

# **Entrepreneurial Opportunities Recognition in Iranian Hyperlipidemic Disease' Demands for Nutrition Counseling Service Development**

**Hamid Reza Rezaeianzadeh**

(Corresponding Author)

M.A. Student, Faculty of Entrepreneurship

Tehran University, North Kargar Avenue

Shahidfarshimoghadamst, Iran- Tehran, Postal Code 1439813141

Email: manager\_hr87@yahoo.com

**Mohammad Reza Meigounpoory**

Assistant Professor, Faculty of Entrepreneurship

Tehran University, North Kargar Avenue

Shahidfarshimoghadamst., Iran – Tehran, Postal Code 1439813141

E-mail: Meigounpoory@ut.ac.ir

(Received: 6-5-12/ Accepted: 11-6-12)

## **Abstract**

Hyperlipidemia is the condition of having an excess of fats scientifically "lipids" in the blood. If a medical professional says you have hyperlipidemia, it means you have either high cholesterol or a high level of triglycerides, or both. This is likely to speed up the accumulation of plaque on the walls of the arteries, restricting the flow of blood and hardening the arteries. This increases the risk of heart disease, stroke and other diseases. The increasing prevalence of chronic and fat diseases such as hyperlipidemia, has led to increase entrepreneurial opportunities in the field of nutrition counseling services development in the world, tremendously. Considering the high prevalence of hyperlipidemic in Iran, it seems necessary to identify entrepreneurial opportunities in this field. In this way, this survey has been conducted by focusing on the Strategic Analysis of External Environment to analyze the trend of hyperlipidemic patients' demands for nutritional counseling in Tehran, capital of Iran. To implement the survey, a questionnaire based on Likert scale was sent by email to 95 active professionals in the field of nutrition counseling services in Tehran that 63 of those responded to the questionnaire. Eventually, mean values of the responses were calculated, using SPSS<sub>11.5</sub>. Mean values obtained from participants' responses in the field of the demand for nutrition counseling among hyperlipidemic patients who have incomes above the 50th percentile and below it, were 4.31 and 3.74, respectively; this values for hyperlipidemic adults with & without college education were 4.14 and 3.89, respectively; also, similar values of age categories: <30y, 30-44y, 45-59y and >60y, were 3.97, 3.73, 4.45 and 4.23. These findings not only indicated that hyperlipidemic patients who have incomes above the 50th percentile, hyperlipidemic adults with college education and hyperlipidemic patients aged 45 to 59 years, can be considered as suitable target groups for entrepreneurial activities in the field of

nutrition counseling in Tehran but showed that the strategic analysis can be a suitable way to achieve findings for both public and private sectors of the health care system.

**Keywords:** Nutrition counseling, strategic analysis, entrepreneurial opportunity identification, health care system, hyperlipidemic.

## 1. Introduction

Hyperlipidemia is also known as high cholesterol and has been linked to coronary heart disease. Knowing your cholesterol levels and adjusting your lifestyle can help to lower your risk of heart disease. In recent times, rapid changes in various aspects of health care have substantiated profiting from sciences such as economic, management, psychology unavoidable. Based on this, the field of entrepreneurship and its common axis "Opportunity Recognition" embraces all of the Mentioned sciences as a common denominator and important focal point when applied to health care systems. Indeed, entrepreneurship has a vital role in meeting patients' needs and improving quality in these systems (King, 2011). Additionally, complex external environment and intensified competition in the field of health care during the past three decades has led to take advantage of strategic methods in both public and private sectors of the health care systems. In other words, success in this situation requires the analysis and prediction of environmental threats and opportunities, targeting, planning and long term strategies, through strategic management (Swayne, Duncan and Ginter, 2006). Based on this, opportunity identification, as one of the most common category of entrepreneurship and strategic management is very important for health care systems, because on one hand, entrepreneurship is defined as the process of identifying and exploiting opportunity and create value from it (Zahra and Dess, 2001) and on the other hand, opportunity identification is one of the main purposes of external environment analysis in strategic management (Swayne, Duncan and Ginter, 2006). Thus, it seems that Dietitians, as a part of health care system, also need the practical use of concepts of entrepreneurial opportunity identification through strategic methods, in order to respond to the demand of their customers and also to access better paying jobs.

Considering the high prevalence of hyperlipidemic in Iran (7 to 10 percent of the adult population) (International hyperlipidemia Federation, 2010) and the enormous expenses of this disease for the country (about 780 billion dollars during recent decade), resulting from inadequate health services such as nutrition counseling (Tabatabaei et al., 2008), it seems necessary to identify entrepreneurial opportunities in this field in Iran. But first, the concepts of the "Entrepreneurial Opportunity" and "Strategic Analysis of External Environment", should be explained.

## 2. Entrepreneurial Opportunity

Identifying and selecting accurate opportunities for new service businesses are among the most important abilities of a successful entrepreneur (Stevenson et al., 1985). Consequently, explaining the discovery and development of opportunities is an important part of entrepreneurship research (Venkataraman, 1997). The creation of successful counseling nutrition service businesses follows a successful opportunity recognition process. This subject includes recognition of an opportunity, its evaluation, and development spontaneously. Numerous models of opportunity recognition have been presented in recent years (Bhave, 1994), (Schwartz and Teach, 1999), (Singh et al., 1999) and (Swayne, Duncan and Ginter, 2006; Hitt, Ireland, Hoskisson, 2009). Generally, considering the view point of famous thinkers in the field of "Entrepreneurship" such as Schumpeter and Kirzner, one can define an Entrepreneurial Opportunity as the chance or opportunity to respond to a need or market demand by creatively mixing resources and creating superior values; Additionally, with greater tendency of defining the market needs with regards to the point of view of particular consumers groups, the meaning of opportunity tends to take a more commercial and business creating role, and the fact that which goods or services for which sector of market or marketing strategy is offered, becomes more important in defining and exacting the definition

of opportunities (Ardichvili, Cardozo and Ray, 2003). Also, a group of prominent thinkers in the field of entrepreneurship emphasize that in order to offer a comprehensive definition of Entrepreneurial Opportunity, in addition to considering new opportunities and conditions, one must also consider opportunities that have existed but previously have not been accounted for. Based on this, one can define Entrepreneurial Opportunity as a chance for employing a working capital with good potential for profit, when used to introduce new goods or services, or improve and duplicate existing goods and services for the purpose of entering them in a new market (Smith, Matthews and Schenkel, 2009).

### 3. Strategic Analysis of External Environment

Strategic Analysis of External Environment is a model that can be used to recognize Entrepreneurial Opportunities in specific cases such as activities of Dietitians. This model has four components such as scanning, monitoring, forecasting and assessing that is explained as follows:

- a. **Scanning:** Scanning is used to recognize early indicators of changes occurring in the environment. This stage of opportunity recognition can be seen as opportunity producing, but often results in obtaining ambiguous and disconnected data. However, it plays a vital role in competitive and intensely changing market environment.
- b. **Monitoring:** Monitoring consists of reviewing of the changes that take place in the environment which were recognized in the scanning stage, with the aim of gaining maximum logical perception of the mode of these changes. Of course, in this stage along with concluding and prioritizing the data of scanning stage, an attempt is made to eliminate the unnecessary information.
- c. **Forecasting:** Based on the findings of the two previous stages, namely recognition and conclusions derived from trends of market transformations, relative to prediction of what future changes are probable, the volume of customer demand or demand for supplies are estimated. This prediction can be made via individual intuitive judgment, using mathematical models such as linear regression, or utilizing expert opinions.
- d. **Assessing:** Generally assessing embodies evaluating the predicted future trends based on their profitability for individuals and the ability of people to profit from them, which usually entails prioritizing the recognized opportunities based on the aforementioned standards (Swayne, Duncan and Ginter, 2006; Hitt, Ireland, Hoskisson, 2009).

Accordingly, in this research, we tried to implement the scanning and monitoring, to review the present status of hyperlipidemic' demands for nutrition counseling to provide necessary information to implement the next steps in order to identify entrepreneurial opportunities in this field.

### 4. Methodology

#### Data collection

The scanning stage of this paper was based on a review of existing scientific papers published about chosen topic during 2001-2011. For this purpose, published papers in scientific Iranian journals were searched through libraries and English-language papers were retrieved via the Medline database, using two keywords, "hyperlipidemic" and "Tehran". Data obtained from this stage, were classified in three categories: Status of hyperlipidemic risk factors, Status of hyperlipidemic prevalence and Status of hyperlipidemic patients' demands for nutrition counseling. To implement the monitoring, a questionnaire was designed based on obtained data from the scanning. Then, this questionnaire was sent by email to members of the selected sample. The questionnaire had two main sections, demographic characteristics and professional opinions. Professional opinions section was included five-point Likert items (Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree) about the trends of demands for nutrition counseling in different groups (age, income and educational groups) of hyperlipidemic patients.

## 5. Sample

The random sample for this paper was made of 95 Dietitians who work in one of the Health Centers in private or public sectors. This statistical sample had been selected from the files of the Medical Council of Iran which is one of the most Prominent societies in the health and medical fields in the country. Employment in City Of Tehran, possession of Nutrition and Diet Therapy Degrees and Medical Council Permit number, with related email verifying their membership was a criterion for their statistical selection.

## 6. Statistical Data Analysis

In order to analyze the gathered data, initially numbers 1-5 were selected to assign values to the points on Likert scale. These values were assigned to as follow: 1=Strongly disagree, 2=Somewhat disagree, 3=Neither agree nor disagree, 4=Somewhat agree, 5=Strongly agree. Then "Total Weight" of each item was calculated by multiplying values of the points by the frequency of them, and then adding all the obtained scores. Then, the mean value of each item was calculated based on the total weight of it and number of the participants, using SPSS 11.5. For determining which findings truly represented the opinion of the active Dietitians in public and private sectors, and ensuring that all sectors were covered, the data gained from responders in "Professional Opinions" section were divided and entered in 3 different groups. These 3 groups of data were made up of the responses of "Business Owners", of "Private Sector Employees", and of "Public Sector Employees" which by use of Tamahne's T2 test were compared with each other.

## 7. Results

Searches done in Scanning stage resulted in finding 146 papers related to hyperlipidemia in city of Tehran. The review of paper showed that 34 of them in this stage were directly connected to the waiting categories. Also most important findings based on review of these papers are presented in Table 1.

**Table 1.** Major findings from the scanning stage

Categories	Findings
Hyperlipidemia risk factors	The growing trend of hyperlipidemia risk factors (reducing physical activity and increasing energy intake and obesity) in Tehranian population
Prevalence of hyperlipidemia	The increasing prevalence of hyperlipidemia in Tehran More accelerated trend in the prevalence of hyperlipidemia among age group between 45 to 59 years than other age groups
Hyperlipidemia patients' demands for nutrition counseling	The increasing Tehranian hyperlipidemia demands for nutrition counseling Possible influence of age, income and educational level on hyperlipidemia patients' demands for nutrition counseling

The number of respondents to the questionnaire in the monitoring stage was 65 (68% Response Rate) that their demographic characteristics are shown in Table 2.

**Table 2.** Demographic characteristics of the participants in the monitoring stage

Characteristics	n	Percent
sex:		
female	30	46.1

male	35	53.9
education (degree):		
bachelor of science	33	50.7
master of science	22	33.8
PhD	10	15.3
occupational status:		
business owners	18	27.7
private sector employees	27	41.5
public sector employees	20	30.7

In this stage, the mean values obtained from the participants' responses implied that the trend of demand for nutrition counseling is more accelerated among the hyperlipidemic patients who have incomes above the 50th percentile, hyperlipidemic adults benefited college education and hyperlipidemic patients who are between ages 45-59. These values are shown in Table 3.

**Table 3.** Mean values of dietitians' responses with regard to hyperlipidemia demands for nutrition counseling

Items: Increasing trend of Demands for nutrition counseling from hyperlipidemiawho ...	Mean value
have incomes under the 50th percentile	4.23
have incomes above the 50th percentile	4.46
have college education	4.09
do not have college education	3.9
are <30 years	4.02
are 30-44 years	3.99
are 45-59 years	4.54
are 60< years	4.21

Also, using Tamahne's test to compare mean values of responses based on occupational status, showed that there no significant differences between them ( $P > 0.05$ ), because in all cases the Lower Bound Delta of mean values was negative and the same Delta for Upper Bound of mean values was positive (Table 4).

**Table 4.** Comparison of the responses of dietitians' occupational groups (1=business owners, 2= Private sector employees, 3=Public sector employees) using Tamhane's T2 test

Items: Increasing trend of Demands for nutrition counseling from hyperlipidemiawho ...	groups	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound
have incomes under the 50th percentile	1 with 2	0.988	-0.76	0.76
	1 with 3	0.956	-0.65	0.86

	2 with 3	0.945	-0.73	1.01
have incomes above the 50th percentile	1 with 2	0.654	-0.75	0.31
	1 with 3	0.611	-0.93	0.36
	2 with 3	0.988	-0.64	0.51
have college education	1 with 2	0.952	-1.26	0.86
	1 with 3	0.657	-1.47	0.61
	2 with 3	0.877	-1.08	0.62
do not have college education	1 with 2	0.16	-1.4	0.18
	1 with 3	0.632	-1.24	0.5
	2 with 3	0.77	-0.46	0.94
are < 30 years	1 with 2	0.177	-1.28	0.18
	1 with 3	0.883	-1	0.59
	2 with 3	0.478	-0.31	1.01
are 30-44 years	1 with 2	0.522	-1.15	0.39
	1 with 3	0.927	-0.9	0.58
	2 with 3	0.886	-0.62	1.06
are 45-59 years	1 with 2	0.412	-1.09	0.31
	1 with 3	0.946	-0.93	0.63
	2 with 3	0.712	-0.38	0.86
are 60< years	1 with 2	0.082	-1.03	0.05
	1 with 3	0.239	-0.81	0.15
	2 with 3	0.818	-0.34	0.66

## 8. Discussion

Findings from Scanning, generally shows that the trends of hyperlipidemic patients' demand for nutritional counseling tend to be increasing in relationship to the prevalence of hyperlipidemia and hyperlipidemia risk factors. However, statistical differences among reviewed papers make an estimate of increase of this trend impossible. It is possible that these differences are caused by the use of different standards and techniques that have been used in different researches. On the other hand, in the Monitoring stage, based on analysis of demographics of participants, it is found that a varied spectrum of dietitians have participated in this research. This indicates that results of the research were comprehensive over the range of the expertise in this area. Also, the response rate seems to be about 60%, which corresponds to the participation of the dietitians in the Surveys conducted by American Hyperlipidemic Association (AHA) and Commission on Hyperlipidemic Registration (CHR) in USA (Rogers, 2009); however, the volume of sample population was a few hundred times smaller. The statistical conclusions of this stage show that among Hyperlipidemic patients of 45-59 years of age, there is a higher demand for nutrition counseling. This result are consistent with The finding of the 2010 survey by Hadaegh et al. also conclude that prevalence of Hyperlipidemic in populations of age of 45-59 in Tehran is higher than other age groups. Also, results show that the possibility of occurrence of the phenomena among the adults who are in greater than 50th Percentile of income, with college education, is greater than those of lower status. From the point view, this can also be a sign of the positive effect of higher social standings on demand for nutrition Counseling. As, the studies of some international researchers have shown that the higher income level and education impacts the awareness and action of hyperlipidemic patients. Overall, one of the conclusions of this survey can be that: hyperlipidemic patients who have incomes above the 4th percentile, hyperlipidemic adults

with college education and hyperlipidemic patients aged 45 to 59 years, can be considered as suitable target groups for entrepreneurial activities in the field of nutrition counseling in Tehran (Abedini, Shouri Bidgoli and Ahmari Tehran, 2010). Additionally, findings of present survey indicate that dietitians' occupational status has no effect on their identification of entrepreneurial opportunities in the field of nutrition counseling for hyperlipidemic patients while some authorities in this subject such as Ardichvili, Cardozo, Ray (2003) and Sigrist (1999) emphasize that job experience affects the recognition of Entrepreneurial Opportunities. From comparing the literature of entrepreneurship with the result of the survey, one can recognize that the opinions about Entrepreneurial Opportunity are often offered from a general point of view. Any branch of a professional field has its own specific sub-branch conditions, such as education and experience aspects, that can impact the elements needed for recognition of an Entrepreneurial Opportunity. However, this survey indicates that Use of strategic analysis to produce findings can be a general tool for both public and private sectors of the Health Care System.

## References

- [1] A. Ardichvili, R. Cardozo and S. Ray, A theory of entrepreneurial opportunity identification and development, *Journal of Business Venturing*, 18(2003), 105-123.
- [2] F. Hadaegh, H. Harati, N. Saadat and F. Azizi, Population-based incidence of type 2 diabetes and its associated risk factors: Tehran lipid and glucose study, *Iranian Journal of Diabetes and Lipid Disorders*, 8(4) (2009), 347-356.
- [3] M.A. Hitt, R.D. Ireland and R.E. Hoskisson, *Strategic Management: Competitiveness and Globalization (8th ed.)*, (2009), Mason, Ohio: South-Western College Publishing.
- [4] K. King, *The Entrepreneurial Nutritionist (4th ed.)*, (2009), New York: Lippincott Williams & Wilkins.
- [5] D. Rogers, Report on the American dietetic association/commission on dietetic registration 2008 needs assessment, *Journal of the American Dietetic Association*, 109(7) (2009), 1283-1293.
- [6] B. Sigrist, Entrepreneurial opportunity recognition, *A Presentation at the Annual UIC/AMA Symposium at Marketing/Entrepreneurship Interface*, (1999), Sofia-Anti polis, France.
- [7] B.R. Smith, C.H. Matthews and M.T. Schenkel, Differences in entrepreneurial opportunities: The role of tacitness and codification in opportunity identification, *Journal of Small Business Management*, 47(1) (2009), 38-57.
- [8] L.E. Swayne, W.J. Duncan and P.M. Ginter, *Strategic Management of Health Care Organizations (5th ed.)*, (2006), Malden, MA: Blackwell Publishing.
- [9] A.A.S. Tabatabaei, M. Amini, M. Gouya, A. Delavari, A.R. Mahdavi and S. Haghghi, Quality of diabetes & hyperlipidemia management in Iran, 2005-2006, *Journal of Medical Council of I.R.I. Rev*, 26(1) (2008), 20-29.
- [10] S. Zahra and G.G. Dess, Entrepreneurship as a field of research: Encouraging dialogue & debate, *Academy of Management Reviews*, 26(1) (2001), 8-11.
- [11] M. Sentí, R. Romero and J. Pedro-Botet et al., Lipoprotein abnormalities in hyperlipidemic and normolipidemic men on hemodialysis with chronic renal failure, *Kidney Int*, 41(1992), 1394.
- [12] S. Yamamoto and V. Kon, Mechanisms for increased cardiovascular disease in chronic kidney dysfunction, *Curr. Opin. Nephrol Hypertens*, 18 (2009), 181.
- [13] C.P. Kovesdy, J.E. Anderson and K. Kalantar-Zadeh, Inverse association between lipid levels and mortality in men with chronic kidney disease who are not yet on dialysis: effects of case mix and the malnutrition-inflammation-cachexia syndrome, *J. Am Soc. Nephrol*, 18 (2007), 304.
- [14] V. Chawla, T. Greene and G.J. Becket al., Hyperlipidemia and long-term outcomes in nondiabetic chronic kidney disease, *Clin J Am Soc Nephrol*, 5(2010), 1582.
- [15] C. Baigent, M.J. Landray and C. Reith et al., The effects of lowering LDL cholesterol with simvastatin plus ezetimibe in patients with chronic kidney disease (Study of heart and renal protection): A randomised placebo-controlled trial, *Lancet*, 377(2011), 2181.

- [16] S. Venkataraman, The distinctive domain of entrepreneurship research: An editor's perspective, In: J. Katz and R. Brockhaus (Eds.), *Advances in Entrepreneurship, Firm Emergence and Growth*, 3(1997), 119-138.
- [17] H.H. Stevenson, M.J. Roberts and H.I. Grousbeck, *New Business Ventures and the Entrepreneur*, (1985), Irwin, Homewood, IL.
- [18] R. Schwartz and R. Teach, A model of opportunity recognition and exploitation: An empirical study of incubator firms, *Presented at the 13th UIC/AMA Symposium on Marketing and Entrepreneurship Interface*, (1999), Nice, June.
- [19] R.D. Teach, R.G. Schwartz and F.A. Tarpley, The recognition and exploitation of opportunity in the software industry: A study of surviving firms, In: R.H. Brockhaus, W.C. Churchill, J. Katz, B.A. Kirchoff, K.H. Vesper and W. Wetzel (Eds.), *Frontiers of Entrepreneurship Research*, (1989), 383-397.
- [20] B. Sigrist, Entrepreneurial opportunity recognition, *A Presentation at the Annual UIC/AMA Symposium at Marketing/Entrepreneurship Interface*, (1999), Sofia-Antipolis, France.
- [21] R. Singh, H. Hills and G.T. Lumpkin, Examining the role of self-perceived entrepreneurial alertness in the opportunity recognition process, *Presented at the 13th UIC/AMA Symposium on Marketing and Entrepreneurship Interface*, (1999), Nice, June.
- [22] M. Bhave, A process model of entrepreneurial venture creation, *J. Bus. Venturing*, 9(2) (1994), 223-242.
- [23] A. De Koning, Conceptualizing opportunity recognition as a socio-cognitive process, *Centre for Advanced Studies in Leadership*, (1999), Stockholm.