Assessment of providers' nutrition education counseling in refugee communities

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Abstract

Poor nutrition exacerbates many chronic diseases, negatively impacts cost of care, and diminishes community health. Refugee communities in the United States are at higher risk for chronic diseases and physical inactivity than the general population. We developed a survey to understand healthcare providers' perspectives on delivery of nutrition counseling, barriers providers face, and strategies to improve nutrition education in the refugee community. We administered a survey to a convenience sample of providers attending the 4th annual North American Refugee Health Conference (NAHRC). 31 providers responded to the survey out of 36 approached, for a response rate of 86%. Most providers (92% frequency) reported they counseled refugee patients about nutrition visits, using interpretation services. Lack of time represented the most important barrier (86% frequency) to effectively educate refugees about nutrition. Most providers agreed that having printed materials in the patient's native language about nutrition (86% frequency) and attending a 1-to-2-day nutrition seminar (81% frequency) on nutrition education counseling are effective strategies to improve nutrition education in the refugee community. Recommendations such as hosting nutrition workshops for refugees regarding cooking guidelines and cultural ideas about food could help the lack of time providers face. More culturally competent videos and education could also promote effective nutrition education of refugee communities.

Keywords: refugee community, nutrition education counseling, culturally competent, providers, chronic diseases.

Introduction

Dietary Guidelines for Americans recommend that individuals 2 years and older consume a diet rich in fruits and vegetables, whole grains, moderate solid fats, and low in dairy products (CDC, 2014). Poor nutrition is associated with many chronic illnesses, including cardiovascular disease, hypertension, and diabetes. Refugee communities in the United States are more at risk of developing Type 2 diabetes and hypertension in comparison to the general U.S population, and refugees with higher educational attainment were more likely to choose healthier eating habits such as consuming more vegetables and eating less white rice (Peterman et al, 2011).

Refugees face many barriers that put them more at risk for developing chronic diseases after post resettlement. For instance, having a history of food shortage from past experiences may make refugees at risk for overeating in the U.S where availability of food is more widespread (Rondinelli et al, 2011). Refugees may also be predisposed to low socio-economic factors that will potentiate poor nutritional choices. Some refugee communities may be accustomed to healthier eating habits, but feel a need to acculturate in the U.S, which may expose them to nutrient poor foods that are high in calories. These factors combined negatively impact the nutrition status of refugees and put them at risk for chronic diseases, obesity, and poor health outcomes (Rondinelli et al, 2011).

Physicians are most influential in initiating lifestyle changes and are in contact with 60-70% of the population in the United States (Olendzki et al, 2006). Research in the general U.S population found that healthcare providers face many barriers in effective nutrition education counseling, including limited training on lifestyle modification techniques, lack of time, and lack

of evidence of the benefit of counseling (Kushner, 1995). While the challenges of nutrition education counseling are well documented in the general population, we do not know about the specific challenges faced by providers in delivery of nutrition counseling in the refugee community. This project describes the findings from a survey of healthcare providers focusing on refugee healthcare.

Background

Since 2000, more than 500,000 refugees have been resettled in the United States with an expected increasing number of resettlement and immigration in the future (Peterman et al, 2011). Refugees are at risk for poor nutrition due to unfamiliarity with food choices in the U.S, sedentary lifestyles, and continuation of past habits. When refugees arrive to the U.S, they receive a health assessment, which seldom includes nutrition counseling (Rondinelli et al, 2011).

Refugees are also prone to a system of "acculturation" in the United States whereas members of refugee communities adopt the practices of the U.S culture, which is their new home. The unique experiences of refugees such as trauma from war and low education may affect how they react to American culture and food (Peterman et al, 2011). Families with children at home may also be at risk for poor nutrition because children may be more acculturated to eating American foods at school, which may impact food choices of parents at home (Rondinelli et al, 2011). Delivery of nutrition counseling by providers may improve the quality of nutrition choices in refugee communities.

Providers play a key role in educating refugees about nutrition, yet literature about the delivery of nutrition counseling in the refugee community is sparse. Providers may be faced with inadequate resources of nutrition education and lack cultural competency training to address the variable refugee diet and lifestyle (Rondinelli et al, 2011). It is important to discover the needs of providers in order to develop a system that meets the needs of refugees and providers.

This study will assist in exposing the importance of nutrition education in refugee communities by assessing the requirements of providers. The North American Refugee Health Conference (NARHC) attracts providers across the country, Canada, and internationally; it has been held alternately in Rochester, NY, and Toronto for the past four years. This study will explore the diverse techniques used by providers and explore strategies to promote healthier nutritional habits among refugees.

Methodology

We drew our sample from attendees of the 4th annual North American Refugee Health Conference (NARHC) held in Rochester, NY. The survey assessed the delivery of nutrition counseling, barriers faced by providers, and potential strategies to improve nutrition counseling in the refugee community.

Kushner (1995), has investigated the barriers to providing nutrition counseling among primary care practitioners using the 1-5 Likert scale format from "strongly agree" to "disagree strongly". We developed a culturally oriented version of this survey that addressed the provider's techniques when serving the refugee community. This one page survey contained separate subheadings: demographics, nutrition training, delivery of nutrition counseling, barriers faced, and potential strategies to improve nutrition counseling in the refugee community. The survey

also contained free response sections to allow providers to add information that was not listed in the choices. Over a 3 day period, we approached 36 conference attendees to participate; 31 attendees participated by completing the survey during the 4th Annual NARCH.

Data from the surveys were collected and entered into Microsoft excel. Extracted data entered into Microsoft excel served to generate bar graphs, pie charts, and tables for comparative analysis.

Results

Provider survey

Demographics

31 of the 36 surveys were returned for a completion rate of 86%. Table 1 indicates the demographics of the providers that completed the survey: by gender, 22 females and 9 males; average age was 44, and by race, 18 Caucasian, 4 Asian, 3 Black/African-American, 1 Hispanic, 1 Filipino, 1 Indian-American, and 1 mixed completed the survey. By profession, 16 participants were physicians, 8 were nurses, 2 were social workers, 1 was a pharmacist, and 1 was a non-clinician. Collectively, the survey was filled out by predominantly Caucasian female physicians. According to Table 1, of the physicians who completed the survey, most were primary care providers (9 family physicians, 4 pediatricians, and 2 internists). Accordingly, it was documented that use of dietitians and medical journals were the top two sources of nutrition counseling in the refugee community (Fig 1).

Refugee community served

Providers were asked to list the predominant refugee community that they work with. For simplicity, the ethnicity of refugees was grouped into regions: South-Asian, Sub-Saharan African, Middle Eastern, South-East Asian, and "other" (Fig 2). To specify, Table 2 indicates the specific break-down of these regions. The predominant South-Asian ethnicity served was Bhutanese followed by Nepali. The major Sub-Saharan African countries served by providers were Somali, Sudan, and Congo. Iraq was the predominant Middle-Eastern ethnicity served by providers, followed by Afghan. Burmese was the major ethnicity served in South-East Asians. "Other" indicated the ethnicities of Cuban and Chinese.

Delivery of Nutrition counseling

The most common delivery of nutrition counseling agreed by providers was verbally, using interpretation services, with a frequency of 92% (Fig 3). Use of pictures (67%) and written materials (62%) were other major delivery methods of nutrition counseling to refugees. On the other hand, most providers did not use video aids (81%) and nutrition charts (76%) as methods to deliver nutrition counseling.

Barriers of Nutrition counseling

Providers predominantly agreed with all the barriers of nutrition counseling using the Likert scale (Fig 4). However, the top four barriers for nutrition counseling among refugees were: lack of time (86%), lack of training in nutrition counseling (67%), lack of in-visit interpretation (63%), and lack of knowledge about nutrition (63%).

Strategies of nutrition counseling

Likewise, providers predominantly agreed with all the strategies to improve nutrition counseling and no provider disagreed with hosting nutrition workshops at the providers' annual conference (Fig 5). Providers agreed that printed materials in patients' native language (86%), a 1-to-2 day seminar on nutrition counseling (81%), a nutrition workshop at refugee annual conference (74%), and home-video demonstration (64%) serve as efficient strategies to improve nutrition counseling.

Discussion

The predominant refugee community served by sample providers was Bhutanese (South-Asian). The second major ethnicities listed by provider were Nepali, Somali, and Iraqi (Table 2). The predominance of these ethnic groups could be dependent on the location of providers as some cities receive a specific refugee group through resettlement agencies. Bhutanese and Nepali are the major ethnic groups served in Rochester, NY.

Major forms of nutrition delivery by providers were use of interpretation services, pictures, and written materials in English. We can speculate that these are the major methods that providers have available for nutrition counseling, however, this does not disregard the use of video aids and nutrition charts as effective methods to counsel refugees about nutrition (Fig 3). Perhaps providers do not have access to video aids and nutrition charts to serve refugee communities. Lack of time was the major barrier to nutrition counseling; which was consistent with the findings of Kushner (1995). Lack of training in nutrition counseling in the refugee community and lack of in-visit interpretation were other barriers (Fig 4). Perhaps, a more

structured approach to nutrition counseling is needed among refugees such as separate nutrition workshops to eliminate time barriers.

Providers also listed some notable comments concerning the barriers faced in delivering effective nutrition education counseling to refugee communities. For example, access to healthy foods, money, time, knowledge, and use of traditional foods limited proper nutritional choices in refugee communities. For some providers, nutrition is not seen as a priority in treating refugee communities due to other pending illnesses that need to be treated. Furthermore, providers are interested in potential nutrition counseling, but are hesitant due to lack of patient follow through and implementation of recommendations (Tale S1).

Although 56% of providers did not use materials printed in the patient's native language to deliver nutrition counseling, 86% of providers agreed that this method would be an effective strategy to improve nutrition education in the refugee community. Likewise, 81% of providers disagreed with using video aids to deliver nutrition counseling, but 64% think that home demonstration videos are effective in improving nutrition education in the refugee community (Fig 5). This suggests that providers do not have access to certain forms of nutrition education materials to educate the refugee community about nutrition. Most providers agreed that attending nutrition seminars and workshop sessions at conferences would improve nutrition counseling (Fig 5).

Recommendations

Providers were given a chance to provide "other" information that was not listed in the survey and these are outlined in the supplemental data (Table S1). One provider suggested having a DVD made in collaboration with local college students about nutrition education in

refugee communities to deliver counseling. This could eliminate time barriers that providers face. Another strategy is to have a home demonstration video done by the refugees themselves in the patient's native language about nutrition. This strategy could eliminate multiple barriers providers face: lack of time, lack of interpretation service, illiteracy concerns, and lack of cultural competency. For patients who may lack access to internet, DVD players, or electricity, a community workshop referred to by providers can assist to limit ineffective nutrition counseling. Some providers also suggested that they deliver nutrition counseling through cooking activities. Perhaps this activity may also be incorporated into the "counseling" section of practices. Also, asking about the types of staples in patient's diets was a delivery method that assisted physicians in adapting to the treatment of refugee communities.

Furthermore, professional school students may not be obtaining sufficient education about global health and nutrition education counseling during professional school. Perhaps earlier exposure to the needs of refugees during professional school could assist with improving refugee nutritional status. One recommendation could be for professional schools to offer summer electives that focus on treating refugee populations that could assist with preparation for nutritional counseling in the refugee community. For instance, Johns Hopkins implemented such a summer experience called the Refugee Health Partnership (RHP) that give 12-15 students opportunities to work with resettlement agencies in Baltimore (Cuneo et al, 2014). Such partnerships may improve the cultural competency of students in preparation to treat diverse communities.

Further research could investigate whether specific strategies will improve nutrition counseling if made available such as home video demonstration tapes. Another possibility is for a survey to be administered to refugee patients about nutrition education counseling rather than

physicians in order to meet the needs of both parties. Lack of time continues to be a consistent barrier for effective nutrition counseling in the refugee community. Perhaps a separate intervention program is needed or physicians can develop a brief universal method to capture the attention of refugees such as visual aids to be taken home by patients.

Conclusion

Proper nutrition education is important for healthier eating habits and better health; food can serve as medicine. Refugees are more at risk than the general population for poor nutritional habits and improper communication between providers and the refugee community. Such issues mirror the complex issues that refugees face such as acculturation into American culture, trying to maintain old eating habits, and poverty. Providers who work with refugees serve a unique role to educate patients about the importance of nutrition education, but face myriad barriers including lack of time, improper training in cultural competency, and lack of interpretation services. A more collaborative effort between providers, refugee communities, health advocates, and the government can reduce the consequences of improper nutrition faced in the refugee community. Such consequences including chronic diseases, higher health care costs, physical inactivity, and stigma can be reduced by strategies presented in this survey.

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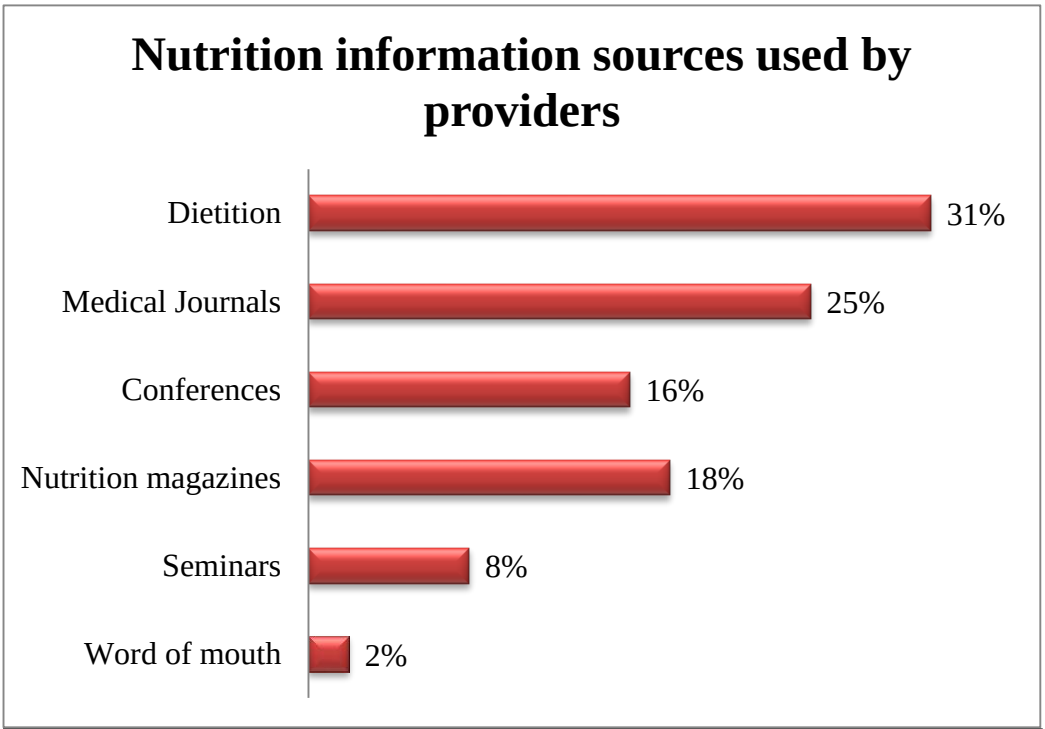
Appendix

Table 1 Demographics of providers based on sex, age, discipline, and race.

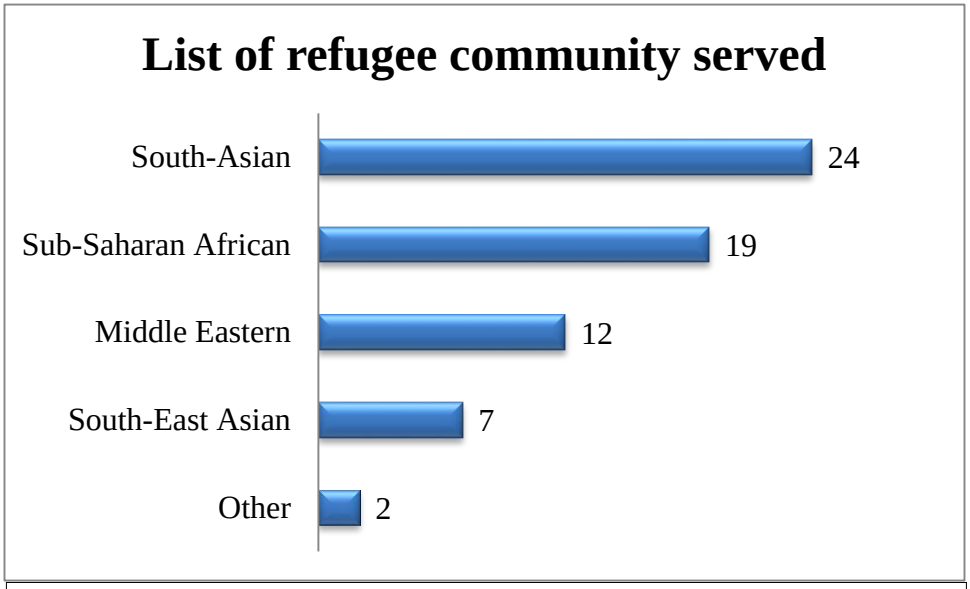
Sex	Average Age	Discipline			Race/Ethnicity
Female (22)	44 years	*Physicians (16)*			Caucasian (18)
		Family Physician (9)	Pediatrician (4)	Internist (2)	
Male (9)		Nurse (8)			Asian (4)
		Social Worker (2)			Black/African-American (3)
		Pharmacist (1)			Hispanic (1)
		Non-clinician (1)			Filipino (1)
					Indian-American (1)
					Mixed (1)

Figure 1 Sources of information used by providers for nutrition counseling



Percentages represent the frequency that each source of nutrition information was chosen by the sample of providers.

Figure 2 Frequency of refugee communities served by providers

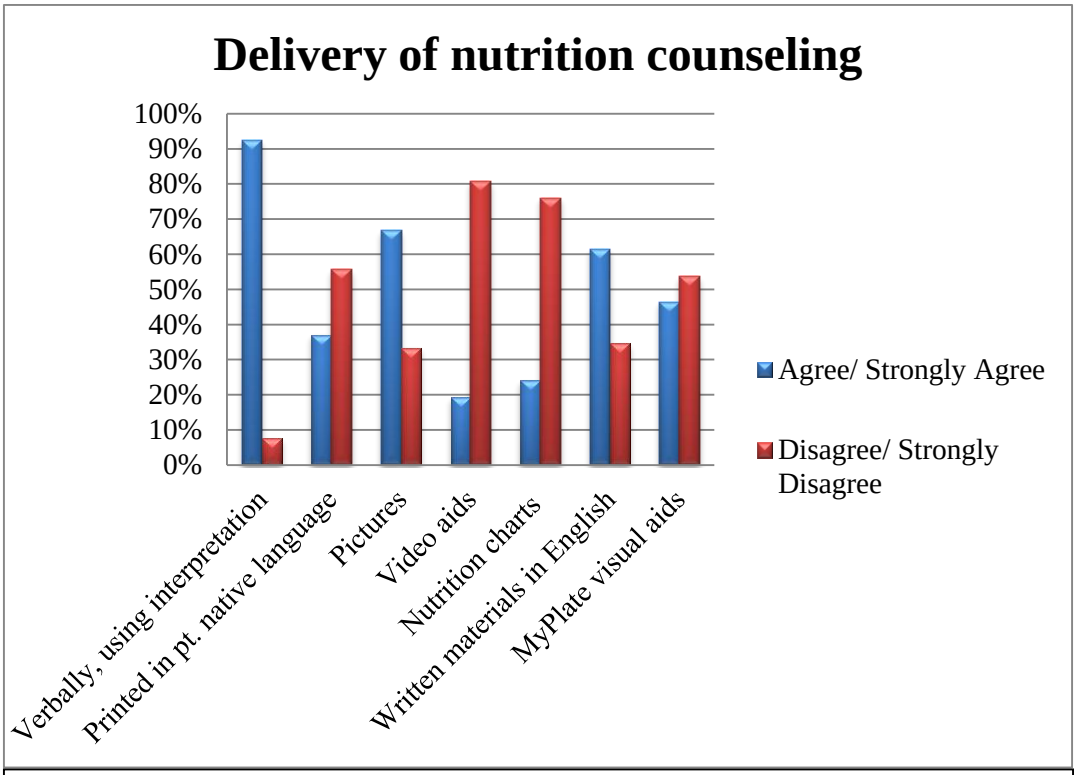


Numbering represent the frequency of refugee ethnicities listed by providers that was then grouped into 4 regions and 1 "other" category.

Table 2 Ethnicity breakdown of refugees served by providers

South-Asian (24)	**Sub-Saharan African (19)**	**Middle Eastern (12)**	**South-East Asian (7)**	**Other (2)**
Bhutanese (12)	Somalian (8)	Iraqi (8)	Burmese (6)	Cuban (1)
Nepali (8)	Sudanese (3)	Afghan (3)	Cambodian (1)	Chinese (1)
Karen (3)	Congolese (3)	Yemen (1)		
Bangladeshi (1)	Ugandese (1)			
	Angolian (1)			
	Central Africa Republican (1)			
	Ethiopian(1)			
	Djboutian (1)			

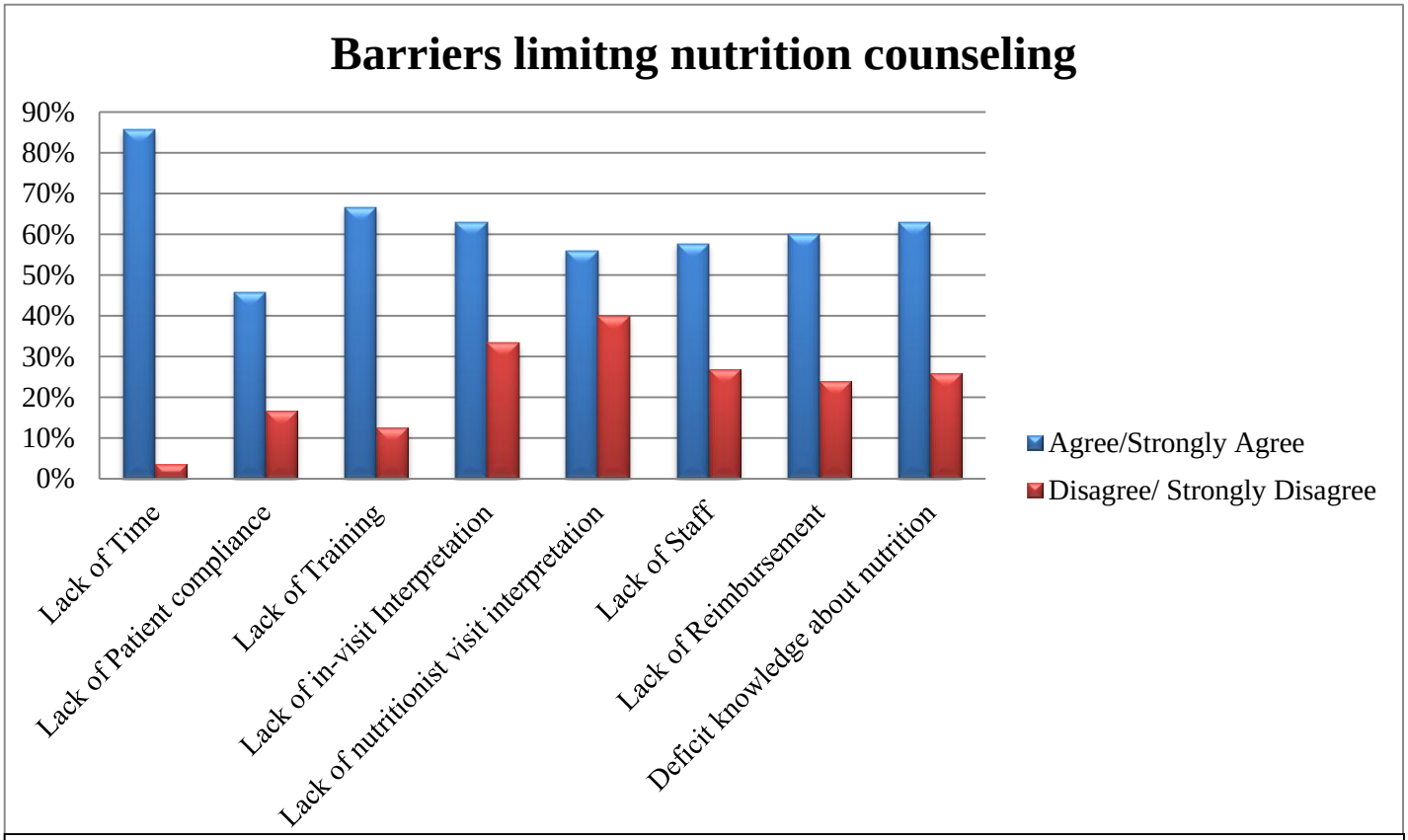
Figure 3 Delivery of nutrition counseling in refugee community by providers



Bar graph presents the frequency with which the 7 forms of delivering nutrition counseling were chosen by providers.

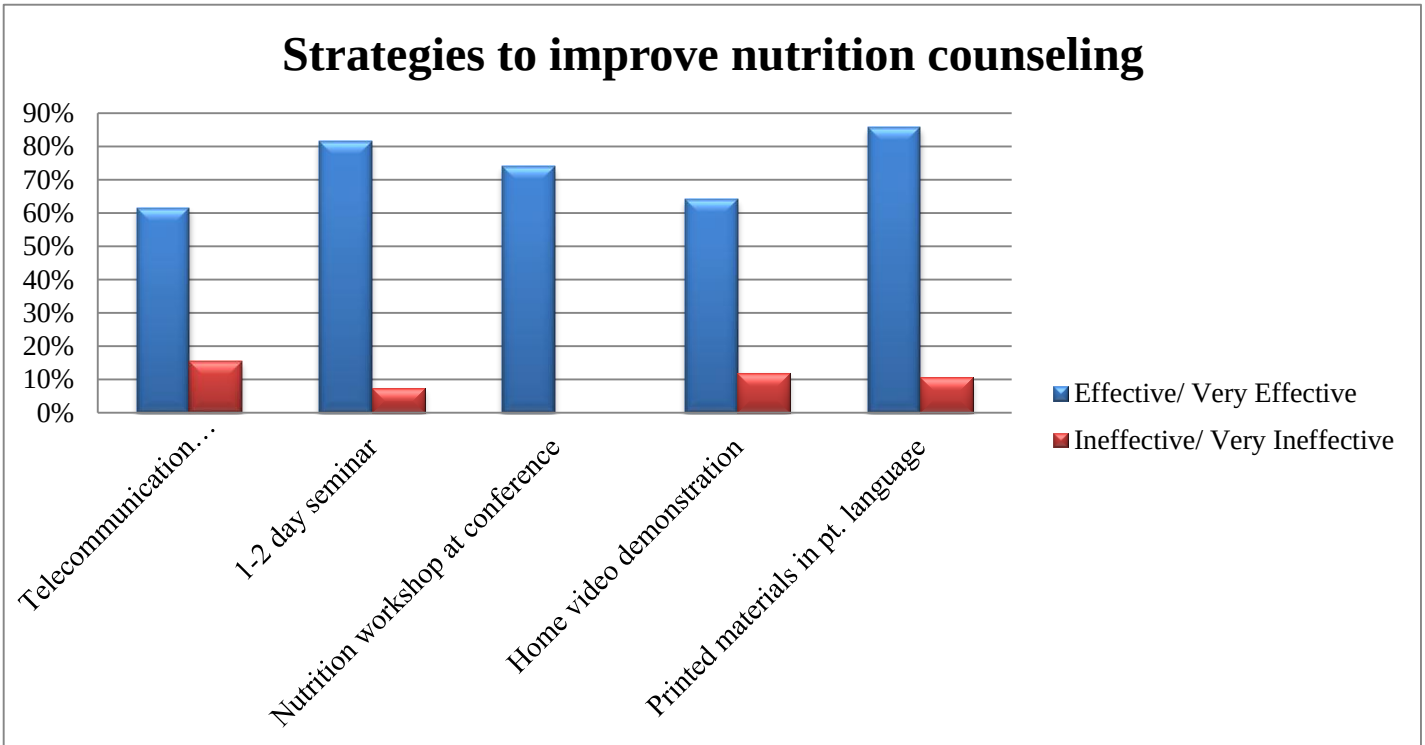
pt. =patient

Figure 4 Barriers faced by providers during nutrition counseling



Bar graph presents the frequency with which the 8 barriers of nutrition counseling were chosen by providers.

Figure 5 Strategies to improve nutrition counseling



Bar graph presents the frequency with which the 5 strategies of nutrition counseling were chosen by providers.

Supplement (S1)- Free/Open ended responses given by providers

Delivery of nutrition counseling	Barriers limiting nutrition counseling	Strategies to improve nutrition counseling	Comments/Questions/Concerns
Have a DVD made in collaboration with local college students	Refugee access to healthy foods (money, time, knowledge) and use of traditional foods ex. INCREASE consumption of corn	Printed materials if literate	This is a huge and important area. I would really like to know about challenges/ successes others have had. This is key area for improving/addressing health. Good luck!
Through cooking activities; (Barrier) Patients not literate in ANY language	With students, we offer focused nutrition education workshops. Thus, time and billing are not concerns. We cover cultural worker pay (for interpretation) with grants.	Literacy in any language is a barrier for us	Need more internet-web based resources. Literate refugees use internet.
On-site dietician support/ advice with interpreters	Cultural understanding of food/ health values	Home video nutrition demonstration tapes by refugees	We need more staff education.
Asking re: types of staples in diet; trying to adapt to it	Competing issues: mental, housing, etc.		Immigration and Refugee clients' health literacy may be an issue. Clients do not always have computers, internet, or electricity- still use charcoal or wood for food preparation.
Websites	Could potentially counsel, but hesitant to do so b/c not sure how able they are to follow through		
Educate during health orientation classes	Area not seen as a priority/health area by providers		
Referred to dietitian	Client follow-through in implementation and recommendations; client lack of financial resources and access to market		
	Occasionally lack of interpreters for dietitian/health orientation classes		
	I delegate to out nutritionist and CDE		
	Lack of knowledge about culturally appropriate foods		