

Psychoeducational intervention proposal to promote salutogenic lifestyles in patients convalescent from myocardial infarction

María C. García Martín¹✉, MSc; Maribey Arias López², BS; Daimí Alfonso López³, MSc; Ahyní Abeledo López¹, BS; and Patricia Gil Pérez¹, BS

¹ Department of Psychology. Hospital Universitario Celestino Hernández Robau. Santa Clara, Villa Clara, Cuba.

² Department of Assistance and Social Security. Santa Clara, Villa Clara, Cuba.

³ Department of Psychology. Cardiocentro Ernesto Che Guevara. Santa Clara, Villa Clara, Cuba.

Este artículo también está disponible en español

ARTICLE INFORMATION

Received: October 27, 2015
Modified: February 19, 2016
Accepted: March 22, 2016

Competing interests

The authors declare no competing interests

Acronyms

AMI: acute myocardial infarction
PIP: psychoeducational intervention proposal

On-Line Versions:
Spanish - English

✉ MC García Martín
Hospital Universitario Celestino
Hernández Robau.
Calle Cuba Nº 564, e/ Barcelona y
Hospital. Santa Clara 50200. Villa
Clara, Cuba. E-mail address:
revista.corsalud@gmail.com

ABSTRACT

Introduction: Lifestyle is the dynamic process that implies the subject's behavior in his social context. It has an active character, is regulated by the personality, and marks the variety of healthy and insane behaviors determining the individual's health level.

Objective: To identify the psychoeducational needs of patients convalescent from myocardial infarction and design an intervention in this field to promote salutogenic lifestyles that favor compensation from their cardiovascular health status.

Method: Descriptive, cross-sectional observational study with an intervention strategy design. The sample consisted of 54 patients who attended the Cardiology consultation at Celestino Hernández Robau Hospital in Santa Clara, Cuba. Main psychoeducational needs were identified through psychological instruments application, and it was designed an intervention proposal that was evaluated by experts: 11 cardiology specialists.

Results: Patients who were adequately aware of decompensation symptoms (81.5%) and information source (88.9%), but had inadequate knowledge of their risk factors (70.4%), their treatment (74.1%) and the consequences of their disease (70.4%) predominated; in addition, 44.5% reported having poor physical conditions, inadequate dietary habits (37.1%), toxic habits (29.6%) and poor emotional status (29.6%). The majority (59.3%) considered their lifestyle as unhealthy and only 18.5% were compensated from their cardiovascular disease.

Conclusions: After the psychoeducational needs diagnosis, the intervention proposal was prepared and was satisfactorily evaluated by experts.

Key words: Myocardial infarction, Convalescence, Clinical Psychology, Needs assessment, Life style, Behavioral Medicine

Propuesta de intervención psicoeducativa para fomentar estilos de vida salutogénicos en pacientes convalecientes de un infarto de miocardio

RESUMEN

Introducción: El estilo de vida es el proceso dinámico que implica el comportamiento del sujeto en su contexto social, tiene carácter activo, está regulado por la personalidad y marca la variedad de conductas sanas e insanas que determinan el

grado de salud del individuo.

Objetivo: *Identificar las necesidades psicoeducativas de los pacientes convalescentes de un infarto de miocardio y diseñar una intervención en este campo para fomentar estilos de vida salutogénicos que favorezcan la compensación de su estado de salud cardiovascular.*

Método: *Estudio observacional descriptivo, de corte transversal, con diseño de una estrategia de intervención. La muestra estuvo conformada por 54 pacientes que asistieron a la consulta de Cardiología del Hospital Celestino Hernández Robau de Santa Clara, Cuba. Se identificaron las principales necesidades psicoeducativas mediante la aplicación de instrumentos psicológicos y se diseñó una propuesta de intervención que fue evaluada por criterio de expertos: 11 especialistas en Cardiología.*

Resultados: *Predominaron los pacientes que conocían adecuadamente los síntomas de descompensación (81,5%) y la fuente de información (88,9%), pero tenían un conocimiento inadecuado de sus factores de riesgo (70,4%), su tratamiento (74,1%) y las consecuencias de su enfermedad (70,4%); además, un 44,5% reconoció tener malas condiciones físicas, hábitos dietéticos inadecuados (37,1%), hábitos tóxicos (29,6%) y mal estado emocional (29,6%). La mayoría (59,3%) considera que su estilo de vida es poco saludable y solo el 18,5% se encontraba compensado de su enfermedad cardiovascular.*

Conclusiones: *Tras el diagnóstico de las necesidades psicoeducativas se confeccionó una propuesta de intervención que fue valorada satisfactoriamente por criterio de expertos.*

Palabras clave: *Infarto de miocardio, Convalecencia, Psicología clínica, Evaluación de necesidades, Estilo de vida, Medicina de la conducta*

INTRODUCTION

Prevention and intervention in chronic diseases are becoming increasingly important nowadays, as their impact is steadily increasing in many developed and underdeveloped countries¹.

Coronary artery disease is a topic of constant discussion because of its medical, economic and social importance, since it is one of the most serious problems in the health field, as it is the leading cause of death in different latitudes^{2,4}.

According to World Health Organization (WHO) reports^{5,6}, more than 75% of cardiovascular deaths are caused by ischemic heart disease, that is increasingly occurring in early stages of life, precisely at times when society most need the individual since he is old enough to enjoy his full competence and productivity. However, in many cases it generates a high disability degree. Added to this is the increasing negative repercussion of the associated risk factors present in nowadays society such as: sedentarism, smoking, obesity, stress, poor nutritional habits, inadequate lifestyles, among others, which foster cardiovascular disease worsening; so, their prevention and control, including lifestyle change, is of paramount importance^{2,7-9}.

The National Public Health System has created a prevention and rehabilitation program aimed at reducing mortality rates for this cause, and has insisted on educating patients in modifying their lifestyles to improve their physical and psychological capacity, as well as helping their general health status compensation^{10,12}.

In Cuba, ischemic heart disease, including acute myocardial infarction (AMI) proved to be the leading cause of death until 2012, when malignant tumors reached that place. This has similarly developed in the province of Villa Clara where it accounts for 73.3% of heart disease mortality^{13,14}.

For these reasons, Psychology is increasingly concerned about people's whole health, emphasizing on those suffering from cardiovascular diseases, as relevance of psychological factors regarding origin, maintenance, relapse and mortality by this type of events is undeniable. Besides, most of them can be prevented or changed¹⁵⁻¹⁷.

A series of psychological responses come together in patients with heart disease, aggravating symptoms and leading to alterations in their psychic dimension, which imply inability feelings and pre-morbid social roles rejection (work, family, personal) because of disease-imposed physical and sub-

jective limitations which immediately changes the patients' social development and presupposes considerable lifestyle changes. Overcoming this depends firstly on the state of health these patients have, as well as their level of knowledge about the disease.

So this research's objectives consisted in identifying psychoeducational needs in patients convalescent from myocardial infarction and design an intervention proposal to promote salutogenic lifestyles that make up for their cardiovascular health state.

METHOD

A descriptive investigation was carried out, divided into three stages, in the period between September 2013 and June 2014, to diagnose the psychoeducational needs of the patients convalescent from myocardial infarction, and design a later intervention in this area.

Stage 1

The study population consisted of all AMI patients who attended the Cardiology consultation at Celestino Hernández Robau Hospital in Santa Clara, Cuba. The sample, obtained through a non-probabilistic (intentional) sampling, was made up of 54 patients who met the selection criteria established for the investigation.

Patients' inclusion criteria

- To be in the second phase of cardiovascular rehabilitation (from discharge to three months after AMI, which is the convalescence stage).
- Ages between 45 and 65 years.
- Medical treatment and follow-up in specialized cardiology consultation.
- Neither absence nor deficit of psychopathological alterations at the psychotic level.

At this stage, the selected patients' psychoeducational needs were diagnosed, related to their knowledge and salutogenic behaviors. For this purpose, various information gathering techniques (survey and interview) were applied in different work sessions. In addition, they were given a document so the attending physician would inform us of their health state.

Stage 2

With the results obtained in the first stage, a work of

analysis, evaluation, selection and determination of the elements to be taken into account for the psychoeducational intervention proposal (PIP) design was carried out, so it would help to promote salutogenic lifestyles in AMI convalescent patients, making up for their cardiovascular health.

Objectives and functions were defined, considering available material resources, coherence with social reality and the purpose of solving the group's common problems, interests and concerns about their health. Thus, four topics were made to be distributed in nine working sessions, with a weekly meeting frequency and one and a half hours duration each.

Once the PIP was made, which will be addressed in further publications (**Appendix**), it was taken under professional opinion.

Stage 3

To evaluate PIP, eleven cardiology specialists were selected from the hospital where this research was carried out, and from the Cardiocentro Ernesto Che Guevara as well.

Inclusion criteria for consulted specialists

- Having five or more years of professional experience assisting patients with cardiovascular diseases.
- To have a weekly out-of-hospital consultation schedule for assisting these patients.
- To be interested in the subject ensuring their commitment to the research.

PIP's professional assessment was requested anonymously, but they all included their personal facts and provided valuable contributions that, with their experience, were useful to enrich the intervention proposal.

Information compilation

Analysis techniques for official documents were applied to carry out the study, as well as psychological and semi-structured interview to the patient and the specialists consulted, a survey on knowledge of the disease (validated by PROCDEC: Joint Research and Assistance Project of the *Universidad Central Marta Abreu de Las Villas*, the *Universidad de Ciencias Médicas Dr. Serafín Ruiz de Zárate Ruiz*, the *Sectorial Municipal de Salud de Villa Clara* and the City Council from Oviedo, Spain), and the lifestyle study guide published in the book *Psicología y Salud: Complemento al programa de la asignatura*

Psicología Médica I (Psychology and Health: A complementary text to the curriculum for Medical Psychology I)¹⁹.

Variables

- Psychoeducational needs: They are focused on the information and knowledge needs that patients have about behavior towards their illness, in order to advance responsible attitudes related to health²⁰. In this case aimed at favoring salutogenic behaviors, valued by three dimensions: knowledge of healthy lifestyles, knowledge of the disease, and knowledge of the associated risk factors (each evaluated through their indicators).
- Life quality and style: Here we describe the behavior of the different areas that make up the patients' lifestyle, so then it is classified and related to their health state: physical conditions, eating and toxic habits, sexuality, self-care, free time and emotional state; which are classified as good, not so good and poor according to the recommendations of Rodríguez Rodríguez and Herrera Jiménez²⁰. This research applies a psychological care strategy to AMI patients that includes a foldable called *Guía para el cardiópata* (Cardiologist's guide), giving suggestions to control different risk factors that could hinder salutogenic lifestyles.
- Somatic health state: It evaluates the compensation degree for somatic health state referring to the cardiovascular system given by medical criterion and results of those complementary ones that justify it. It was obtained through the document given to the patient to be signed by the doctor, who should mark box 1, 2 or 3, according to the indicators: compensated, partially decompensated and decompensated, respectively.
- Lifestyle: Includes assessment on several aspects: physical conditions, eating, toxic habits, sexuality, self-care, emotional state, and free time activities. It was evaluated through four indicators: healthy, at risk, little unhealthy and unhealthy.
- Sociodemographic variables: Age, sex, marital status, educational level, occupation.

Statistical analysis

Data was stored in a database from the statistical package SPSS (Statisti-

cal Package for Social Sciences), version 11.0 for Windows. They were applied the percentage method, to numerically express the results obtained from the applied techniques, giving a qualitative interpretation to them, and the non-parametric Chi square test was used to determine variables association.

Ethics

Patients and clinicians agreed to take part in the research signing the informed consent model. Data confidentiality was always respected.

RESULTS

The largest number of AMI patients belonged to the age group between 56 and 65 years (59.3%), with male predominance (62.9%), 34 males and 20 females, and from middle level education (40, 74%), many of them with occupations involving intellectual work (office work, professionals).

Stage 1

It was confirmed in the studied sample that a limited knowledge about their disease predominates (**Table 1**), with associated risk behaviors that can be modified, It is noteworthy that only decompensation symptoms (81.5%) and the source of information received (88.9%) were adequately knew, whereas more than 70% of patients had inadequate knowledge of associated risk factors (70.4%), their treatment (74.1%) and their disease consequences (70.4%).

Tabla 2 describes the behavior in the different areas that make up these patients' lifestyle. 44.5% of them admitted having poor physical conditions (sedentary life and overweight), as well as inadequate

Table 1. Patients' degree of knowledge about their disease (n=54). Hospital Universitario Hospital Celestino Hernández Robau. Santa Clara, Villa Clara, Cuba. 2013 – 2014.

Aspects	Adequate		Inadequate	
	Nº	%	Nº	%
Causes of the disease	26	48.1	28	51.9
Associated risk factors	16	29.6	38	70.4
Decompensation symptoms	44	81.5	10	18.5
Treatment indicated	14	25.9	40	74.1
Consequences of the disease	16	29.6	38	70.4
Source of information received	48	88.9	6	11.1

Table 2. General diagnosis by area (n=54).

Areas	Good		Not so good		Poor	
	Nº	%	Nº	%	Nº	%
Physical conditions	12	22.2	18	33.3	24	44.5
Eating habits	12	22.2	22	40.7	20	37.1
Toxic habits	8	14.8	30	55.6	16	29.6
Sexuality	24	44.5	26	48.1	4	7.4
Self-care	14	25.9	40	74.1	0	0.0
Free time	28	51.9	26	48.1	0	0.0
Emotional state	14	25.9	24	44.5	16	29.6

Table 3. General lifestyle diagnosis.

Lifestyle	Nº	%
Healthy	4	7.4
At risk	14	25.9
Little unhealthy	32	59.3
Unhealthy	4	7.4
Total	54	100

Table 4. Health state diagnosis.

Health state	Nº	%
Compensated	10	18.5
Partially decompensated	32	59.3
Decompensated	12	22.2
Total	54	100

dietary habits (37.1%), toxic habits (29.6%) and poor emotional state (29.6%). On the other hand, a high number of patients considered both their sexuality (44.5%) and free time activities (51.9%) as good; but self-care was predominantly considered as not so good (74.1%).

Generally, most of the patients (59.3%) consider they have an unhealthy lifestyle and only 7.4% consider it healthy (**Tabla 3**). **Tabla 4** shows the patient's state of health, according to medical criteria, where partially decompensated ones predomi-

nated (59.3%) and only 18.5% were compensated for their cardiovascular disease. It is noteworthy that the patient view of unhealthy lifestyles corresponded with an equal number of medical diagnoses from a partially decompensated health condition, although should be noted that it was a mathematical coincidence because not all were necessarily corresponding.

Stage 2

With the obtained diagnostic results, PIP (**Appendix**) was designed and structured for different work sessions, aimed to promote salutogenic lifestyles in AMI convalescent patients. Its objective has been to satisfy this type of patients' psychoeducational needs, related to knowledge and salutogenic behaviors that compensate their somatic health state, specially of the cardiovascular system.

Stage 3

Once PIP was drawn up, it was evaluated by 11 professionals who, unanimously (**Tabla 5**), were in agreement with their quality, suitability, relevance, subjects' coherence, objectives fulfillment, and complete proposal evaluation.

DISCUSSION

A healthy lifestyle should not have associated risk factors. In the present case, since patients are diagnosed with a chronic disease (their cardiovascular disease), and because of the results obtained from the applied psychological techniques, it is verified that given the associated risk factors in the studied AMI patients, their lifestyle is diagnosed as unhealthy^{21,22}. In them prevails a partially decompensated state of health, according to the medical criterion and the result of the complementary ones. Comparable results on this topic have been reported by other investigators²³⁻²⁵.

In relation to these associated risk factors, it is evident that patients stick to risk behaviors with frequent withdrawal of the treatment indicated by the physician, as high blood pressure is found in

Table 5. Proposal assessment by professional opinion.

Assesed aspects	Agreed			
	Yes	%	No	%
Quality	11	100	0	0.0
Suitability	11	100	0	0.0
Relevance	11	100	0	0.0
Coherence between topics	11	100	0	0.0
Objectives achievement	11	100	0	0.0
Satisfaction with design	9	81.8	2	18.2
Acceptance of used terms	10	90.9	1	9.1
Comprehensive assessment of the proposal	11	100	0	0.0

most of them, since high blood pressure is the higher-incidence risk factor on the investigated subjects, capable of generating serious cardiovascular complications^{8,26}.

Coinciding with the results of recent research on the subject^{25,27}, there is limited knowledge about the disease and the mechanisms established to achieve appropriate behaviors. The specialists consulted confirm what patients stated and insist on the need of providing adequate direction so they learn how to live with cardiovascular disease and its resulting limitations.

Consistent with this investigation results and taking the above criteria as a reference, where it is confirmed a highly significant association between lifestyle and health state of the infarcted patients^{5,22,27}, obtaining knowledge about the disease that favors salutogenic behaviors related to their lifestyles arises as the main psychoeducational needs of this group of patients. In this sense and in coherence with other authors^{11,12,14,18,26}, the patients refer they need to learn how to control the disease, acquire skills to monitor and act on the psychic symptomatology manifestations related with cardiovascular decompensation, know its associated risk factors, situations that may complicate their overall health and cardiovascular system, in particular; as well as adequately assuming health behaviors and salutogenic lifestyles.

The PIP to promote salutogenic lifestyles in AMI convalescent patients is already designed and accepted by the respective specialists. Group therapy methodology^{1,20} basis was taken into account to design it; now we have to implement it to evaluate

impacts on the target population. That will be our next research objective.

CONCLUSIONS

Psychoeducational needs were identified from data provided by patients and physicians, which allowed designing a PIP aimed at promoting salutogenic lifestyles in AMI convalescent patients. This PIP obtained a satisfactory professional evaluation, who recognized its ideal design and coherence about the topics.

REFERENCES

1. OMS. Diseño y evaluación de programas en salud. Ginebra: OMS; 2010.
2. Vintró IB. Control y prevención de las enfermedades cardiovasculares en el mundo. *Rev Esp Cardiol.* 2004;57:487-94.
3. De la Cuerda RC, Alguacil Diego IM, Alonso Martín JJ, Molero Sánchez A, Miangolarra Page JC. Programas de rehabilitación cardiaca y calidad de vida relacionada con la salud. Situación actual. *Rev Esp Cardiol.* 2012;65:72-9.
4. Cárdenas Álvarez L. Programa de acciones psicoeducativas para la educación de escolares hipertensos ante factores de riesgos de la hipertensión arterial [Tesis] [Internet]. Santa Clara: UCLV; 2011 [citado 6 Mayo 2016]. Disponible en: <http://dspace.uclv.edu.cu/handle/123456789/2121>
5. Pikhart H, Pikhartova J. The relationship between psychosocial risk factors and health outcomes of chronic diseases: a review of the evidence for cancer and cardiovascular diseases. Copenhagen: WHO Regional Office for Europe; 2015.
6. Myers L, Mendis S. Cardiovascular disease research output in WHO priority areas between 2002 and 2011. *J Epidemiol Glob Health.* 2014;4:23-8.
7. Colli M, Mantilla E. Estrés y cardiopatía isquémica. Programa de prevención y de rehabilitación psicossocial en el paciente coronario como parte de la rehabilitación integral. *Rev Cubana Psicol.* 1998;15:105-16.
8. De Backer G, Gohlke H, Graham I, Verschuren M, Albus C, Benlian P, *et al.* Guía europea sobre

- prevención de la enfermedad cardiovascular en la práctica clínica (versión 2012). *Rev Esp Cardiol*. 2012;65:937:e1-66.
9. De Pablo-Zarzosa C, Maroto-Montero JM, Arribas JM. Prevención y rehabilitación de la enfermedad cardiovascular: papel de la asistencia primaria. *Rev Esp Cardiol*. 2011;11(Supl 5):S23-9.
 10. Alonso A, Carcedo C. Pautas de estudio y tratamiento psicológicos. En: Maroto-Montero JM, de Pablo Zarzosa C, eds. *Rehabilitación cardiovascular*. Madrid: Panamericana; 2011. p. 273-89.
 11. Hernández García S, Mustelier Oquendo JA, Prendes Lago E, Rivas Estany E. Fase de convalecencia en la rehabilitación cardíaca. *Protocolo de actuación*. *CorSalud* [Internet]. 2015 [citado 15 Oct 2015];7:60-75. Disponible en: <http://www.revcorsalud.sld.cu/index.php/cors/article/view/14/14>
 12. Hernández García S, Prendes Lago E, Mustelier Oquendo JA, Rivas Estany E. Fase hospitalaria de la rehabilitación cardíaca. *Protocolo para la cirugía cardíaca*. *CorSalud* [Internet]. 2014 [citado 15 Oct 2015];6:246-56. Disponible en: <http://www.corsalud.sld.cu/sumario/2014/v6n3a14/rehab-ccv.html>
 13. Ministerio de Salud Pública, Dirección Nacional de Registros Médicos y Estadísticos de Salud. *Anuario Estadístico de Salud 2011*. La Habana: MINSAP; 2012.
 14. Sánchez Manzanares MG, Moreno-Martínez FL, Aladro Miranda IF, Vega Fleites LF, Ibarra Hernández RS, Nodarse Valdivia JR, et al. Valoración clínica y angiográfica de la reestenosis del stent coronario convencional. *CorSalud* [Internet]. 2014 [citado 15 Oct 2015];6:36-46. Disponible en: <http://www.corsalud.sld.cu/sumario/2014/v6n1a14/reestenosis.html>
 15. De Pablo-Zarzosa C, Torres R, Herrero C. Resultados de los programas de rehabilitación cardíaca sobre la calidad de vida. En: Maroto-Montero JM, De Pablo-Zarzosa C, eds. *Rehabilitación cardiovascular*. Madrid: Panamericana; 2011. p. 485-95.
 16. Fernández-Abascal EG, Díaz Martín D, Domínguez Sánchez FJ. Factores de riesgo e intervenciones psicológicas eficaces en los trastornos cardiovasculares. *Psicothema*. 2003;15:615-30.
 17. Fernández de Bobadilla J, García-Porrero E, Luengo-Fernández E, Casasnovas-Lenguas JA. Actualidades en cardiología preventiva y rehabilitación. *Rev Esp Cardiol*. 2012;65(Supl. 1):S59-64.
 18. Pérez Coronel P. *Rehabilitación cardíaca integral*. La Habana: ECIMED; 2009.
 19. Casals A. *Psicología y Salud. Complemento al Programa de la Asignatura Psicología Médica I*. La Habana: Ciencias Médicas; 2002.
 20. Rodríguez Rodríguez T, Herrera Jiménez LF. *Estrategia de atención psicológica a pacientes con infarto agudo del miocardio en fase hospitalaria* [Tesis] [Internet]. Santa Clara: UCLV; 2007 [citado 20 Oct 2015]. Disponible en: <http://tesis.repo.sld.cu/117/1/RodriguezRodriguezteresa.pdf>
 21. Ordúñez García PO, Cooper RS, Espinosa Brito AD, Iraola Ferrer MD, Bernal Muñoz JL, La Rosa Linares Y. *Enfermedades cardiovasculares en Cuba: determinantes para una epidemia y desafíos para la prevención y control*. *Rev Cubana Salud Pública* [Internet]. 2005 [citado 20 Oct 2015];31:270-84. Disponible en: <http://scielo.sld.cu/pdf/rcsp/v31n4/spu02405.pdf>
 22. Baudet M, Daugareil C, Ferrieres J. Cardiovascular disease prevention and life style modifications. *Ann Cardiol Angeiol (Paris)*. 2012;61:93-8.
 23. Janson J. *Modificación del estilo de vida como medio de prevenir/tratar la HTA* [Internet]. 2007 [citado 11 Oct 2015]. Disponible en: <http://www.intramed.net/contenidover.asp?contenidoID=49762>
 24. Maroto-Montero JM, Prados C. *Rehabilitación cardíaca. Historia. Indicaciones. Protocolos*. En: Maroto-Montero JM, De Pablo-Zarzosa C, eds. *Rehabilitación cardiovascular*. Madrid: Panamericana; 2011. p. 1-16.
 25. Favero G, Paganelli C, Buffoli B, Rodella LF, Rezzani R. Endothelium and its alterations in cardiovascular diseases: life style intervention. *Biomed Res Int* [Internet]. 2014 [citado 20 Oct 2015];2014:801896. Disponible en: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3955677/pdf/BMRI2014-801896.pdf>
 26. Pérez Caballero MD, Dueñas Herrera A, Alfonso Guerra J, Vázquez Vigoa A, Navarro Despaigne D, Hernández Cueto M, et al. *Guía cubana para la prevención, diagnóstico y tratamiento de la hipertensión arterial* [Internet]. Cuba: MINSAP; 2006 [citado 21 Mar 2016]. Disponible en: http://www.sld.cu/galerias/pdf/servicios/hta/guia_hta_cubana__version_final_2007revisada_impresta.pdf
 27. Galiani Domínguez JA, Valdivielso Felices P. *La enfermedad coronaria como una enfermedad del estilo de vida. Modificación del nivel de riesgo desde una perspectiva conductual*. En: Trujillo

Pérez-Lanzac M, Almoguera Abad A, Roman García J; eds. Una visión psicosocial de la enfermedad coronaria. Madrid: Ibermutuamur; 2007. p. 231-66.

Appendix. Methodological structure for the psychoeducational intervention proposal.

Topic 1. Presentation of the psychoeducational intervention design.

- 1.1. Proposal of psychoeducational intervention design.
- 1.2. Proposal objectives.
- 1.3. Selected patients' expectations in relation to the topic.

Topic 2. General outlines on cardiovascular disease.

- 2.1. Information about myocardial infarction.
- 2.2. Concept. Diagnostic criteria.
- 2.3. Myths and beliefs.
- 2.4. Connecting and exposing personal experiences.

Topic 3. Atherogenic risk factors.

- 3.1. Concepts, risk behaviors, consequences.
- 3.2. Modifiable and non-modifiable risk factors.
- 3.3. Aspects related to chronic noncommunicable diseases that are important risk factors (diabetes mellitus, hypercholesterolemia, and high blood pressure).
- 3.4. Salutogenic lifestyles.

Topic 4. Lifestyles.

- 4.1. Toxic and nutritional habits.
 - 4.2. Physical conditions and free time activities.
 - 4.3. Emotional self-control.
 - 4.4. Self-care.
 - 4.5. Sexuality.
-