Chester University's (WCU) LinkedIn Learning and under Dr. Golmohamadi's supervision.

Phase 2 (weeks 3 and 4): Used NVivo software to identify most-frequent themes.

Data was labeled to describe their content in NVivo. Auto-coding in NVivo was used to identify themes in a total of 300 internet articles in a short amount of time. The codes allow us to gain an overview and main points that recur in the data for each behavior category. The data was compiled to identify themes and patterns. The themes were reviewed, for accurate representations by comparing them with the compiled data, named and defined, based on how it helps us understand the data.

A description of how often each theme occurred and what they mean were reported in NVivo. Then, the frequency of occurrences was compiled. Lastly, I concluded on how the analysis answered the research question. Figure 1 below, illustrates the process of information used with NVivo.

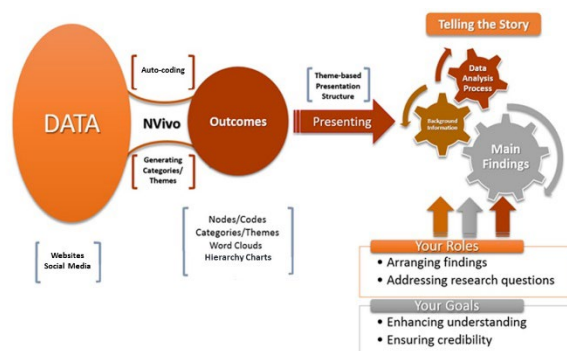


Figure 1. NVivo flow chart.⁹



Figure 6. Sugar is linked to DAS.



Figure 7. Increased caffeine is linked to anxiety and depression.



Figure 8. Iron deficiency is linked to fatigue.



Figure 9. Criticism and judging is linked to DAS.

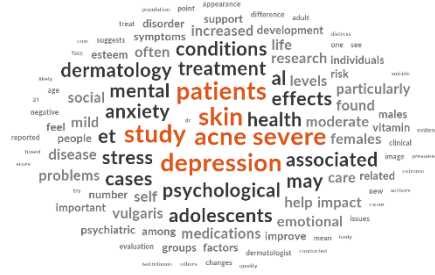


Figure 10. Acne is linked to DAS.

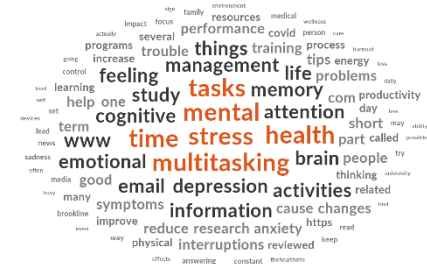


Figure 11. Multi-tasking is linked to stress and anxiety.

Strengths & Limitations

The current study was qualitative, which lacks internal validity because variables are not controlled. Also, convenience sampling and qualitative studies, which are more subjective than quantitative studies, may lead to bias and error. We need to keep in mind that some internet articles may have been written to please readers. Therefore, the next step in research, a reliability study, is crucial in validating this research topic.

A strength is that the articles were written or sourced from a variety of professionals, such as psychologists, dietitians, and doctors, so a broad perspective was given. Furthermore, themes from healthcare professionals were only uncovered through observing the interaction of professionals with clients. Also, lot of valuable information (associated themes) was found in the results. We know what behaviors and related topics are associated with DAS, after this broad thematic search. Another strength is that this study is a holistic/ multidisciplinary approach on how food effects mental health, which is a new research topic.

A qualitative study was needed for considering people as whole human beings, and not separated into different sections. It allowed us to make sense of seeing the mental and physical disorders.

Future Work

The next steps in designing an evidence-based, holistic, health intervention may include a semi-structured interview, with college students, dietitians, and psychologists. It will be a focus study group to testing the reliability of this thematic analysis. Then, I can send out a pilot survey to adults and adolescents in the West Chester area to determine whether this holistic intervention decreases DAS. Another option is to start creating YouTube videos for teaching adolescents and adults through social media. This thematic analysis will be used to develop new ideas and lines of research in nutrition and dietetics for behavioral changes on increasing happiness, reducing stress, and improving mental, physical, and social wellness. This research project advances my goal in teaching it to people starting as early as 7th grade.

Conclusion

The holistic (dietary and mental) behavior changes, listed in table 1, shown below, may decrease DAS, and increase happiness. Dietitians may work in a multi-disciplinary team to come up with a best practice approach in providing the most effective healthcare and improving the quality of life of people. An all-hands approach is necessary to combat the growing problems in the U.S. today. This study highlights the importance of cross-functional teams. All aspects of life, including physical, mental, and social status, needs considered, for reducing DAS, and increasing wellness, or we would be destroying ourselves from the insides.

Table 1:

Holistic Behavior Changes	General rule of thumbs for results
Do NOT judge or criticize.	Empathize, think, "What did he or she go through". ¹⁰
Rarely eat added sugars.	Limit added sugar intake to 5 grams per food item. ¹¹
Rarely use caffeine.	Limit caffeine intake to 47 milligrams daily.
Do NOT get Vitamin A deficiency.	Get 80- 100% of Recommended Daily Allowance (RDA). Eat carrots, sweet potatoes, fish, and cooked leafy greens.
Do NOT get Vitamin D deficiency.	Get 80- 100% of RDA. Eat dairy products and fish. Do NOT get Magnesium deficiency.
Do NOT get Vitamin E deficiency.	Get 80- 100% of RDA. Eat sunflower seeds, kiwi, and milk.
Do NOT get iron deficiency.	Get 80- 100% of RDA. Eat beef, fortified cereal, or spinach w/ a little meat, fish or poultry.
Do NOT use illegal drugs.	
Do NOT multi-task.	
Rarely get acne.	Wash face w/ soap at night. Wash face w/ only water in the morning. Apply lotion at night. Change pillow covers every other night. Use a clay face mask once per week. Wipe oil and sweat off during the day. Also, see a dermatologist.

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