The Effect of Educational Intervention on Health Literacy, Self-efficacy and Quality of Life in Suburban Women of Mashhad

Mansooreh Khandehroo
Mashhad University of Medical Sciences
Nooshin Peyman
Mashhad University of Medical Sciences
Mahdi gholian aval
Mashhad University of Medical Sciences
Hadi Tehrani (Tehranih@mums.ac.ir)
Mashhad University of Medical Sciences

Research Article

Keywords: health literacy, self- efficacy, quality of life

Posted Date: January 27th, 2022

DOI: https://doi.org/10.21203/rs.3.rs-1262103/v1

Abstract

Background

Health literacy is one of the important factors to improve menopausal quality of life that Proper and timely education and tailored to the needs of individuals, caused to improve quality of life. This study aimed to investigate the effect of educational intervention on health literacy, self-efficacy, and quality of life in women.

Method

This quasi-experimental study with the control group was performed on 107 suburban women aged 40-60 years during 2021-2022. Participants were randomly selected by substituting and selected avenue number 3 as the experimental group and 6 as the control group. instruments of this study were Iranian Health Literacy and Scherer Self-Efficacy and Menopausal Quality of Life Questionnaires. The educational intervention was performed in 4 training sessions of 95 minutes once a week.Questionnaires were completed before training, immediately after training, and 3 months later. Data were analyzed by SPSS21 and independent t-test, Kruscalovalis, and linear regression tests.

Results

The mean score of health literacy in the experimental group before intervention (9 ± 11.36) and immediately after the intervention (20.65 ± 11.41) and three months after the intervention (21.09 ± 11.78) was the mean score of self-efficacy in the experimental group before the intervention (13.72 ± 44.73) and immediately after the intervention (54.76 ± 14.36) and three months after the intervention (55.96 ±14.80). The mean quality of life score of the experimental group was (27.33 ± 80), immediately after the intervention (62.66 ± 22.45) and 3 months after the intervention (51.12 ± 23.57).

Conclusion

This study obtain that educational interventions improve quality of life, health literacy, and self-efficacy. The mean score of quality of life, health literacy, and self-efficacy increased, immediately after training and 3 months later in the experimental group. The difference between the experimental and control groups was significant. There was a positive relationship between quality of life and education, job, and income. This relationship was also positive and significant in self-efficacy and health literacy. Three months after the intervention, there was a significant relationship between health literacy and quality of life.

Introduction

The average life expectancy of people and the number of elderly over 60 years has increased due to improved health conditions in Iran, as in many countries of the world. Therefore, all people must live in a way that healthy old age, and to be active in the social and economic in the future(1).

Recognizing the risk factors and controlling their complications are the necessities of women's lives. women's knowledge of these changes and understanding the reasons for them makes it easier to get through this stage. Knowledge will have a positive effect on health care and increase healthy behaviors and lead to improving their quality of life.

The person's confidence in her abilities is an important and influential factor in the quality of life and controlling menopausal symptoms. Perceived social support has many effects on physical and mental status, life satisfaction, and various aspects of quality of life (2)

The World Health Organization defines the quality of life as perceived by individuals in their lives, in the context of the culture and value system in which they live, and about their goals, expectations, communications, and needs. The quality of life of older women in society depends on the ability to cope with economic, social, medical, and health-related challenges in the menopausal years (2). Given that inadequate health literacy is considered a global threat today. Health education aims to raise the level of health literacy that helps to make the right decisions about their health and the community health in which they live. (3) The level of health literacy is one of the most important factors in improving the quality of life in menopause, which improves with proper and timely and accordance with the needs education (4).

According to Bandura, self-efficacy is the main and important precondition for changing behavior, and a person with a high level of self-efficacy is more successful and hopeful in doing works.

Perceived self-efficacy can be defined as the beliefs about own ability to control actions, and the level of performance, and events that affect lives. People with strong self-efficacy believe that they can do any difficult task. They see difficult tasks as challenges and struggles to become proficient rather than threats that they must avoid. Efficient people in the failures continue to strive that succeed (5).

In the study of Rachel Yolizmatores ,the relationship between health literacy, self-efficacy, knowledge, and hormone therapy behaviors between the two variables of health literacy and self-efficacy decisions, clear correlation was seen based on regression(3).

This study aimed to determine the effect of educational intervention on health literacy, self-efficacy, and improving the menopausal quality of life in 40-60 aged women in the suburbs of Mashhad.

Methods

This study was a quasi-experimental with a control group of women aged 40-60 years living in the suburbs of Mashhad. The study period was 2020-2021(figure 1). The samples size was assigned based on a similar study (6).

Inclusion criteria included:

-Persian language

- satisfaction for entering the study

- living in the suburbs of Mashhad

- women aged 40-60.

Exclusion criteria:

- unwillingness to participate in training sessions during the intervention,

-incurable diseases,

-absence of more than two sessions in training classes

samples were 107 from the southern highlands area of the suburbs randomly by alternatives selected and, the 3rd street, exprimental group, and 6th street, as the control group, were randomly assigned(figure2). The two groups had an acceptable distance to prevent bias. Details of the training sessions give in Table 1. Questionnaires were completed before the beginning of the sessions, immediately and 3month later. In educational sessions, were done, lectures and focus groups. Practical exercises were done when necessary.

The measurement tools were health literacy short TOFLA, menopausal quality of life (MENQOL) and sherer self-efficacy questionnaires.

The TOFLA Health Literacy Questionnaire has three texts related to the instructions for preparing for the upper gastrointestinal tract x-ray, the ward, and the patient's responsibilities on the insurance policy and a standard hospitalization. Short TOFLA Health Literacy Questionnaire has 50 questions. The validity and reliability of the short health literacy questionnaire (TOFLA) has been confirmed by past studies.

Scherer's general self-efficacy questionnaire consists of 17 standard questions, which are graded on a Likert scale from Strongly Disagree (1) to Strongly Agree (5). The maximum score is 85 and the minimum is 17. This questionnaire has been translated and validated by Barati (1996).

The Menopausal Quality of Life Questionnaire was designed and standardized by John Hildage et al. At the University of Canada and consists of 29 questions with psychosocial (7 questions), physical (16 questions), sexual (3 questions), cardiovascular dimension (3 questions), by seven Likert scales. Golrokh Moridi approved validity and reliability. The lower the scores obtained in this questionnaire, the better the quality of life.

Educational texts were adjusted based on the results of the questionnaires. The educational intervention was performed in 4 sessions (Table 1). Questionnaires were completed before education and immediately and three months later. After collecting, the data were entered into a computer and analyzed by SPSS21 statistical analysis software. Finally, improvement in health literacy and self-efficacy, and quality of life these two groups were assessed and compared.

Table No. 1 - Details of the training program

session	Purpose	content	method
First	Raising knowledges, attitudes about quality of healthy life	-Healthy lifestyle - dimensions of healthy quality of life and the factors affecting it - ways to improve the quality of life	-Lecture -Focus group -Express expriments
Second	Raising knowledges, attitudes about quality of health litracy	-Teaching different aspects of health literacy and its importance	- Lecture -Focus group
Third	Raising knowledges, attitudes about self-efficacy	-The concept of the importance of self-efficacy -Training ways to improve self-efficacy -Training the factors affecting self-efficacy	- Lecture -Focus group - Practical relaxation
forth	Increase performance in the field of self-efficacy and quality of life	Remind, summarize and present successful experiences	-Focus group - Practical relaxation - present successful experiences

Results

The Participants were 107 people with a mean age of 53.4 7± 7.72, 53.3% had primary education, 15% middle school, 23.4% diploma, 8.4% university education. 92.5% were housewives, 5.6% self-employed. 1.9% had government jobs. 58.9% income status as favorable, 27.1% as unfavorable, and 14% were unable to provide daily necessities (Table 2).

Table 2
Frequency and percentage of demographic variables

variable	Experimental group		Control group		
	Frequency	percentage	Frequency	percentage	Pvalue**
occupation	103	96.3	99	92.5	0/00
housewife	2	1.9	6	5.6	
Self employed	2	1.9	2	1.9	
Governmental	103	96.3	99	92.5	
Income					
Optimal	66	61.7	63	58.9	0/00
Undesirable	28	26.2	29	27.1	
Inability to meet daily needs	13	12.1	15	14.0	
education					
Primary	61	57.0	57	53.3	0/00
Under diploma	12	11.2	16	15.0	
Diploma	25	23.4	25	23.4	
University	9	8.4	9	8.4	
Paired sample T-test **					

The mean score of quality of life in the experimental group before intervention was 80±27.33, immediately after intervention was 62.66 ± 22.45, and after 3 months was 51.12 ± 23.57. This improvement was significant by independent t-test p-value = 0.00. The mean score of health literacy in the experimental group before the intervention was 9.36 ±11.36, immediately after the intervention was 20.65 ± 11.41, and three months after the intervention was 21.09 ± 11.78. This improvement was also significant by independent t-test p-value = 0.00.

The self-efficacy scores in the experimental group were 44.73 ± 13.72 before the intervention, 54.76 ± 14.36 immediately after the intervention, and 55.96 ±14.80 three months after the intervention. This improvement was also significant by independent t-test p-value = 0.00.

The mean score of quality of life, health literacy, and self-efficacy in the experimental group increased immediately and three months after the intervention (Table 3). Three months after the intervention, there was a significant relationship between health literacy and quality of life (Table 4). But there was no relationship between self-efficacy and quality of life.

Table 3
Mean and standard deviation of variables of quality of life, health literacy and self-efficacy, before, immediately and three months after intervention

variable		Before intervention		immediately		three months after intervention		Pvalue*
		Mean	s.d	Mean	s.d	Mean	s.d	
Control group								
Quality of life		87/92	26/88	78/83	26/76	78/83	26/76	0/00
Health literacy		9/30	10/88	9/30	10/88	9/30	10/88	0/00
Self -efficacy		42/2	15/25	42/36	15/04	42/36	15/04	0/00
Experimental group								
Quality of life		80/0	27/33	62/66	22/45	51/12	23/57	0/00
Health literacy		9/0	11/36	20/65	11/41	21/09	11/78	0/00
Self -efficacy		44/73	13/72	54/76	14/36	55/96	14/80	0/00
pvalue	Quality of life	Pvalue**	0/79	Pvalue**	0/00	Pvalue	0/00**	
	Health literacy	Pvalue**	0/12	Pvalue**	0/00	Pvalue	0/00**	
	Self - efficacy	Pvalue**	0/06	Pvalue**	0/00	Pvalue	0/00**	
Independent T-test *								
Paired sample T-test **								

Table4- Pearson correlation coefficient of research variables

variable	Quality of life	Health literacy	Self- efficacy
Quality of life	1		
Health literacy	0/27(p value=0/04)	1	
Self-efficacy	0/07(p value=0/46)	0/04(p value=0/62)	1

Discusion

This study showed that education could improve the postmenopausal quality of life (7) and lifestyle and promote women's health (8). Some studies in Iran and other parts of the world indicate the negative impact of menopause on quality of life (9,10,11).

One of the main factors to improve quality of life is the improvement of lifestyle (7). Increasing knowledge about menopause can correct quality of life, reduce complications and increase self-efficacy (12). Quality of life is a perception state of physical, mental, social, and environmental health. Various variables such as personal characteristics such as age, gender, personality, education, and organizational factors such as stress experienced in the workplace, the nature of work and tasks, and social factors such as relationships between family members and co-workers have affected the quality of life.

The people with higher self-care and health care have a more positive perception of their health and experience a better quality of life (13). In various qualitative studies, as the study of the peyman and khandehroo (12), different interpretations such as satisfaction and dissatisfaction (12) identity transformation, disability, and helplessness (14) feel of aging (9) were perception. The women will have different attitudes towards menopause depending on their interpretations and consequently may have various quality of life.

In Nazarpour's study, individual and social factors aggravated menopausal complications thus were affected the quality of life (16). In addition, these imposing an economic burden on the family and society affect the menopausal quality of life (15). health literacy is another factor that affects the menopausal quality of life

.World Health Organization named health literacy one of the sufficient determinants of health (7). Health literacy has been offered a global issue in the 21st century(2). it is necessary to choose an educational approach to promote health literacy and quality of life by considering the abilities and skills (5).

Health education aims to raise the level of health literacy of people, to help them make the right decisions about their health and

the community in which they live (3). In addition, Bandura introduces a view of human behavior in which the beliefs that people have about themselves are vital to controlling their behavior (17).

People with higher self-efficacy believe that they can do any difficult task (5). In the study of Forough Jafari et .al a direct and significant relationship was seen between the variables of the meaning of life and self-efficacy and body areas satisfaction and health assessment with quality of life (18).

In the study of Mostafavi in Isfahan, the level of health literacy in the elderly was very inadequate. The people with lower age, less education, less income, and more doctor visits had low health literacy(19). In Khaledian's study, there was no statistically significant relationship between education ($p = 0.48$, occupation) ($p = 0.12$) and the number of family members ($p = 0.43$) and quality of life (20),however this relationship was confirmed in the present study.

In Abdi's research, there was a statistically significant relationship between quality of life and job ($p = 0.04$) and quality of life and income ($p = 0.009$). The present study was certified too. The quality of life and health literacy gained a direct and significant relationship and an inverse and significant between the quality of life and self-efficacy.

The positive and significant effect of educational intervention in improving the quality of life and increasing health literacy and self-efficacy was certified in the khandehroo research (21). It acknowledges in this study. This increase was more significant in 3 months after the intervention.

The limitations of this study were the presence of covid 19 and limited communication and education of participants, the fear of covid 19 if they participated in training classes. This limitation had somewhat modified. This study did with individual funding.

Suggestions:

Using the results of such studies in the community cause women's health promotion, make them healthier and more productive for the rest of their lives, take more effective steps towards sustainable development. In addition to providing the necessary knowledge about menopausal symptoms and complications, how to deal with and adapt to them to maintain health and improve the menopausal quality of life. to Create support groups, induce a positive attitude, and promote healthier behaviors should strive in postmenopausal women.

It can also help managers of health services in controlling and reducing the complications of menopause and reducing the resulting burden on the health care system. Authorities can consider the results of this study in their policies in disease and health services management.

Declarations

Acknowledgment:

We are particularly grateful to the researchers who have provided us with a wealth of knowledge and experience of menopause. As well, we thank professors of the Faculty of Health, and Research Committee of Mashhad University of Medical Sciences.

Authors' contributions

khandehroo wrote the main manuscript text .tehrani and khandehroo prepared figures and tables.All authors reviewed the manuscript.

Funding

This study sponsored Mashhad University of Medical Sciences .There were no funding agancies role in design of study, data collection and analysis, or presentation of the results .

Availability of data and materials

All data generated or analysed during this study are included in this published article

Ethics approval and consent to participate

This article is a part of research in the field of Health Education and Health Promotion in Mashhad University of Medical Sciences. All procedures performed in studies were in accordance with the ethical standards of the institutional research committee with the 1964 Helsinki declaration. This proposal has been approved by the Ethics Committee of Mashhad University of Medical Sciences; the ethics code IR.MUMS.FHMPM.REC.1400.035. Address: https://ethics.research.ac.ir/IR.MUMS.FHMPM.REC.1400.35 (2021 year). Informed consent was obtained from all participants.

Consent for publication

Not applicable.

Competing interests

There is nopotential conflict of interest between the authors.

Author details

[1]Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.[2]Department of Health Education and Health Promotion, PhD , Faculty of Health , Mashhad University of Medical Sciences, Mashhad, Iran

Mansooreh khandehrooID http://orcid.org /0000-0003-4395-718X

References

1. Reisi M MF, Hasanzade A, G. S. The relationship between health literacy, health status and healthy behavirors among eldery in Isfahan. Journal of health system research. 2011;7(4):1-12.
2. Moridi G,Seyedalshohadaee F,Hossainabasi N,The Effect of Health Education on Knowledge and Quality ofLife Among Menopause Women Iranian nersing journal 1394,18(44)p;31-38
3. Rachel Yolizma Torres-RELATIONSHIPS BETWEEN HEALTH LITERACY, SELF-EFFICACY,KNOWLEDGE AND BEHAVIORAL INTENT REGARDINGHORMONE REPLACEMENT THERAPY (HRT). J Health Commun. 2009 Jan-Feb;14(1):43-55 Abrams MA, Kurtz-Rossi S, Riffenburgh A, S. B. Building health literate organizations: A guidebook to achieving organizational change. Wes Des Moines, Iowa: UnityPoint Health.2.
4. Hsieh HF SS-. Three approaches to qualitative content analysis. Qual Health Res .2005;15(1277-88).
5. Solhi M,Kazemi S,Haghni H, Relationship between general health and self-efficacy in women referred tohealth center No.2 in Chaloos (2012)Razi Journal of Medical Sciences, 2013,20(109)P:72-79
6. mohammadi N, takarli f, khodaveisi m, soltanian a. The Effect of Peer Educational Program on the Self-Efficacy of Multiple Sclerosis Patients: A Randomized-Controlled Trial. Avicenna Journal of Nursing and Midwifery Care. 2017;25(2):36-44.

7. golian sh et.al . Promote the health of women in menopause by teaching the principles of self-care. hayat j. 2008;13(3):67-75.
8. Morowatisharifabad MA, Yoshany N, Sharma M, Bahri N, Jambarsang S. Readability and suitability assessment of educational materials in promoting the quality of life for postmenopausal women. Przeglad menopauzalny = Menopause review. 2020;19(2):80-9.
9. Granheim UH, B L. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today. 2004;24(2):105-12.
10. Norozi E,et al,Factors Related with Quality of Life among Postmenopausal Women inIsfahan, Iran, based on Behavioral Analysis Phase of PRECEDE Model,searching health jornal,1390,7(3)p267-277
11. Mohammadbeigi A MN, Aligol M. . 2015;13(12):1153-70. Validity and reliability of the instruments and types of measurments in health applied researches. . Journal of rafsanjan university of medical sciences. 2015;13(12):1153-70.
12. Strauss AaJCPoQRMBT, Practices and Practices, Translated by Biouk Mohammadi, Tehran: Human Rights and Cultural Studies. Principles of Qualitative Research Methodology: Basic Theory, Practices and Practices,.
13. Ahmadi F et all. Health Literacy among students of Farhangian University. Journal of the Iranian Institute for Health Sciences Research Payesh 2018; 17(3): 257-266
14. Mehraban A DIM. A review of qualitative content analysis and its application in research. 2015.
15. Corbin J, A S. Basics of Qualitative Reseach: Techniques and Procedures for Developing Grounded Theory. 4 thed. publication; LAS, editor2008.
16. Serdar CC, Cihan M, Yücel D, Serdar MAJBM. Sample size, power and effect size revisited: simplified and practical approaches in pre-clinical, clinical and laboratory studies. 2021;31(1):27-53.
17. Ghanbari sh, Majlessi f, Ghaffari m, Mahmoodi m, Majdabadi, Evaluation of health literacy of pregnant women in urban health centers of Shahid Beheshti Medical UniversityDaneshvar(medicine) shahed University,2012,19(97)p:1-12
18. Jafari Shirazi f. Life skills training to enhance self-efficacy impact on women inTehran . jornal women research1391(2)p:47-70
19. Mostafavi F. Akbar Hassanzadeh. Gh.rabth Sharifirad relationship between health litracy and Health behavior and general health in eldrly Email: sharifirad@hlth.mui.ac.ir
20. Mehraban A, Doosti Irani M. A review of qualitative content analysis and its application in research. Esfahan2015
21. Khandehroo M, Tavakoly Sany SB, Oakley D, Peyman N. Health Literacy Intervention and quality of life in Menopausal Women: a Randomized Controlled Trial. International Journal of Health Promotion and Education. 2020:1-13.
22. Panahi R et all.Relationship between Health Literacy Skills and Adoption ofPreventive Smoking Behaviors among University Students-cientific Journal of Ilam University of Medical Sciences. March 10, 2019

Figures

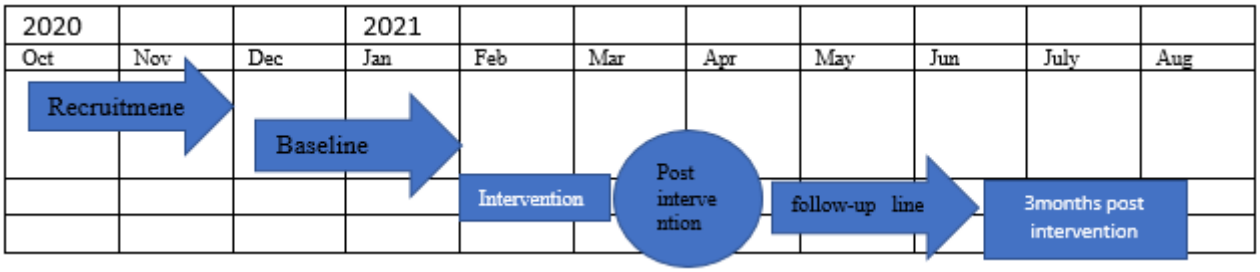

Figure 1

(colour online) Intervention timeline for intervention

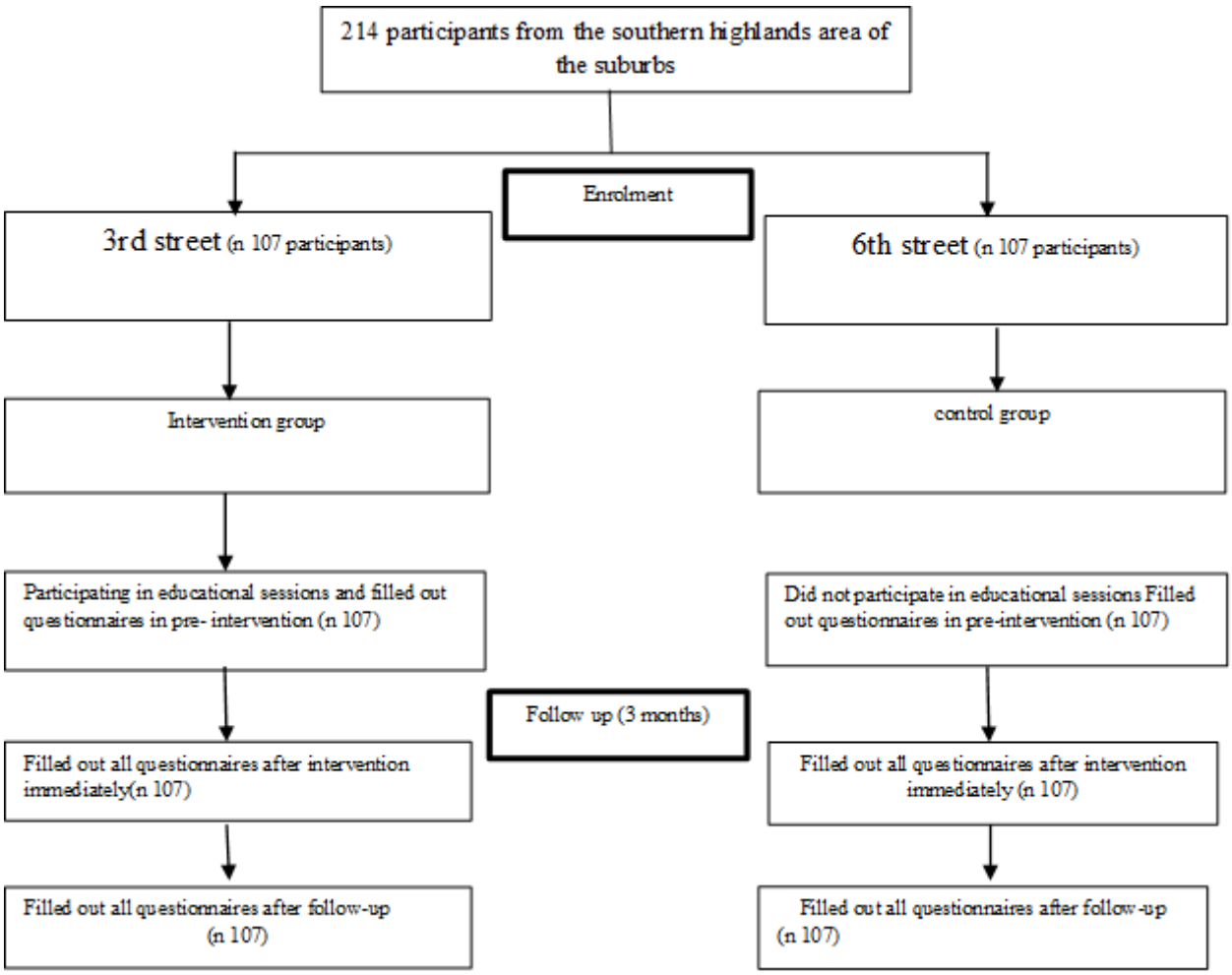

Figure 2

Flow of participants through each stage of the programme