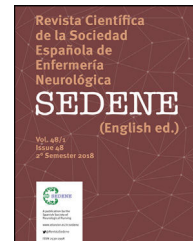




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BRIEF ARTICLE

Development and evaluation of the usefulness of an infographic on reproduction for multiple sclerosis patients[☆]

Marina Martínez Moliner^{a,*}, Cristina Carrasco Carbó^a, Eva Gracia Aragües^a, Ana Romeo Laguarda^a, Berta Sebastián Torres^b, Sebastián García Rubio^b

^a Hospital Universitario Miguel Servet, Zaragoza, Spain

^b Unidad de Esclerosis Múltiple, Hospital Universitario Miguel Servet, Zaragoza, Spain

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KEYWORDS

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Abstract

Introduction: Recurrent-remittent relapsing multiple sclerosis (RRMS) often affects fertile women and family planning (FP) is an important issue, where patients continue to have doubts. Infographic is a visual tool for transmitting messages that can be useful in health education.

Objectives: Prepare an infographic on RRMS and reproduction and evaluate its usefulness in relation to obtaining knowledge in women of childbearing age affected by this disease and who are cared for in our center.

Method: We carry out a questionnaire for the selection of 5 topics to 10 patients affected by RRMS and between 18 and 35 years old and an infographic is developed with the most voted. We then delivered a pre- and post-visualization questionnaire of the infographic to 10 other patients, which values the subjective perception of graduated knowledge in good/regular/bad and makes 7 yes/no answer questions.

Results: The infographic reports on: inheritance, treatments for MS and pregnancy, pregnancy and evolution of MS, pregnancy planning and postpartum. Mean of pre-infography hits was 4.4 and post-infography was 5.6 (increase 17%). 60% improved their pointing after viewing the infographic, 30% kept it and 10% made it worse. Subjective perception of pre-infography knowledge was 33.3% “good” and 66.6% regular, and post-infography changed to 77.7% “good” and 22.2% “regular”. None of them valued it as “bad” and one did not answer this question.

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* Corresponding author.

E-mail address: mmmzgz93@hotmail.com (M. Martínez Moliner).

Conclusions and/or discussion: There are certain topics of greater interest within PF in RRMS patients that can be presented through an infographic, which seems useful in nursing work in health education.

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PALABRAS CLAVE

Esclerosis múltiple;
Planificación familiar;
Reproducción;
Infografía;
Educación sanitaria;
Enfermería

Elaboración y valoración de utilidad de una infografía sobre la reproducción para pacientes con esclerosis múltiple

Resumen

Introducción: La esclerosis múltiple recurrente-remitente (EMRR) suele afectar a mujeres en edad fértil y la planificación familiar (PF) es un tema importante, donde las pacientes siguen albergando dudas. La infografía es una herramienta visual para transmitir mensajes que puede ser útil en la educación sanitaria.

Objetivos: Elaborar una infografía sobre EMRR y reproducción y evaluar su utilidad en relación a la obtención de conocimientos en mujeres en edad fértil afectadas por esta enfermedad y que son atendidas en nuestro centro.

Método: Se elaboró una infografía con 5 temas sobre EMRR y reproducción a partir de un cuestionario entregado a 10 mujeres de entre 18 y 35 años afectadas por esta enfermedad. Posteriormente se evaluó el grado de conocimiento pre y post visualización de la infografía en otras 10 pacientes.

Resultados: La infografía informa sobre: herencia, tratamientos para EM y embarazo, embarazo y evolución de EM, planificación del embarazo y postparto. La media de aciertos preinfografía fue de 4.4 y postinfografía de 5.6 (incremento 17%). El 60% mejoró su puntuación tras visualizar la infografía, 30% la mantuvo y 10% la empeoró. La percepción subjetiva del conocimiento preinfografía fue 33.3% "bueno" y 66.6% regular, y postinfografía cambió a 77.7% "bueno" y 22.2% "regular". Ninguna lo valoró como "malo" y una no contestó esta pregunta.

Conclusiones y/o discusión: Existen ciertos temas de mayor interés dentro de la PF en pacientes con EMRR que pueden ser presentados a través de una infografía, pareciendo ésta útil en la labor de enfermería en educación sanitaria.

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Introduction

Multiple sclerosis (MS) is calculated to affect about 45,000 people in Spain.¹ This disease clearly predominantly affects women, as 70%–75% of cases of recurring-remitting MS (RRMS) patients are women. Onset in 90% of patients occurs between the ages of 15 and 50 years old.² MS will therefore affect a large number of women of fertile age, so that family planning (FP) will be highly important for these patients. Current knowledge shows that women with MS have the same reproductive possibilities as those who are healthy, although their pregnancy should be planned according to their personal situation and that of their disease.³ Some studies indicate that women with MS should be informed more fully, to reduce the negative impact of their diagnosis on FP. Otherwise, their situation may lead to fewer pregnancies than they wish, due to the diagnosis and erroneous ideas about pregnancy and how it affects the course of the disease.⁴

The work of nurses who care for patients with MS also involves health education. Educational books are available to answer patient questions about FP,³ although copies

are sometimes limited in number or complicated to read. An infographic format may therefore be of use here. An infographic consists of the visual representation of written information, to summarise it or explain it figuratively, and this format was first used in journalism.⁵ Infographics help to communicate public health messages by using image, concentrating and spreading information efficiently. A good example of its use is its widespread employment by the WHO.⁶ This paper describes the preparation of an infographic about RRMS and reproduction, and evaluates its usefulness in communicating knowledge to women of fertile age who are affected by this disease, and who are treated in our hospital.

Method

A sample of 10 patients were selected by convenience in the Multiple Sclerosis Unit during a one-month period. They were all diagnosed RRMS and were aged from 18 to 35 years old (fertile age) and having been informed volun-

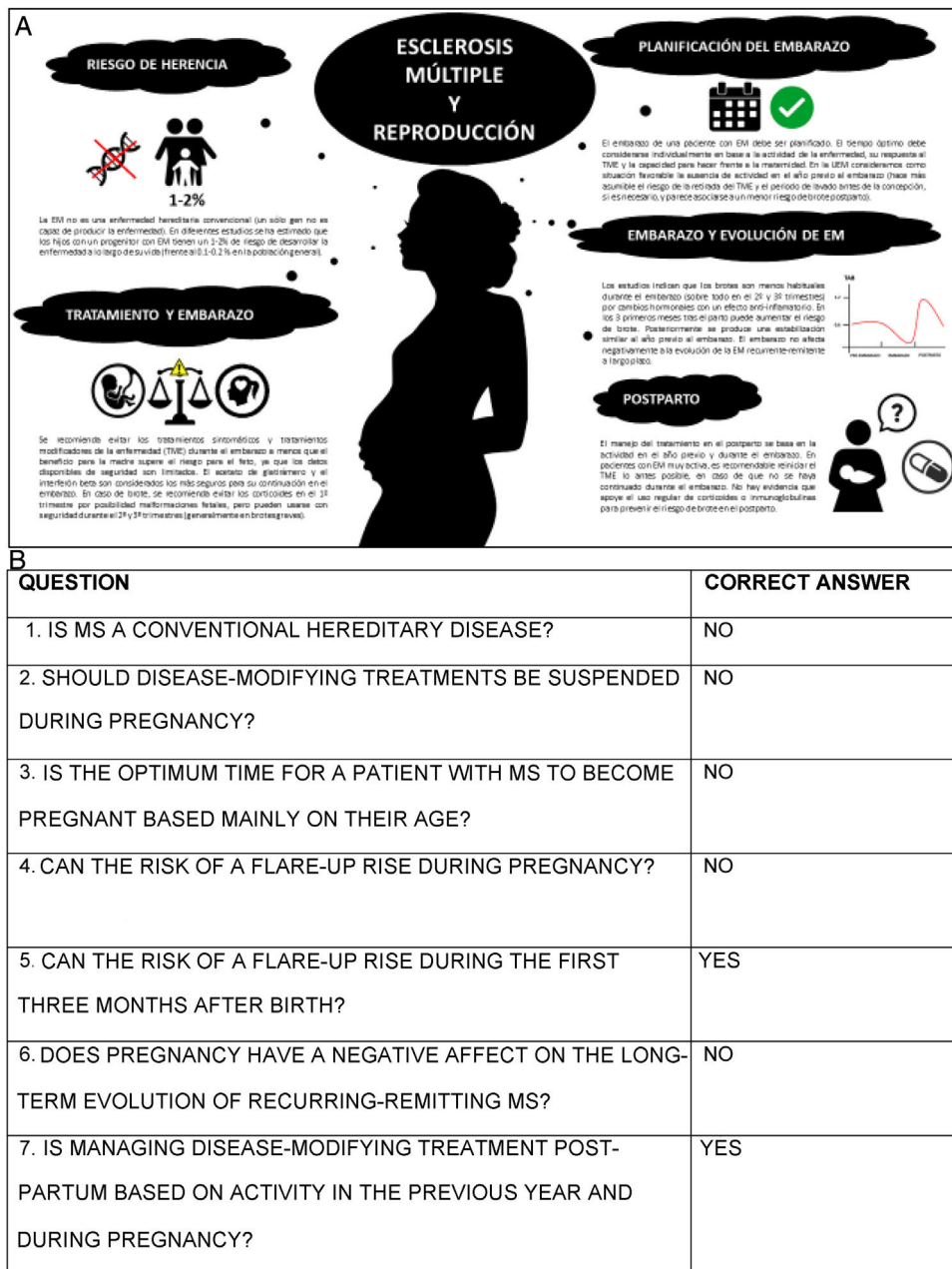


Figure 1 A. Infographic with information about the subjects which received the most votes. B. The 7 questions with their correct answer.

tarily accepted to take part in the survey. The inclusion criteria were sex, age and the diagnosis. Patients who did not fulfil these criteria were excluded. The respondents were given a list of 10 items in connection with MS and pregnancy (contraception, heredity, fertility, planning pregnancy, pregnancy and the evolution of MS, MS treatments and pregnancy, nuclear magnetic resonance and pregnancy, birth, post-partum and breastfeeding). They had to select the 5 most relevant subjects for them based on the question: "Which of these subjects most interests you in connection with the pregnancy process?" The 10 items had been selected on the basis of the bibliography. An infographic was prepared (Fig. 1A) with the 5 subjects that had been selected the most often, based on the latest bibliography.⁷

Subsequently another 10 patients were selected by convenience sampling in the Multiple Sclerosis Unit using the same inclusion criteria. Patients who did not fulfil these criteria were excluded. They were given a questionnaire (Fig. 1B) before they were shown the infographic, to assess their own level of knowledge on the subjects shown, classifying it as good/normal/poor. They were asked 7 questions on heredity, MS treatments and pregnancy, pregnancy and the evolution of MS, planning for pregnancy and the post-partum period, to be answered either yes or no. After they had seen the infographic they were given time to assimilate the information before the same questionnaire was applied for a second time, to be completed in writing to evaluate the degree to which they had absorbed the information.

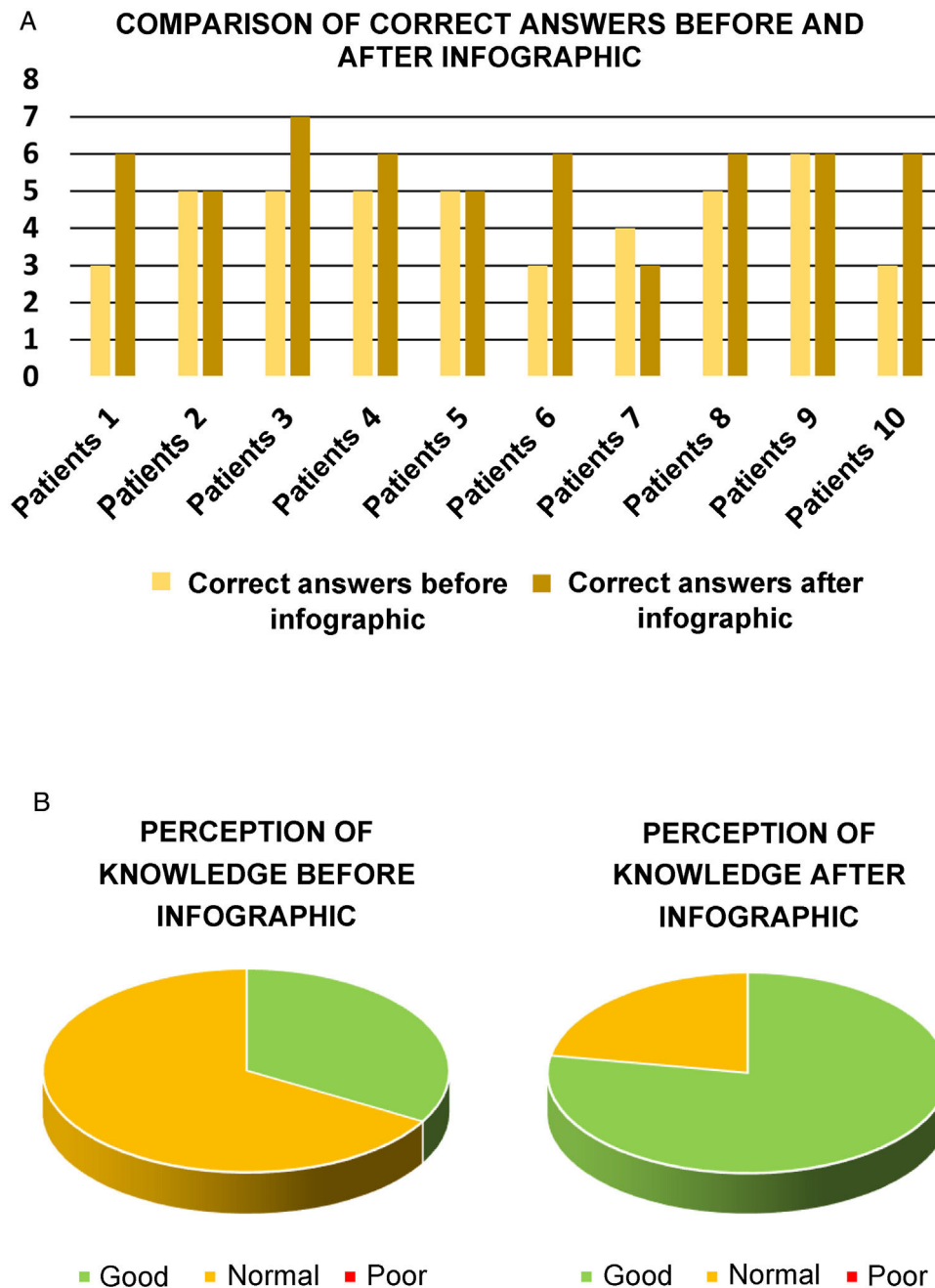


Figure 2 A. Comparison of correct answers before and after the infographic. B. Comparison of subjective perceptions of knowledge before and after the infographic.

The participants were informed that the results of this work would be used to prepare a paper on improving the quality of care. Their anonymity was guaranteed, and they gave their verbal consent.

Results

The subjects which received the most votes were: heredity (20%), MS treatments and pregnancy (15%), pregnancy and the evolution of MS (13%), planning pregnancy (11%) and postpartum (11%). The infographic with information on the 5 subjects was shown in poster format (Fig. 1A).

The average number of correct answers prior to the infographic was 4.4 ± 1.15 , while after the infographic the corresponding figure was 5.6 ± 1.15 . This means there was an increase of approximately 21% (1.2) in the correct answer per participant. 60% (6) of the respondents improved their score after seeing the infographic, while 30% (3) scored the same as before and only one scored less (Fig. 2A). 33.3% of the patients described their level of subjective knowledge prior to the infographic as "good", while 66.6% described it as "normal". After the infographic 77.7% described their knowledge as "good", and 22.2% described it as "normal"; no patient described their level of knowledge

as “poor”, and one patient did not answer this question (Fig. 2B).

Conclusions and discussion

The diagnosis of MS influences FP and patients’ decision whether to have children. Few studies have covered the concerns of patients with MS who are of fertile age,⁸⁻¹⁰ especially in Europe.⁴

The subjects which most interested our patients coincide in some cases with those mentioned in other previous works.⁸ They mainly centre on “planning pregnancy” and “postpartum”, and the lower level of interest in subjects such as “birth” or “breastfeeding” stands out. The increasing availability of disease-modifying therapies is reflected in the concern of our sample about “MS treatments and pregnancy.” This did not concern patients in the early years of this century so much, probably because fewer disease-modifying treatments were available then.

This situation shows how important it is to improve health education. It agrees with the results of other works which emphasise the need to supply more information on the effect of MS on pregnancy, and how pregnancy affects the evolution of MS.⁹ Although there is now a large amount of scientific information about the disease, patients still seem to feel many doubts about maternity and how it is affected by MS. This is probably due to the difficulty of finding reliable information in the rising tide of information and the persistence of falsities in the main digital sources (blogs and social networks, etc.).

Infographics is a widely used technique for spreading health information, which has to be verified and to resolve the doubts of its target audience. Evaluation of its usefulness may help to optimize its use. Although our study has methodological restrictions due to the low number of patients evaluated and the content of the questions, it found an improvement in terms of correct answers regarding theoretical content (approximately 17% over the basal figure). It also found a 44.4% improvement in subjective evaluation by patients (with an increase in the perception that they had a “good” level of knowledge over the basal figure), which we consider to be an outstanding result.

Therefore, and in spite of the said limitations, our results indicate a tendency for this instrument to be both useful and

accepted. These results encourage us to undertake further research in the future on the use of infographics as a tool to improve MS patients’ health education in our nursing work, and more specifically if they wish to have children.

Acknowledgements

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