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Chronicity and use of health services: peer education of the School of Patients

Cronicidad y uso de servicios sanitarios: la formación entre iguales de la Escuela de Pacientes

Cronicidade e utilização de serviços de saúde: a formação entre iguais na Escola de Pacientes

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ABSTRACT

Objective: To evaluate the impact of the training strategy of the *Escuela de Pacientes* (School of Patients) on the use of health services among people with chronic diseases. **Method:** Quantitative design study of pretest and posttest evaluation with a population of 3,350 chronic patients of the *Escuela de Pacientes* (Andalusia, 2013-2015). A questionnaire adapted from the Stanford University was used. It measured the self-perceived health, number of health visits, and level of trust and communication with health personnel. A descriptive and bivariate study, a correlation study and a pretest/posttest net gain analysis were performed. **Results:** Participation of 964 patients (28.8% of the population), of which 18.8% were men, mean age 56 years. Training increased trust in Primary Care (PC) and Hospital Care (HC) professionals (0.44 and 0.65 points), medical visits decreased by 25%, and hospital admissions fell by 51% with statistically significant differences by sex and disease. The correlation index between trust in professionals and use of health services was -0.215. **Conclusion:** The training strategy had a positive impact on the use of health services and trust in health professionals, and were identified areas of improvement from which recommendations are established.

DESCRIPTORS

Chronic Disease; Health Education; Patient Participation; Self Care; Health Services.

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INTRODUCTION

Peer education programs for patients with chronic diseases are based on social cognitive theory(1) and have the objective of improving self-efficacy by promoting the necessary skills and knowledge for proper self-management of the disease(2-3). At the same time, they believe on the benefits of interaction between patients and expert patient trainers by strengthening social support, communication and empathy(4-6).

In 2008, the Ministry of Health launched the *Escuela de Pacientes* (School of Patients) in Andalusia. It is a self-care training program through peers with the same chronic illness. Within this program, were designed training strategies for fibromyalgia (as of 2008), diabetes and heart failure (as of 2009), among others, including specific contents for each disease, and a series of common contents, namely: needs and resources, healthy lifestyle habits – physical activity, diet, relaxation –, action plan, problem solving, communication and emotional management of the disease(7).

Despite the diversity of currently available formats(8), self-care training programs have shown their efficiency in improving health and quality of life for adoption of healthy living habits, and reduction in use of health services(9-13). According to a recent review(14), 37% of studies on chronicity training focus on the use of health services, despite the lack of a common measuring instrument. In addition to a positive impact on health attendance, peer education showed a positive impact on the relationship between patients and health professionals by improving their collaboration and communication(3,15).

The current literature has paid attention to the sociocultural needs of diverse groups of patients, with special attention to ethnic groups and immigrant populations in the Anglo-Saxon area(16-18). However, in Spain, this research field has scarcity of studies focused on the use of health services before and after training programs in relation to socio-demographic variables, the type of chronic disease or the relationship with health personnel.

Within a broader study of assessment of impact of the *Escuela de Pacientes* on the health and quality of life of people with chronic diseases, the present study proposes a quantitative approach on the use of health services and the relationship between patients and health professionals.

The general objective was to evaluate the impact of the training strategy on the use of health services among people with chronic diseases trained in the *Escuela de Pacientes*. The specific objectives were the following: 1. To measure the impact of training on the number of visits to primary care, emergency services and hospital admissions. 2. To know the impact of training on the perceived relationship and trust in health professionals. 3. To identify differences in the use of health services before and after training according to the chronic disease, sociodemographic variables of trained people, health self-perception, and level of trust in health professionals.

METHOD

Quantitative, pretest and posttest design of evaluation at six months of training. The study population were 3,350 patients and patient trainers who participated in training of Diabetes, Fibromyalgia and Heart Failure between 2013 and 2015. The inclusion criteria were: 1. To be an adult patient with any of the three chronic diseases studied. 2. Have completed one of the training workshops of the *Escuela de Pacientes*. Exclusion criteria were the presence of incompatible physical or mental health state for participation in the study or that could jeopardize the participant's safety. As in similar studies conducted at the *Escuela de Pacientes*(7), "all participants signed an informed consent and the study protocol was approved by the Research Commission and the Ethics Committee of the Escuela Andaluza de Salud Pública", based on the following: exhaustive information to participants about the study objectives and methodology, use of verbal and written informed consent, maintenance of anonymity or confidentiality, return of general results to the participants, no physical, social and legal risks.

The data collection instrument was a questionnaire used in previous studies with fibromyalgia patients, "adapted from the Stanford University Expert Patient Program", which was held by telephone before (pretest) and six months after (posttest) the training. It included "blocks of dichotomous questions in a Likert scale or filled out freely"(7).

The SPSS 15.0 software was used for statistical analysis and included the following: 1. descriptive and bivariate statistical study by sex, age, marital status, educational level, employment status, years with disease and type of disease. 2. a bivariate correlation study. 3. calculation of net gains with T-test for related samples (for parametric data) and Wilcoxon test (for non-parametric data). "The Shapiro-Wilk test (normal distribution of scores) and the Levene test (of homogeneity of variances) were applied to check the assumptions that allow the use of parametric tests"(7). The McNemar's test was used for the pre/post study of qualitative variables.

RESULTS

The study had participation of 964 chronic patients that represented 28.8% of the total study population. Of these, 18.8% were men and the mean age was 56 years (SD 10.90, minimum 31 years, maximum 81 years). Of the 964 completed questionnaires, only 445 contained complete sociodemographic data (Table 1) and 611 had data on the disease and sex. Chart 1 presents the variables measured through the adapted questionnaire.

There were no significant changes in self-perception of health status before and after training, but there were differences between men and women. While women's responses were based on 68% of 'bad' or 'very poor' health in the pretest (69% in the posttest), men recorded 23.5% of 'bad' or 'very poor' health in the pretest (22.9% in posttest). By chronic disease, 80% of people with fibromyalgia considered their health 'bad' or 'very poor', compared to 16% of patients with diabetes and 23% with heart failure.

Table 1 – Sociodemographic description of the sample by sex – Andalusia, Spain, 2013-2015.

Sociodemographic variables	Men (48) N (%)	Women (397) N (%)	Total (445) N (%)
Age			
<50 years	8 (16.7)	31 (7.8)	39 (8.8)
50-60 years	11 (22.9)	91 (22.9)	102 (22.9)
>60 years	13 (27.1)	51 (12.8)	64 (14.4)
No answer	16 (33.3)	224 (56.4)	240 (53.9)
Marital status			
Married/with partner	31 (66.0)	330 (83.3)	361 (81.5)
Separated	3 (6.4)	19 (4.8)	22 (5.0)
Single	11 (23.4)	29 (7.3)	40 (9.0)
Widowed	2 (4.3)	18 (4.5)	20 (4.5)
Educational level			
Primary or lower	25 (55.6)	266 (68.2)	291 (66.9)
Middle school	12 (26.7)	90 (23.1)	102 (23.4)
Higher education	8 (17.8)	34 (8.7)	42 (9.7)
Work status			
Working or unemployed	13 (27.1)	82 (20.8)	95 (21.4)
Unemployed	8 (16.7)	63 (16.5)	73 (16.5)
Retired/pensioner	19 (39.6)	98 (24.8)	117 (26.4)
Housewife	0	137 (34.7)	137 (30.9)
Other	8 (16.7)	13 (3.3)	21 (4.7)
Disease			
Diabetes	73 (63.5)	77 (15.5)	150 (24.5)
Fibromyalgia	7 (6.1)	406 (81.9)	413 (67.6)
Heart failure	35 (30.4)	13 (2.6)	48 (7.9)
Disease duration			
<3 years	7 (20.0)	15 (4.7)	22 (6.2)
3-5 years	2 (5.7)	22 (6.9)	24 (6.8)
5-10 years	12 (34.3)	89 (27.9)	101 (28.5)
>10 years	14 (40.0)	193 (60.5)	207 (58.5)
Associate			
Yes	12 (25.0)	173 (43.6)	185 (41.6)
No	16 (33.3)	20 (5.0)	36 (8.1)
No answer	20 (41.7)	204 (51.4)	224 (50.3)

Source: research data.

Chart 1 – Blocks of questions of the questionnaire – Andalusia, Spain, 2013-2015.

Block	Questions	Measuring scale
Self-perceived health status	How do you consider your general health status?	Excellent/ very good/ good/ bad/ very poor
Use of health services	How many visits to Primary Care have you performed in the last 6 months?	No. of visits in the last 6 months
	How many times have you been to the ER (emergency room) in the last 6 months?	No. of visits in the last 6 months
	How many times have you been hospitalized for one night or more in the last 6 months?	No. of admissions in the last 6 months
Communication and trust in health professionals	What is your level of trust in health care professionals who serve you at your health center?	1(no trust) – 10 (maximum trust)
	What is your level of trust in health care professionals who serve you at the hospital?	1(no trust) – 10 (maximum trust)
	Do you prepare a list of questions for your doctor before you go to the consultation?	Always/ often/ sometimes/ never
	Do you ask questions and about matters you do not understand in visits to your healthcare professionals?	Always/ often/ sometimes/ never
	When you visit your healthcare professionals, do you raise personal issues that may be related to your disease?	Always/ often/ sometimes/ never

Source: Adapted from the questionnaire of the Stanford University Expert Patient Program.

The results on the impact of training on the level of trust and use of health services are shown in Table 2, including the 611 complete cases with pretest and posttest data, and the independent variables with statistically significant differences (sex and type of disease).

Before conducting the training, there were four (mean number) health visits per semester (SD 2.05), with significant differences by sex (women performed 20% more visits than men) and by chronic disease, since in fibromyalgia there were 25% more visits than in diabetes. On average, there were 2.6 visits to the ER in the last six months, with a maximum mean of three visits among people with diabetes. Hospital admissions were higher for people with diabetes (mean of 3.4) and among men (2.6 vs. 2.2 for women).

Six months after training, the number of health visits and visits to the ER decreased by 25% for all groups. The reduction by half in the number of visits to the ER (from 2.5 to 1), of hospital admissions (from 2.6 to 1.3) among men, and among people with diabetes (from 3 to 1.4 visits to ERs; from 3.4 to 1.9 average number of hospital admissions) stands out.

The level of trust in health professionals of primary care was of 7.3 points on average (SD 2.12) in the pretest, with no significant differences by sex, but with a reduction to 6.1 points among diabetes patients ($p<0.05$). At the posttest stage, the total mean increases by 0.4 points, with an increase of 0.8 points among female patients and 1.2 points among diabetes patients. The level of trust in HC professionals is lower among women (mean of 6.2 points vs. 7.8 among men), especially among fibromyalgia patients (5.7 points). The evaluation of level of trust increases after training for all groups, with greater impact among diabetes patients, who improve their evaluation by 1.9 points.

The correlation study indicated an indirectly proportional relationship between the level of trust and the number of visits to health centers; the Pearson's correlation index between trust in PC and visits to PC was -0.215 ($p<0.05$).

The habit of preparing a list of questions before the primary care consultation is observed in 17% of the participating population, both in the pretest and posttest, without significant differences by sex or disease. Half of patients ask questions to their health professionals, and there is an increase in this percentage among men (they reach 66% in the posttest), but a decrease among women (45%-42% in the posttest). There is possibility of addressing personal issues related to the disease in 29% of men in the pretest that increases significantly to 54% in the posttest. Among women, this ratio is reversed, from 38% in pretest to 27% in posttest (Figure 1).

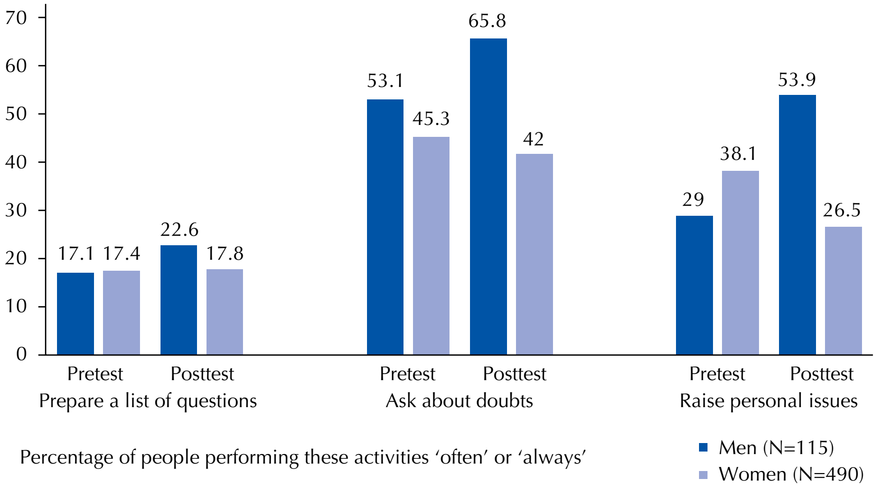
Table 2 – Level of trust and use of health services – Andalusia, Spain, 2013-2015.

Variables (N)	Pretest Media ± SD	Difference (Pretest-Posttest) ± SD
No. of visits to PC (611)	4.06 ± 2.05	0.90 ± 2.26*
Men (115)	3.52 ± 1.84*	0.81 ± 2.13*
Women (496)	4.18 ± 2.07*	0.93 ± 2.31*
Diabetes (150)	3.45 ± 2.14*	0.82 ± 2.45*
Fibromyalgia (413)	4.29 ± 2.04*	0.93 ± 2.22*
Heart failure (48)	3.94 ± 1.21*	0.83 ± 2.03*
No. of visits to the ER (611)	2.56 ± 2.34	0.93 ± 2.55*
Men (115)	2.53 ± 2.43	1.05 ± 2.60*
Women (496)	2.57 ± 2.37	0.86 ± 2.48*
Diabetes (150)	3.01 ± 2.88*	1.40 ± 3.21*
Fibromyalgia (413)	2.42 ± 2.22*	0.77 ± 2.33*
Heart failure (48)	2.40 ± 1.83*	0.87 ± 1.77*
No. of hospital admissions (611)	2.25 ± 2.51	1.04 ± 2.73*
Men (115)	2.62 ± 2.66	1.35 ± 2.79*
Women (496)	2.17 ± 2.47	0.98 ± 2.66*
Diabetes (150)	3.37 ± 3.24*	1.97 ± 3.67*
Fibromyalgia (413)	1.88 ± 2.20*	0.72 ± 2.34*
Heart failure (48)	2.06 ± 1.63*	1.00 ± 1.65*
Level of trust in PC staff (103)**	7.31 ± 2.12	-0.44 ± 2.53
Men (40)	7.45 ± 1.64	0.02 ± 2.37
Women (63)	7.22 ± 2.32	-0.75 ± 2.60*
Diabetes (99)	6.11 ± 1.96*	-1.22 ± 2.81*
Fibromyalgia (49)	7.29 ± 2.30	-0.39 ± 2.57
Heart failure (45)	7.58 ± 1.88	-0.36 ± 2.46
Level of trust in HC staff (103)**	6.99 ± 2.17	-0.65 ± 1.97*
Men (40)	7.75 ± 1.73*	-0.58 ± 1.76*
Women (41)	6.24 ± 2.36*	-0.73 ± 2.16*
Diabetes (89)	6.38 ± 2.06*	-1.88 ± 1.55
Fibromyalgia (27)	5.74 ± 2.03*	-0.41 ± 2.50
Heart failure (46)	7.83 ± 1.90*	-0.59 ± 1.61

Source: research data.

* Statistically significant differences (Anova test for comparison of means, $p<0.05$)

**Negative values of the pretest-posttest difference indicate an increase in the level of trust in the posttest.



Source: research data (p< 0.05 McNemar's test).

Figure 1 – Communication with health professionals: pretest and posttest – Andalusia, Spain, 2013-2015.

DISCUSSION

The training strategy for people with chronic diseases had a positive impact on the use of health services. It increased the trust in primary care and hospital care, and reduced the number of visits and admissions in health centers, showing the association between patients' greater level of trust in their health professionals with less use of health services. Training had a greater impact on those variables and in patients with worse results in the pretest. It improved the data of diabetes patients, especially increased female patients' level of trust, and was highly effective in reducing visits to ER and hospital admission among men.

The main limitations of the study are the low percentage of participation and the loss of data caused mainly by the procedure of telephone data collection performed in two moments, before training and six months after it. However, as the study population was wide, it was possible to obtain statistically significant results that could be generalized and compared with other populations.

Based on the results obtained in the pretest, there were significant differences regarding a worse self-perception of health among women and the total number of fibromyalgia patients. This is not surprising, since in general, women report worse health status(17), and fibromyalgia patients often perceive their disease as a state of permanent deterioration compared to other chronic diseases(19).

Another consistent result with the available literature is the minimal worsening of health self-perception in the posttest, an issue not linked to the training strategy, but to the course of chronic diseases(9). At this point, it is noteworthy that in spite of patients' poorer perception of their health, they have reduced the number of medical visits. The training affected the frequency of visits to PC and ER, which declined more sharply among groups with greater use in the pretest, namely women with fibromyalgia in PC and diabetes patients in the ER. These data could indicate the adequacy of the training strategy to the needs of the most vulnerable groups, and reassured the *Escuela de Pacientes* about the effectiveness of health education for the reduction in use of health services(12-13).

Coinciding the pretest data with the average of one medical visit/month registered in the international scope(9), the results of the *Escuela de Pacientes* demonstrated greater impact of training in the number of consultations, with an approximate 25% decrease. This represents an improve of results observed in similar investigations, which placed the average decrease around 10% in PC and ER(11,20-21). On the other hand, in our study the hyper-frequency of use of hospital services before the training is remarkable, with a high number of ER visits, as well as of hospital admissions (higher than two in the pretest) with varying average of between 0.2(9) and 1 in others contexts(11). These data is precisely where the training strategy seems to be more important by halving the number of visits to the ER and hospital admissions in the posttest, especially in the case of diabetes patients, which is above values found in other studies(20).

Training in self-management of the disease has a positive impact on the quality of the relationship with health professionals(3), and in our study it was efficient for the consolidation of trust of people with chronic diseases in their professionals. In general, there was a good level of trust (about 7 points) of patients in their health professionals, highlighting an average close to 8 points among people with heart failure.

The pretest results highlighted a reduced level of trust of people with diabetes in PC professionals according to the level of care, which could be related to the multidisciplinary assistance and the inter-level coordination in diabetes care; 72% of diabetes patients are treated in PC consultations, while 40% are referred to hospital care, mainly due to low glycemic control or complications(22). The referral may be interpreted as a failure of PC assistance and generate a feeling of disenchantment and loss of trust among patients. Another possible explanation might indicate that patients' expectations regarding their social and emotional needs are not always fulfilled in PC consultations, where health workers often have difficulty defining roles and responsibilities and addressing the emotional aspects of the illness(22).

On the other hand, patients with fibromyalgia in ER were those who reported the lowest levels of trust. This could be explained by the long care path usually followed by these patients both in the diagnosis and treatment of their disease, and the poor understanding they perceive in the area of care, both in Spain and internationally(23).

An interesting aspect was the differential impact by sex that training had on the previous preparation and communication with health professionals during consultations. Although before training there were many similarities in the behavior of men and women, after training, men were the ones who strengthened their active role in the relationship with their health professionals, asking and raising more personal questions related to the disease. Given this result, it would be necessary to investigate patients' discourses through qualitative methodologies that would help to know their opinions and positions in depth.

Finally, this study showed an indirectly proportional relationship between the level of trust in health professionals and the use of health services. Although the correlation study suggested a slight relationship between these variables, it was statistically significant. Therefore, training improved the trust and relationship with health professionals, which, at the same time, contributed to reduce the frequency of use of health consultations.

CONCLUSION

The study revealed the positive impact of the training strategy of the *Escuela de Pacientes* on the use of health services and the trust of people with chronic diseases in their health professionals. There was a differential incidence of the training program according to sex and type of disease without significant differences in relation to other sociodemographic variables, and a greater impact of training in the groups with worse results in the pretest. Based on these results, are made the following recommendations: to deepen the knowledge on specific needs of people with different diseases in order to adapt the training contents to their expectations; to promote activation strategies for patients with chronic diseases for improvement of their optimal self-management; to propose training interventions for health professionals on relational and communication skills for improvement of their relationship with patients who are active and experts in their illness; to design dissemination and awareness-raising measures focused on health administration and citizenship for a greater promotion of self-care training activities aimed at patients with chronic diseases.

RESUMEN

Objetivo: Evaluar el impacto de la estrategia formativa de la Escuela de Pacientes en el uso de servicios sanitarios entre las personas con enfermedades crónicas. **Método:** Diseño cuantitativo de evaluación pretest y postest con una población de 3350 pacientes crónicos de la Escuela de Pacientes (Andalucía, 2013-2015). Se empleó un cuestionario adaptado de la Universidad de Stanford, que midió: salud autopercibida, número de visitas médicas y nivel de confianza y comunicación con el personal sanitario. Se realizó estudio descriptivo y bivariante, estudio de correlación y análisis de ganancias netas pretest/postest. **Resultados:** Participaron 964 pacientes (28,8% de la población): el 18,8% hombres, edad media 56 años. La formación aumentó la confianza en el personal de Atención Primaria (AP) y Atención Hospitalaria (AH) (0,44 y 0,65 puntos), descendieron las visitas médicas en un 25% y los ingresos hospitalarios en un 51%, con diferencias estadísticamente significativas por sexo y enfermedad. El índice de correlación entre confianza con profesionales y uso de servicios sanitarios fue de -0,215. **Conclusión:** La estrategia formativa tuvo un impacto positivo en el uso de servicios sanitarios y confianza con personal sanitario, detectándose áreas de mejora a partir de las cuales se establecen recomendaciones.

DESCRIPTORES

Enfermedad Crónica; Educación en Salud; Participación del Paciente; Autocuidado; Servicios de Salud.

RESUMO

Objetivo: Avaliar o impacto da formação da Escola de Pacientes entre iguais sobre a utilização de serviços sanitários das pessoas com doenças crônicas. **Método:** Desenho quantitativo da avaliação pré-teste e pós-teste com uma população de 3.350 pacientes da Escola de Pacientes (Andaluzia, 2013-2015). Foi usado um questionário adaptado da Universidade de Stanford, que mediu: saúde autopercebida, visitas médicas, nível de confiança e comunicação com o pessoal sanitário. A análise estatística incluiu estudo estatístico descritivo e bivariado, estudo de correlação e análise de ganhos líquidos pré-teste/pós-teste . **Resultados:** Participaram 964 pacientes (28,8% da população do estudo), 18,8% homens, idade média de 56 anos. Depois da formação, a confiança no pessoal de Atenção Primária (AP) e Atenção Hospitalar (AH) aumentou (0,44 e 0,65 pontos, respectivamente), as visitas médicas decresceram em 25% e as entradas hospitalares em 51%, com diferenças estatisticamente significativas por sexo e doença. O índice de correlação entre confiança nos profissionais e utilização de serviços de saúde foi de -0,215. **Conclusão:** A estratégia formativa teve um impacto positivo na utilização dos serviços de saúde e na confiança no pessoal de saúde, detectando-se áreas de melhoria a partir das quais se estabelecem recomendações.

DESCRITORES

Doença Crônica; Educação em Saúde; Participação do Paciente; Autocuidado; Serviços de Saúde.

REFERENCES

1. Bandura A. Social cognitive theory: an agentic perspective. Annu Rev Psychol. 2001;52:1-26.
2. Debussche X, Collin F, Fianu A, Balcou-Debussche M, Fouet-Rosiers I, Koleck M, et al. Structured self-management education maintained over two years in insufficiently controlled type 2 diabetes patients : the ERMIES randomised trial in Reunion Island. Cardiovasc Diabetol. 2012;11:91. DOI: 10.1186/1475-2840-11-91
3. Haas L, Maryniuk M, Beck J, Cox CE, Duker P, Edwards L, et al. National standards for diabetes self-management education and support. Diabetes Educ. 2012;38(5):619-29.
4. Lockhart E, Foreman J, Mase R, Heisler M. Heart failure patients' experiences of a self-management peer support program: a qualitative study. Heart Lung. 2014;43(4):292-8. DOI: 10.1016/j.hrtlng.2014.04.008.
5. Stenberg U, Haaland-Øverby M, Fredriksen K, Westermann KF, Kvisvik T. A scoping review of the literature on benefits and challenges of participating in patient education programs aimed at promoting self-management for people living with chronic illness. Patient Educ. Couns. 2016;99(11):1759-71. DOI: 10.1016/j.pec.2016.07.027
6. Heisler M, Halasyamani L, Cowen ME, David MD, Resnicow K, Strawderman RL, et al. Randomized controlled effective- ness trial of reciprocal peer support in heart failure. Circ Heart Fail. 2013;6(2):246-53. DOI: 10.1161/CIRCHEARTFAILURE.112.000147
7. Danet A, Prieto-Rodríguez MA, Valcárcel-Cabrera MC, March-Cerdà JC. Evaluación de una estrategia formativa entre iguales en fibromialgia: un análisis de género. Aquichan [Internet]. 2016[citado 2017 Jun 1];16(3):296-312.Disponible en: http://www.scielo.org.co/pdf/aqui/v16n3/v16n3a03.pdf
8. Jonkman NH, Schuurmans MJ, Groenwold RHH, Hoes AW, Trappenburg JCA. Identifying components of self-management interventions that improve health-related quality of life in chronically ill patients: systematic review and meta-regression analysis. Patient Educ Couns. 2016;99(7):1087-98. DOI: 10.1016/j.pec.2016.01.022
9. Lorig KR, Ritter P, Stewart AL, Sovel DS, Brown BW, Bandura A, et al. Chronic disease self-management program: 2-year health status and health care utilization outcomes. Med Care. 2001;39(11):1217-23.
10. Ahs S, Basu R, Smith ML, Jiang L, Lorig K, Whitelaw N, Ory MG. The impact of chronic disease selg-management programs: healthcare savings through a community-based intervention. BMC Public Health. 2013;13:1141. DOI: 10.1186/1471-2458-13-1141
11. Swerissen H, Belfrage J, Weeks A, Jordan L, Walker C, Furler J, et al. A randomised control trial of a self- management program for people with a chronic illness from Vietnamese, Chinese, Italian and Greek backgrounds. Patient Educ Couns. 2006;64(1-3):360-8. DOI: 10.1016/j.pec.2006.04.003
12. Bodenheimer T, Lorig K, Holman H, Grumbach K. Patient self-management of chronic disease in primary care. JAMA. 2002;288(19):2469-75.
13. Bosch Romero E, Sáenz Moya N, Valls Esteve M, Viñolas Valer S. Estudio de la calidad de vida en pacientes con fibromialgia: impacto de un programa de educación sanitaria. Aten Primaria. 2002;30(1):16-21.
14. Du S, Yuan C. Evaluation of patient self-management outcomes in health care: a systematic review. Int Nurs Rev. 2010;57(2):159-67. DOI:10.1111/j.1466-7657.2009.00794.x
15. Piette JD, Schillinger D, Potter MB, Heisler M. Dimensions of patient-provider communication and diabetes self-care in an ethnically diverse population. J Gen Intern Med [Internet]. 2003 [cited 2017 Feb 10];18(8):624-33. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1494904/
16. Ritter PL, Lorig K. The English and Spanish Self-Efficacy to Manage Chronic Disease Scale measures were validated using multiple studies. J Clin Epidemiol. 2014;67(11):1265-73. DOI: 10.1016/j.jclinepi.2014.06.009
17. Connor U, Antón M, Goering E, Lauten K, Hayat A, Roach P, et al. Listening to patients' voices: linguistic indicators related to diabetes self-management. Commun Med. 2013;9(1):1-12.
18. España. Ministerio de Sanidad; Servicios Sociales e Igualdad Encuesta Nacional de Salud 2011/2012 [Internet]. Madrid; 2011 [citado 2017 Feb. 10] Disponible en: http://www.msssi.gob.es/estadEstudios/estadisticas/encuestaNacional/encuesta2011.htm
19. Eilertsen G, Ormstad H, Kirkevold M, Mengshoel AM, Soderberg S, Olsson M. Similarities and differences in the experience of fatigue among people living with fibromyalgia, multiple sclerosis, ankylosing spondylitis and stroke. J Clin Nurs. 2015;24(13-14):2023-34. DOI: 10.1111/jocn.12774
20. Lorig K, Ritter PL, Villa F, Piette JD. Spanish diabetes self-management with and without automated telephone reinforcement. Diabetes Care. 2008;31(3):408-14. DOI:10.2337/dc07-1313
21. Gómez-Huelgas R, Artola Menéndez S, Menéndez Torre E. Análisis del proceso asistencial de los pacientes con diabetes mellitus tipo 2 y comorbilidad asociada atendidos en el Sistema Nacional de Salud en España: una perspectiva de los profesionales médicos. Estudio IMAGINE. Rev Clin Esp [Internet]. 2016 [citado 2017 feb. 10];216(3):113-20. Disponible en: http://www.sciencedirect.com/science/article/pii/S0014256515002830
22. Rushforth B, McCrorie C, Glidewell L, Midqley E, Foy R. Barriers to effective management of type 2 diabetes in primary care: qualitative systematic review. Br J Gen Pract [Internet]. 2016 [cited 2017 Apr 20];66(643):114-27. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4723210/
23. Colmenares-Roa T, Huerta-Sil G, Infante-Castañeda C, Lino-Pérez L, Alvarez-Hernández E, Peláez-Ballestas I. Doctor-patient relationship between individuals with fibromyalgia and rheumatologists in public and private health care in Mexico. Qual Health Res. 2016;26(12):1674-88. DOI: 10.1177/1049732315588742

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