

The relationship between individual empowerment and health-promoting lifestyle among women NGOs in northern Iran

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Abstract

Introduction: According to the health-promoting approach, people should be empowered such that they take responsibility for their health and follow a healthy lifestyle. Empowerment is a process in which people confront problems and tasks in their lives in order to better control them. This study was conducted to specify the relationship between individual empowerment and health-promoting lifestyle among women NGOs of northern Iran.

Methods: In this cross-sectional study, 290 women NGOs of Guilan Province were selected randomly using multistage cluster sampling, and were examined using the questionnaire of health-promoting lifestyle profile II and individual empowerment inventory scale. Data were analyzed using STATA 11 software via one-way ANOVA, Pearson correlation coefficient and multivariate linear regression.

Results: Both variables of individual empowerment and health-promoting lifestyle were of favorable status among the population under study. The highest score in individual empowerment belonged to the domain of social support and the highest score in lifestyle belonged to spiritual growth. A significant relationship was found between individual empowerment and health-promoting lifestyle ($p < 0.001$). The highest correlation between individual empowerment and dimensions of health-promoting lifestyle was related to interpersonal relationships. In addition, it was specified that 21% of lifestyle variance could be explained by individual empowerment.

Conclusion: There is a relation between individual empowerment and health-promoting lifestyle. Individual empowerment is a predictive variable to have a health-promoting lifestyle. Therefore, by increasing individuals' empowerment, their healthy lifestyle can be promoted.

Keywords: Empowerment; Life style; NGOs

1. Introduction

Today, lifestyle is an important and significant strategy in which to prevent non-communicable diseases (NCDs) (1). Worldwide, over one third of mortality rate occurs due to an unhealthy lifestyle, and is the leading cause of prevalence of coronary diseases, hypertension, type II diabetes, tooth decay, stroke and a number of cancers (2). In Iran, diseases caused by an unhealthy lifestyle are the most common cause of morbidity and mortality (3). The

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World Health Organization (WHO) believes that most risk factors that are the major factors in mortality can be managed via changing and modifying lifestyle (4). In this regard, one of the objectives that will be determined by the WHO up to 2020 is to promote a healthy lifestyle among people. To this purpose, it is suggested that nations consider placing strategies on their agenda that are effective in promoting individual and social life (5), and reduce factors like improper physical activities, poor nutrition and drug abuse that direct the lifestyle towards failing health (4). One of these strategies is to increase peoples control on their life choices or their empowerment (6). In promoting health, it is believed that people are empowered such that they take the responsibility of their health and have a healthy lifestyle (7). In other words, due to the selective nature of behavior in lifestyle, it is necessary to pay attention to empowerment of each individual (8). This necessity increases in women, due to the relation between most gender-dependent problems and diseases including breast and uterus cancer, obesity, psychological problems and depression, stress and menopause (9). In general, limited evidence exists in this regard, due to the difficulty of measuring empowerment in society. Recently, several studies in Britain were conducted, on the relation between empowerment and health; however, they were not sufficiently reliable to be referred to, since their focus had not been on health outcomes. Therefore, there is a requirement to conduct studies to specify the relation between various levels of empowerment with individual and social health outcomes (10). Moreover, promoting women's empowerment using strategies of NGOs is an important factor in their lives, and provides an opportunity for them to choose, and this can bring about expected outcomes (11). The Health Companions Population (known as "Hamyaran") which operates under the supervision of the State Welfare Organization of Iran, is an NGO that operates to create opportunities and resources to promote objectives of social and health development. Empowerment of this population is one of the priorities of the State Welfare Organization. To this purpose, investigating empowerment dimensions of these people, and its relation to healthy lifestyle, can be helpful for future measures. This paper is part of a larger study on this issue that was conducted to find the relation between individual empowerment and lifestyles of women who are members of the Health Companions Population as a pilot study in northern Iran. The specific objectives of this study are to determine individual empowerment of subjects under study, to determine lifestyle status of subjects under study and to determine factors affecting lifestyle.

2. Material and Methods

2.1. Sampling and Population under Study

Sampling of this cross-sectional descriptive-analytic study was conducted from October 2015 to February 2016 among 290 NGOs of the Health Companions Population in Guilan Province. Participants were classified via random sampling and they were selected using Health Companions Population who functioned as volunteers under the supervision of the State Welfare Organization in Guilan Province.

2.2. Inclusion & Exclusion Criteria

Inclusion criteria were over 6-month membership at intended population, willingness to participate in the study, and exclusion criteria were suffering from a diagnosed chronic disease and unwillingness to participate in the study.

2.3. Data Collection Tools

To collect data, a questionnaire with three sections of personal details (age, duration of membership at population, marital status, number of children, number of family members, job, housing, education, access to computer and the Internet, computer capabilities, and socio-economic status of the household), and a 37-item questionnaire of individual empowerment was employed in addition to the questionnaire of health-promoting lifestyle profile II. In the section of personal details filled by companions, to specify socio-economic status, the subjects were asked to rate socio-economic status from very high to very low. Anthropometric items including height, weight and blood pressure in this questionnaire were measured and recorded by administrator using the same measuring tape, scale and weights for all subjects. To measure empowerment, a researcher-made questionnaire with 37 questions was employed. The research group has previously provided this tool and its reliability and validity have been confirmed with Cronbach's alpha of 0.81. This questionnaire measured individual empowerment of Health Companions in 8 fields including participation, motivation, cognitive thinking, critical thinking, intention, self-efficacy, perceived control and social support using 37 questions and, where the answers were provided, using 5-item Likert scale from strongly agree (5 scores) to strongly disagree (1 score). Therefore, fields of participation, critical thinking and self-efficacy each with four questions, were scored between 4 and 20. Scores of motivation, intention and perceived control, with five questions, were between 5 and 25. Cognitive thinking, with three questions, was scored between 3 and 12 and social support, with seven questions, was scored between 7 and 35. Finally, the total score of individual empowerment was between 37 and 185 while calculating a separate score for each field. Higher scores show higher individual empowerment. In order to facilitate announcement of the results, it was decided to consider scores higher

than average as favorable. To collect data related to healthy lifestyle in this study, the standard questionnaire of health-promoting lifestyle profile II was used. This questionnaire measured 6 dimensions of healthy lifestyle including nutrition, taking responsibility of health, interpersonal relations, spiritual growth, physical activity and stress management through 52 questions and they were scored via 4-item Likert scale of “never (1), sometimes (2), often (3), and always (4).” Four dimensions of nutrition, taking responsibility for health, interpersonal relations and spiritual growth (each with 9 questions with scoring range of 9-36) and two dimensions of physical activity and stress management (each with 8 questions with scoring range of 8-32) were scored. The range of total score for health-promoting lifestyle behavior is between 52 and 208 and for each dimension a separate score is considered. Taking higher scores in this questionnaire shows adopting healthier behavior and lifestyle. To facilitate announcement of the results, it was decided to consider scores higher than average as favorable. The standard questionnaire of health-promoting lifestyle profile II has been previously translated into Persian, and used in numerous studies. Validity and reliability of the Persian version of this questionnaire in Iran was confirmed by Mohammadi Zeidi et al. and verified with Cronbach's alpha of 0.82 and ICC of 0.91 (12).

2.4. Data Analysis

After collecting questionnaires and entering data into the computer, STATA 11 software was used to analyze them. To examine the significant difference between mean score of lifestyle dimensions based on levels of multimode qualitative variables (including marital status, economic status, and type of housing, job and education), one-way ANOVA was employed. In addition, Pearson correlation coefficient was used to examine the relation of various dimensions of health-promoting lifestyle with empowerment. In this study, individual empowerment and healthy lifestyle were considered as independent and dependent variables with significance level of $P < 0.05$. Multivariate linear regression was used to find the adjusted correlation between empowerment and healthy lifestyle. With regard to the high design effect of cluster sampling, survey command of STATA software was used for this analysis to consider design effect in estimation of variances. Criteria of including variables in these calculations were their correlation of less than 0.2.

2.5. Ethical Considerations

This study has been registered at Tehran University of Medical Sciences with ethical code of 138416. Participating in this study was completely voluntary. Participants were assured that participating in this study would bring about no harm to them. Researchers pledged to complete all questionnaires without any name or details of subjects.

3. Results

3.1. Socio-Demographic Factors of Respondents

Of all participants, 33.2% were between 30 and 39 years old. Duration of membership at Health Companions Population was less than 5 years for about 71% of respondents. Over half of the respondents were married and living in a 1-to-4-member family. Of respondents who had diplomas, there was 60.9%, most of whom (79.9%) were housekeepers. Of those who mentioned their socio-mental status as average, there was 67.6%. Over half of these women had insufficient computer skills (Table 1).

3.2. Individual Empowerment & HPLP II Dimensions

Of eight dimensions of individual empowerment, the highest score belonged to “social support” with an average of 27.7 and “motivation” with an average of 21.9, and the lowest score belonged to “self-efficacy” with an average of 14. Of six dimensions of health-promoting lifestyle, “spiritual growth” and “interpersonal relations” had the highest scores of 29.6 and 27.5 respectively and “physical activity” and “stress management” with average of 17 and 21.1 respectively had the lowest scores. Health-promoting lifestyle of companions with average of 144.3 considering the 0-100 scale of HPLP II was at a good level, and individual empowerment with average of 148.3 was high. As can be seen in Table 2, design effect range of all variables is over one and the highest value is observed in the domain of social support of individual empowerment (2.86). Results of correlation coefficient of individual empowerment with its total score, showed that perceived control has the highest correlation with total score of individual empowerment ($r=0.76$). The highest correlation of dimensions of health-promoting lifestyle with its total score, was related to spiritual growth ($r=0.076$). In addition, other dimensions showed a significant correlation with total score of empowerment and health-promoting lifestyle.

3.3. Individual Empowerment in Association with Dimensions of Healthy Lifestyle

Table 3 shows the results of correlation test (Pearson) between dimensions of individual empowerment and health-promoting lifestyle. Most correlations are significant at < 0.05 . The highest correlation is related to empowerment

with interpersonal relations ($p < 0.01$, $r = 0.42$) and then the relation of perceived control with spiritual growth ($p < 0.01$, $r = 0.39$). The lowest correlation is associated with the relation between perceived control and nutrition ($p < 0.05$, $r = 0.12$). The relation of total score of individual empowerment with lifestyle is also high and significant ($p < 0.01$, $r = 0.36$). According to this table, self-efficacy and total empowerment have a positive correlation with all dimensions of health-promoting lifestyle. Therefore, with a confidence level of 99%, it can be said that there is a direct relationship between individual empowerment and health-promoting lifestyle in this group. Variables of duration of membership, marital status, having access to the Internet, socio-economic status and individual empowerment with $P < 0.02$ in simple regression test, entered multiple regression test. Coefficients of the regression effect of individual empowerment as independent variable on health-promoting lifestyle as dependent variable, showed that empowerment is a good predictor of health-promoting lifestyle. Coefficient of individual empowerment with healthy lifestyle is 21% that shows one unit increase in the individual empowerment score significantly increases health-promoting lifestyle score for 0.21. Coefficients of the regression effect of other studied variables show that socio-economic status has a significant and reverse relationship with healthy lifestyle behavior.

Table 1. Respondents' characteristics in association with the mean score of the HPLP II dimensions through ANOVA (n=290)

Variable	HPLP II (p-value)						
	Responsibility ^a	Physical Activity ^b	Nutrition ^a	Spirituality ^a	Relationship ^a	Stress ^b	Overall
Age groups (year)	0.011	0.347	0.112	0.006	0.084	0.399	0.056
Duration of membership (year)	<0.001	0.037	0.210	0.006	0.020	0.066	0.001
Marital status	0.114	0.072	0.191	0.239	0.818	0.109	0.926
Number of children	0.042	0.891	0.012	0.005	0.787	0.266	0.071
Number of family members	0.768	0.784	0.562	0.837	0.661	0.074	0.662
Education	0.692	0.553	0.759	0.535	0.745	0.721	0.650
Job	0.987	0.608	0.866	0.193	0.067	0.788	0.251
House status	0.844	0.016	0.611	0.559	0.375	0.504	0.341
Computer accessibility	0.064	0.854	0.990	0.041	0.055	0.251	0.211
Internet accessibility	0.165	0.026	0.570	0.003	0.027	0.988	0.031
Computer ability (Skill)	0.421	0.036	0.269	0.891	0.890	0.280	0.567
Subjective Social Status	<0.001	0.002	0.006	<0.001	0.009	0.021	<0.001
BMI	0.356	0.723	0.352	0.200	0.465	0.115	0.155
Systolic BP	0.459	0.451	0.264	0.543	0.297	0.273	0.299
Diastolic BP	0.252	0.127	0.570	0.464	0.286	0.435	0.540

Attainable Score: a= 9-36, b= 8-32

Table 2. Empowerment & HPLP II dimensions score in the study population (n=290)

Dimension		Numbers of questions	Range of scores	Mean (SD)	Design effect
Empowerment	Participation	4	10-20	16.8 (0.19)	2.14
	Motivation	5	10-25	21.9 (0.21)	2.38
	Cognitive thinking	3	3-15	20.3 (0.23)	1.71
	Critical thinking	4	7-20	15.8 (0.16)	1.60
	Intention	5	12-25	12.5 (0.13)	1.90
	Self-efficacy	4	7-20	14 (0.18)	1.30
	Perceived control	5	7-25	19.2 (0.25)	1.87
	Social support	7	12-35	27.7 (0.48)	2.86
	Overall (Empowerment)	37	96-185	148.3 (1.54)	2.95
Healthy lifestyle	Responsibility	9	9-36	24.8 (0.45)	1.87
	Physical activity	8	8-32	17 (0.41)	1.52
	Nutrition	9	13-35	24.4 (0.23)	0.94
	Spirituality	9	13-36	29.6 (0.35)	1.76
	Relationship	9	15-36	27.5 (0.29)	1.24
	Stress	8	9-32	21.1 (0.30)	1.5
	Overall (HPLP II)	52	84-192	144.3 (1.53)	1.46

Table 3. Correlation between empowerment dimensions and health-promoting lifestyle (n=290)

Variables	Participation	Motivation	Cognitive thinking	Critical thinking	Intention	Self-efficacy	Perceived control	Social support	Overall (Empowerment)
Responsibility	0.24**	0.18**	0.14*	0.15*	0.17**	0.26**	0.19**	0.17**	0.27**
Physical activity	0.11	-0.053	0.016	0.089	0.096	0.24**	0.13*	0.092	0.13*
Nutrition	0.11	0.047	0.007	0.069	0.092	0.13*	0.12*	0.13*	0.13*
Spirituality	0.28**	0.17**	0.077	0.21**	0.20**	0.32**	0.39**	0.26**	0.35**
Relationship	0.30**	0.25**	0.17**	0.29**	0.31**	0.35**	0.36**	0.28**	0.42**
Stress	0.20**	0.046	0.067	0.085	0.15*	0.26**	0.11	0.19**	0.20**
Overall (HPLP II)	0.29**	0.19**	0.11	0.21**	0.26**	0.35**	0.29**	0.28**	0.36**

*p<0.05, **p<0.01

4. Discussion

Various social, economic and environmental factors are associated with health-promoting lifestyle behavior. Although finding the relation between these factors and health is not an arduous task, it is often overlooked by health staff. According to the results of this study, there is a positive and significant relationship between individual empowerment and health-promoting lifestyle. Of dimensions of empowerment, seven dimensions of participation, motivation, critical thinking, intention, self-efficacy, perceived control and social support are positively and significantly related to health-promoting lifestyle. Of demographic details of the subjects, there is a significant relationship between duration of membership at Health Companions Population, socio-economic status and having access to the Internet, with health-promoting lifestyle. On the other hand, duration of membership and socio-economic status were significantly related to individual empowerment. In explaining these results, it can be said that, as duration of membership at Health Companions Population increases, people's empowerment also increases and are more inclined to follow health promoting lifestyles. As Laverack stated in his study, individual and social empowerment of people can improve health-related outcomes via the effect of factors like participation, management, etc. (13). Socio-economic status can also be a factor to empower individuals by developing freedom of choice and action, and therefore, better and more compliance with health-promoting behavior (14, 15). In examining various dimensions of health-promoting lifestyle, the highest score was related to dimensions of spiritual growth and interpersonal relations, which complies with results of other studies (16, 17). In addition, the lowest score was related to dimensions of physical activity and stress management. Lower mean score of physical activity and stress management complies with various studies, including the study by Malakouti, Sousa and Cao (18-20). However, in the study by Enjebab et al., on middle-aged women in Yazd, stress management was of a high score (16). This incompliance can be justified by differences in occupational and social features of targeted communities. In terms of

individual empowerment, the highest score obtained was related to dimensions of motivation and social support. This finding complies with results of the study by Hall (21). In the study by Nedjat, social support and dependence were also of high scores (22). Average total score of calculated individual empowerment, shows that participants were able to obtain 80.2% of total score of empowerment inventory and it is a relatively high percent that shows good individual empowerment of these people. This value has been reported to be different in various studies. Sa'di (2014) reported empowerment of rural women to be 63.3% (23). In the study by Kiani, women's empowerment to decide for pregnancy, was reported to be 54.3% (15). Soares estimated the total average of individual empowerment to be 77.83% (24). These differences can be related to differences in the target population of those studies. Higher empowerment in this study can be due to the voluntary nature of NGOs and participation of these women in various courses of readiness for cooperation. On the other hand, it appears that people who are more empowered seek for voluntary activities in society. Total mean score of health-promoting lifestyle shows 69.4% of total score of the inventory, i.e., higher than average scored by participants. These results comply with findings of the study by Enjezab on women of Yazd (16). The similarities in these results are due to selecting middle-aged women as subjects in both studies. However, in most studies where samples were selected from other groups such as teachers, students or nurses, this value was reported to be lower (9, 25-27). Results of this study on the relationship between various dimensions of empowerment and health-promoting behavior show that there is a significant and positive relationship between dimensions of participation, motivation, critical thinking, intention, self-efficacy, perceived control and social support with health-promoting lifestyle behavior. In various studies, different dimensions are considered for empowerment that are more or less identical. Results from investigating the relationship between these dimensions and lifestyle show that health promotion is completely affected by community empowerment (28, 29). In various statements of the WHO, the effect of empowerment on health promotion and healthier lifestyle are emphasized via individuals' participation in health programs and health-oriented decision-making (30-33). In this regard, there is evidence on the effect of empowerment on mental health, self-efficacy and self-confidence of people (13, 34-37). In two studies, it is shown that participating in different social groups and programs leads to health promotion and healthy lifestyle behavior (13, 38). The effect of individual empowerment on health-promoting lifestyle was positive and significant, such that as empowerment increased, health-promoting lifestyle developed for 21% of the study population. In explaining this finding, it can be said that due to the dependency of lifestyle-promoting behavior to decision-making of people (13, 39), all factors affecting decision-making and choices of individuals, comprise following healthier behavior in their lives. Although no study was found that directly investigated these two variables, some studies based on strategies of increasing patients' compliance with health-oriented regimes, focus their attention on empowering those people (40-43). For instance, in 2011 McCorkle showed that caring patients with the aim of empowerment of cancer patients can result in increased self-efficacy and improve their quality of life and promote a healthier life (44). The relationship between dimensions of individual empowerment and health-promoting lifestyle, shows the significance of most of these correlations. The highest correlation is found between individual empowerment and interpersonal relations of health-promoting lifestyle and then between perceived control and spiritual growth. Participation as one of the bases of empowerment, requires creating appropriate interpersonal relations. In various groups and populations, due to continuous and permanent interactions, interpersonal relations are strengthened (45). In his study, Hatzidimitriadou reported that membership in a group increases the sense of control and individual empowerment (46). In other words, volunteering in NGOs, results in increased positive attitudes, development of ethics and accountability in the community (47). Since the population of this study were a group of volunteer women who were members of an NGO, deep interactions and interpersonal relations, the spirit of participation in various activities and capability of critical thinking and decision making are considered as part of their routine activities. This will strengthen individual empowerment and as a result, their community empowerment, and it puts them among empowered people of the society. There is also evidence for the effect of empowerment on the ability of decision-making (48). In addition, findings of various studies show the relationship between empowerment and health outcomes in individuals and groups (49). Therefore, currently one of the effective strategies for comprehensive and sustainable development, is to employ people's empowerment and participation in all dimensions. The major tool to reach this goal is to establish NGOs, based on the needs and abilities of various groups in the essential and assorted issues, to implement development plans (50). Therefore, most countries encourage their people to participate in voluntary activities with the aim of promoting environmental or social objectives (51).

5. Conclusions

Findings of this study, showed that by increase in empowerment of women under study, their health-promoting lifestyle also improved, and dimensions of social support, motivation and participation had the major role in increasing individual empowerment. Functional importance of these findings, is that some evidence for the effect of

empowerment on healthy lifestyle was obtained that was not directly investigated earlier. It is suggested to design interventions to increase the dimensions stated, in order to promote individual empowerment in society. Therefore, while having an empowered community, we will also see a healthier lifestyle. Conducting a complementary study on the relationship between individual empowerment and healthy lifestyle on non-NGO women with a similar methodology, can be a good path for future studies on this issue.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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