

ANDERSON CESAR ZANI
HEAD ORGANIZER

APPROACHES TO HEALTH CARE



LATIN AMERICAN
publicações

2025

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Head Organizer



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LATIN AMERICAN
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Latin American Publicações
2025

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Editora Executiva: Profa. Dra. Dariane Cristina Catapan
Diagramação: Editora
Edição de Arte: Editora
Revisão: Os Autores

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Dados Internacionais de Catalogação na Publicação (CIP)
<p>Approaches to Health Care [livro eletrônico] organização Anderson Cesar Zani. -- Curitiba, PR: Editora Latin American Publicações, 2025.</p> <p>PDF. Bibliografia. ISBN: 978-65-85645-09-6 DOI: 10.47174/lap2020.ed.978-65-85645-09-6</p> <p>1. Saúde. 2. Medicina. I. Zani, Anderson Cesar. II. Título.</p>

Latin American Publicações
São José dos Pinhais – Paraná – Brasil
www.latinamericanpublicacoes.com.br/
editora@latianamericanpublicacoes.com.br

APRESENTAÇÃO

Approaches to Health Care é uma obra que explora as múltiplas perspectivas e práticas no campo da saúde. O livro examina diferentes abordagens utilizadas para promover o bem-estar, prevenir doenças e tratar pacientes, desde os métodos tradicionais até os mais recentes avanços tecnológicos e científicos.

Ao longo das páginas, a obra convida o leitor a refletir sobre o impacto das políticas públicas, o papel da ética na prática clínica e a importância da humanização no atendimento. Além disso, destaca a diversidade cultural e social que influencia a forma como a saúde é percebida e tratada ao redor do mundo.

Ideal para profissionais, estudantes e interessados no tema, Approaches to Health Care oferece uma visão panorâmica e atualizada das práticas de saúde, incentivando discussões sobre como melhorar a qualidade e a acessibilidade dos serviços de saúde para todas as comunidades.

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CAPÍTULO 01

EMPOWERMENT AS AN OUTCOME IN THE SELF-MANAGEMENT OF CHRONIC ILLNESS: A CROSS-SECTIONAL STUDY

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ABSTRACT: Empowerment is a concept that can be used as a process or a result. As a result in the context of self-management of the therapeutic regimen, empowerment is a determinant factor in achieving health gains. This study aimed at characterizing the level of individual empowerment of the chronically ill person; identifying the facilitator and inhibitor personal and contextual factors related to the level of individual empowerment; identifying a predictive model of individual empowerment. **Type of study:** A mixed cross-sectional study was conducted. **Results:** Regarding the sociodemographic variables, age and schooling level reached statistical significance concerning individual empowerment, formally guided, and abandoned scores of the therapeutic regimen management styles. Regarding the predictive model, four multivariable linear regression models were constructed with the overall empowerment level as a dependent variable. The theoretical explanation was identified in the second phase of the study: ***“Facilitating decision-making according to each mindset”***, including the following three processes/categories or axes, namely, *Being aware of the need to change, Perceiving the ability to change, Deciding on change*. **Discussion:** An association was found between the impact of the disease and the therapeutic regimen on people's lives and empowerment. A statistically significant association was identified between the levels of interference of chronic disease and individual empowerment. It was also found that the higher the level of interference of chronic disease in the person's life, the lower the individual empowerment. These study results showed that the interference of the chronic disease in the person's life and the interaction with health professionals have a negative impact on individual empowerment, leading to its decrease. This means that the impact of chronic disease

has a negative influence on empowerment. However, the negative influence of health professionals on the empowerment outcomes needs further investigation. This outcome may be related to the biomedical model commonly adopted by health services. **Conclusions:** The greater the impact of chronic disease on people's lives, the lower the levels of empowerment. This study confirms the association between individual empowerment, the therapeutic regimen management style, and the interference of chronic disease in a person's life. Identifying the construction process of empowerment and the analysis of the result in the person with chronic disease allowed the clarification of a nursing intervention: Enabling (Swanson).

KEYWORDS: nursing, empowerment, chronic disease, health promotion.

RESUMO: O empoderamento é um conceito que pode ser usado como um processo ou um resultado. Como resultado, no contexto da autogestão do regime terapêutico, o empoderamento é um fator determinante para a obtenção de ganhos em saúde. Este estudo teve como objetivo caracterizar o nível de empoderamento individual do doente crônico; identificar os fatores pessoais e contextuais facilitadores e inibidores relacionados ao nível de empoderamento individual; identificar um modelo preditivo de empoderamento individual. **Tipo de estudo:** Foi realizado um estudo misto de corte transversal. **Resultados:** Em relação às variáveis sociodemográficas, a idade e o nível de escolaridade alcançaram significância estatística em relação ao empoderamento individual, à orientação formal e aos escores de abandono dos estilos de gerenciamento do regime terapêutico. Com relação ao modelo preditivo, foram construídos quatro modelos de regressão linear multivariável com o nível geral de capacitação como variável dependente. A explicação teórica foi identificada na segunda fase do estudo: "**Facilitando a tomada de decisões de acordo com cada mentalidade**", incluindo os três processos/categorias ou eixos a seguir, ou seja, *Estar ciente da necessidade de mudar, Perceber a capacidade de mudar, Decidir sobre a mudança*. **Discussão:** Foi encontrada uma associação entre o impacto da doença e o regime terapêutico na vida das pessoas e o empoderamento. Foi identificada uma associação estatisticamente significativa entre os níveis de interferência da doença crônica e o empoderamento individual. Também foi constatado que quanto maior o nível de interferência da doença crônica na vida da pessoa, menor o empoderamento individual. Os resultados desse estudo mostraram que a interferência da doença crônica na vida da pessoa e a interação com os profissionais de saúde têm um impacto negativo no empoderamento individual, levando à sua diminuição. Isso significa que o impacto da doença crônica tem uma influência negativa sobre a capacitação. No entanto, a influência negativa dos profissionais de saúde sobre os resultados da capacitação precisa ser investigada mais a fundo. Esse resultado pode estar relacionado ao modelo biomédico comumente adotado pelos serviços de saúde. **Conclusões:** Quanto maior o impacto da doença crônica na vida das pessoas, menores os níveis de capacitação. Este estudo confirma a associação entre o empoderamento individual, o estilo de gestão do regime terapêutico e a interferência da doença crônica na vida de uma pessoa. A identificação do processo de construção do empoderamento e a análise do resultado na pessoa com doença crônica permitiram o esclarecimento de uma intervenção de enfermagem: Capacitação (Swanson).

PALAVRAS-CHAVE: enfermagem, empoderamento, doença crônica, promoção da saúde.

1. BACKGROUND

In 2012, the WHO released a report with the main strategies for health in 2020, having as its main goal the citizens Empowerment in Health. This report refers to empowerment as a key element in improving health, health care satisfaction, communication between clients and health professionals, increasing adherence to the therapeutic regimen and the efficient use of primary health care, Cerezo, Juvé-Udina, Delgado-Hito, (2016). Currently, empowerment has been extended to chronic disease management. Self-management, empowerment as at the individual level is a process in which the person rediscovers his identity and self-esteem and takes his life in his own hands (Zoun, et al., 2019). Empowerment is a process aimed at increasing the capacity to think critically and act autonomously (Santis, M., *et al.*, 2018). Empowering patients for disease self-management is complex goal that also has a positive effect on the patient's well-being, health and quality of life; in this context, empowerment is a result (Santis, M., *et al.*, 2018). To achieve the results of patient empowerment in the healthcare system it is important to create preconditions for patient empowerment for disease self-management (Vainauskiene, V., Vaitkien, R., 2021). The self care is key to a successful outcome in Chronic`s management disease (Everett, J.; Lawrance, S., Phillips N., 2020). Empowerment, as a result in the context of self-management of the therapeutic regimen, is a determinant factor to achieving health gains. Promoting empowerment could largely contribute to improving indicators such as the number of hospitalizations, reducing complications or associated morbidities. Thus, contributing to a decrease in the consumption of health services and health care. The operationalization of this concept allows understanding and identifying the factors that contribute to empowerment in chronic disease and how they can influence the development of this phenomenon in the produced outcomes. This objective implies effective communication without overpowering and focused on the client's goals.

This study aimed at identifying the variables interfering in the development of individual empowerment, contributing to improving the quality of nursing care aimed at their promotion. Characterizing the level of individual empowerment of the chronically ill person; identifying the facilitator and inhibitor personal and contextual factors related to the level of individual empowerment; identifying a predictive model of individual empowerment; and understand the development of the empowerment process.

2. METHOD

A mixed cross-sectional study was developed in two phases. In the first phase, a quantitative methodology was used to characterise the population, the level of empowerment and the relationship with socio-demographic variables, interference of chronic disease, and regimen management style, namely its predictive value. In the second phase, a qualitative approach was used to understand the factors promoting empowerment from the perspective of the most empowered clients and nurses. To determine the influence of the explanatory (endogenous) variables on the variance of individual empowerment (global) it was assumed that individual empowerment as the result of health care, is determined by the endogenous (explanatory) variables. Four multivariate linear regression models were constructed with the overall empowerment level as a dependent variable. The backward method was used in all models. This is an algorithmic process in which the independent variables with a lower explanatory contribution to the model are progressively removed until only those variables whose contribution is statistically significant ($p < 0.05$) remain in the final model.

2.1 SELECTION OF PARTICIPANTS

The sample was comprised of 271 adult participants with chronic disease. The following inclusion criteria were set:

- Adults living in the geographical area of the Healthcare Centre Group of central Lisbon and registered in one of its health units.
- Aged between 18-65 years.
- Being diagnosed with at least one chronic disease;
- Not having cognitive or communication problems;
- Independent in the activities of daily living.

In the first phase, the participants were selected by the researcher in the functional units where the study was conducted and following the inclusion criteria previously established. Non-probabilistic convenience sampling was then used to select participants. The qualitative study included privileged informants, those who revealed higher levels of empowerment. The selection of these participants for

interviews was based on the assessment results of the Individual Empowerment scale used in the first phase.

2.2 DATA COLLECTION INSTRUMENTS

Instruments were selected according to the objectives of this study and the data collection method.

2.3 ADAPTIVE CLASSIFICATION OF INTERFERENCE OF CHRONIC DISEASE

The Illness Intrusiveness Rating scale was first developed in 1983 (Devins *et al.*, 1983) and assess the extent to which disease and treatment interfere with people with chronic disease. This scale is presented in three dimensions (Luz, Bastos, Vieira, 2017): Activities of daily living (items 1,2,3,4,5,6); activities of relationships and intimacy (items: 7,8,9,10); potential for human growth (items: 11,12,13). Each item is measured through a Likert-type concordance scale. The internal consistency or scale's reliability level in this study revealed a total Cronbach Alpha of 0.920, (Luz, Bastos, Vieira, 2017) considered very good (Hill & Hill, 2008; Maroco, 2014). After performing the exploratory factorial analysis, the Kaiser-Meyer-Olkin (KMO) measure value was 0.882 and Bartlett Test = 2588.523 for a $p < 0.001$ (Luz, Bastos, Vieira, 2017).

2.4 INDIVIDUAL EMPOWERMENT SCALE

The Individual Empowerment scale was developed for this study by reviewing the literature (Luz, Bastos, Vieira, 2020). A 25-item scale was obtained with each item being measured through a Likert-type concordance scale. The scale has seven dimensions: Self-perception; Participation in health decision-making; Mastery; Determination; Identity; Autonomy; Relationship with health professionals. Factorial analysis (main components - Varimax) showed that the 25 items were organized into seven factors with a total explained variance of 65.28%, and Cronbach Alpha of 0.8033 (Luz, Bastos, Vieira, 2020).

2.5 CHARACTERIZATION OF THE THERAPEUTIC REGIMEN MANAGEMENT STYLE INSTRUMENT

This instrument is based on the explanatory theory on the management of the disease and therapeutic regimen (Bastos, 2015). The questionnaire is composed of two self-reporting tools that assess the identity traits and attitudes towards the disease, the therapeutic regimen, and related behaviour perception, through a Likert-type scale (Meireles, 2014). This questionnaire also allows assessing seven compound variables: internal locus of control, decision-making, self-determination, attitude towards the disease, attitude towards the therapeutic regimen, self-efficacy, and interaction with professionals (Meireles, 2014). The therapeutic regimen management styles derive from the variance of response to the flexibility and control required to manage the therapeutic regimen, from which the following styles theoretically emerged: Responsible, formally guided, independent, and abandoned. In this study, the reliability level showed good internal consistency with a Cronbach alpha (α) of 0.77.

2.6 INTERVIEW SCRIPT

In the second phase of the study, semi-structured interviews were conducted with people with chronic disease, adapted to the participant's empowerment experience, seeking to identify factors and nursing therapeutics contributing to building empowerment. An interview script was designed to support the semi-structured interviews, which were fully recorded and transcribed.

2.7 ETHICAL CONSIDERATIONS

Ethical consent to develop the study in the health units was granted by the ARSLVT (Regional Health Administration) of Lisbon and the Managing Board of the Healthcare Centre Group. Participants were informed of the study objectives and those willing to participate signed informed consent.

3. RESULTS

3.1 SOCIODEMOGRAPHIC AND CLINICAL CHARACTERIZATION OF THE SAMPLE

The sociodemographic characterization of the sample revealed an average age of 56 years ($SD=8.5$). From the 271 participants, 118 were men (43.5%) and 153 (56.5%) women. The majority of the participants (68.6%) were married or cohabiting. Concerning schooling, 35.4% of the participants completed up to the first cycle of basic education, 32.5% up to the third cycle, 21% completed upper secondary education, and 11.1% attained higher education. Hypertension was the most frequently diagnosed chronic disease, corresponding to 80.1% of all reported diseases, either alone or concomitant with other chronic diseases. Administration by oral route was most commonly observed within the pharmacological regime. The daily number of pills varied between 0 and 35 for each participant. Interestingly, although 18 people (6.6%) reported not taking any medication, one person referred to taking 35 pills a day. However, compared to the median (2), 52.8% of participants were taking up to two pills a day, while 47.2% took more than two. Some participants administered medication through other types of route, such as the subcutaneous route and inhalation route.

Hospitalisation due to disease complications is one of the most important indicators on disease control and this study showed that 141 (52 %) participants had never been hospitalized for their chronic disease. From the 130 (48%) individuals who reported having had at least one hospitalization, 44.6% referred 1 to 5 hospitalizations, five (1.8%) were hospitalized between 6 and 10 times, and four (1.5%) had more than 10 hospitalizations. However, more than half of the participants, 164 (60.5%) were admitted to the emergency department because of disease-related complications. The majority of respondents (66.4%) reported no complications related to their chronic disease, and 51.3% of the subjects had no other associated diagnosis.

The Pearson's correlation coefficient (r) was applied to determine the strength and meaning of the association between the sociodemographic variables under study. Concerning the sociodemographic and clinical characterization, a relationship between the age of the participants and the educational background ($r=0.44$, $p<0.001$) was found. The results also revealed a negative correlation between age of first diagnosis and the number of admissions to the emergency department ($r=-0.304$, $p<0.001$) and

years of illness ($r=-0.742$, $p<0.001$). A positive correlation between the number of hospitalizations and the frequency of attendances at the emergency department due to chronic disease ($r=0.559$, $p<0.001$) was found. This correlation showed the consistency of the results, demonstrating that in situations of disease instability, people attend the emergency department more often and hospitalizations are more likely to occur. Lastly, the findings revealed a positive correlation between the frequency of hospitalizations and the years living with chronic disease ($r=0.227$, $p=0.009$), and a correlation between the frequency of attendances at the emergency department and the years living with chronic disease ($r=0.348$, $p<0.001$).

3.2 INDIVIDUAL EMPOWERMENT CHARACTERIZATION

The individual Empowerment scale was characterised by an overall mean of 3.2993, $SD=0.46516$, maximum value =4, minimum value =1 and Kurtosis $SD(0.295)=2.677$. Through factor analysis the yielded values of $KMO=0.803$ and the Bartlett sphericity test=2850.868 ($p<0.001$) were considered good level, in line with Maroco (2014). According to the aforementioned in the scale characterization, seven factors or dimensions were obtained. This instrument also allowed to identify participants with higher empowerment levels. Since no golden point was reached, the researchers decided that the cohort point would correspond to the fourth quartile, e.g. value set at 3.58. Following this criterion, 25% of the sample ($n=68$) and the remaining 75% ($n=203$) were considered less empowered.

When comparing the results between the two groups, more empowered individuals revealed higher indices in decision-making $t(269)=4.33$, $p<0.001$, $M=2.94$ and $SD=0.45$; for self-determination $t(269)=6.49$, $p<0.001$, $M=3.67$ and $SD=0.3$; for attitude towards the disease $t(269)=3.11$, $p=0.002$, $M=2.72$ and $SD=0.38$; for self-efficacy $t(269)=3.07$, $p=0.002$, $M=3.60$ and $SD=0.7$; and for the responsible score $t(269)=7.02$, $p<0.001$, $M=3.75$ and $SD=0.20$.

Inferential analysis of the sociodemographic variables and therapeutic regimen statistically significant differences for individual empowerment were also found between age groups (T.ANOVA) according to the age of first diagnosis of the disease (Table 1).

Table 1: Inferential analysis of sociodemographic variables and therapeutic regimen

Clinical and sociodemographic variables	Interference of Chronic Disease (Dimensions)	Individual empowerment (Dimensions)	Therapeutic Regimen Management Styles (Scores)
Age T.ANOVA		Identity $F(270.2)=4.82$, $p=0.009$, Autonomy and Power $F(270.2)=7.94$, $p<0.001$, concerning the groups aged between 18-50 years and 61-65 years. Through the analysis of multiple comparisons using post-hoc tests, and the Tukey test, the results showed: Statistically significant differences between the age groups 18-50 and 61-65 ($p=0.007$) for identity, the latter showing higher mean scores ($M=3.62$, $SD=0.61$), compared with the former ($M=3.30$, $SD=0.72$); - Statistically significant differences between the age groups 18-50 compared with the age group 51-60 ($p=0.023$) and 61-65 ($p<0.001$), for autonomy and power, with higher mean scores for the age group 18-50 ($M=3.11$, $SD=0.77$).	$F(270.2)=12.45$, $p=0.001$, formally guided score for the age group 61-65. Through the analysis of multiple comparisons using post-hoc tests, and the Tukey test, the results showed: - Statistically significant differences between the age groups 18-50 compared with the group age 51-60 ($p=0.001$) and 61-65 ($p<0.001$), for the formally guided score, with higher mean scores for the age group 61-65 ($M=2.61$, $SD=0.61$).
Marital status T.ANOVA	Instrumental activities $F(270.3)=3.47$, $p=0.017$, for intimacy $F(270.3)=3.40$, $p=0.019$ and for personal growth and relationships $F(270.3)=3.13$, $p=0.026$. Through the analysis of multiple comparisons using post-hoc tests, and the Tukey test, the results showed: - Differences between divorced participants compared with married individuals ($p=0.019$), for interference of chronic disease in instrumental activities, with higher mean scores for single participants ($M=2.14$, $SD=1.36$), compared with married respondents ($M=1.44$, $SD=1.23$). - Differences between divorced participants compared with the widowed ($p=0.048$), for interference of chronic disease in intimacy, with higher mean scores for the divorced participants ($M=1.32$, $SD=0.25$), than widowers ($M=0.33$, $SD=1.05$). - Differences between divorced participants compared with married individuals ($p=0.027$), for interference of chronic disease in personal growth and relationships, with higher mean scores for the divorced participants ($M=0.52$, $SD=10.00$), than married participants ($M=0.18$, $SD=0.48$).		
Schooling level T.ANOVA		Identity $F(270.3)=3.02$, $p=0.030$, autonomy and power $F(270.3)=3.90$, $p<0.009$. Through the analysis of multiple comparisons using post-hoc tests, and the Tukey test, the results showed: - Statistically significant differences between participants with schooling \leq to the first cycle of basic education and licentiate respondents ($p=0.049$) for mastery, with higher mean scores for the licentiate participants ($M=3.02$, $SD=1.05$), compared with respondents with schooling \leq to the first cycle of basic education ($M=2.38$, $SD=1.35$). - Statistically significant difference between the age group with upper-secondary education compared with those with the first cycle of basic education ($p=0.004$), for autonomy and power, with higher mean scores for participants with upper-secondary education ($M=3.06$, $SD=0.75$), compared with those individuals with the first cycle of basic education ($M=2.53$, $SD=0.95$). However, this difference was not found for licentiate participants.	Formally guided score $F(270.3)=42.46$, $p<0.001$, and abandoned score $F(270.3)=3.97$, $p=0.009$. All schooling levels are distinctive for the formally guided score, with values ranging between $p=0.013$ e $p<0.001$. Also, the higher the schooling the lower these scores. Lastly, for the abandoned score, individuals with upper-secondary education show lower results ($M=0.86$, $SD=0.64$), compared with those with up to the first cycle of basic education ($M=1.28$, $SD=0.76$).
Age of diagnosis T.ANOVA	Instrumental activities $F(270.3)=3.45$, $p=0.017$, personal growth and relationships $F(270.3)=3.86$, $p=0.010$ concerning the age groups 19-35 and the age group above 51. The Tukey test identified greater interference in daily life in the age group 19-35 ($M=1.69$, $SD=1.48$) compared with the age group over 51 ($M=1.40$, $SD=1.26$) ($p=0.035$).	Identity $F(270.3)=3.72$, $p=0.012$. Through the analysis of multiple comparisons using post-hoc tests, and the Tukey test, the results showed: - Higher empowerment level ($M=3.63$, $SD=0.59$) in the age group 36-50, compared to other age groups. The level of empowerment is lower for the age group under 18 ($M=3.15$, $SD=0.48$), compared with the age group 36-50. Similar results were found in the age group over 51 ($M=3.51$, $SD=0.70$).	

Source: Authors.

Regarding the variables of the therapeutic regimen: the number of diseases, associated diagnosis, hospitalizations, complications, polymedication were found to have statistical significance in the interference of chronic disease; also, with the dimensions of perception, autonomy and power, and the scores of formally guided and abandoned (Table 2). (47)

Table 2: Inferential analysis of therapeutic regimen variables and the chronic disease interference, individual Empowerment, therapeutic regimen management styles

Therapeutic regimen variables	Interference Chronic Disease (Dimensions)	Empowerment Individual (Dimensions)	Therapeutic Regimen Management Styles (Scores)
Number of chronic diseases T.ANOVA	Instrumental activities $F(270.2)=16.76$, $p=0.001$, in intimacy $F(270.3)=12.88$, $p<0.001$, and personal growth and relationships $F(270.3)=4.02$, $p=0.019$. Overall, the Tukey test revealed that the higher the number of identified diseases, the higher the interference perceived in the three analysed dimensions.	$F(270.3)=8.01$, $p<0.001$, perception $F(270.3)=6.79$, $p<0.001$, autonomy and power $F(270.3)=3.23$, $p=0.048$ related to the variable number of diseases. The Tukey test also revealed that the higher the number of identified diseases, the lower the level of empowerment, perception, autonomy, and power.	Formally guided $F(270.3)=3.07$, $p=0.048$, and abandoned $F(270.3)=11.07$, $p<0.001$. Overall, the Tukey test revealed that the higher number of diseases was related to higher scores for formally guided and abandoned.
Associated Diagnosis T. TSUDENT	Participants with associated diagnoses showed higher levels for the dimensions, perception of instrumental activities $t(269)=6.49$, $p<0.001$, intimacy $t(269)=5.30$, $p<0.001$, and personal growth and relationships $t(269)=2.98$, $p=0.003$, compared with people with unrelated diagnoses.	Also, participants with no associated diagnoses to their primary disease showed higher levels for the dimensions, perception $t(269)=3.67$, $p<0.001$, autonomy and power $t(269)=2.09$, $p<0.038$, compared with people with associated diagnoses.	The age group reporting having no other associated diagnoses with the primary disease, showed lower scores for abandoned $t(269)=3.48$, $p<0.001$.
Hospitalizations T. TSUDENT	Participants that were hospitalized perceived a greater impact on the interference in instrumental activities $t(269)=5.49$, $p<0.001$, intimacy $t(269)=4.47$, $p<0.001$ personal growth and relationships $t(269)=2.58$, $p=0.011$.	Moreover, participants not requiring hospitalization showed higher scores for the dimensions of the Empowerment scale, namely $t(269)=3.28$, $p<0.001$, perception $t(269)=3.30$, $p<0.001$, and identity $t(269)=2.34$, $p=0.020$.	The participants that did not require hospitalization showed higher scores for responsible $t(269)=3.64$, $p<0.001$. The abandoned score was higher for individuals who were hospitalized $t(269)=4.09$, $p<0.001$.
Complications T. TSUDENT	Complications have impact on instrumental activities $t(269)=8.88$, $p<0.001$, intimacy $t(269)=5.66$, $p<0.001$, and personal growth and relationships $t(269)=3.18$, $p=0.002$.		The age group reporting more related complications reveals a higher score for abandoned $t(269)=4.54$, $p<0.001$.
Polymedication T. TSUDENT	Higher interference was found for instrumental activities $t(269)=7.34$, $p<0.001$, intimacy $t(269)=5.39$, $p<0.001$, and personal growth and relationships $t(269)=4.36$, $p=0.001$ in participants taking more than two medicines a day.	Empowerment $t(269)=3.62$, $p<0.001$), perception $t(269)=3.94$, $p<0.001$, mastery $t(269)=2.77$, $p=0.006$, and autonomy and power $t(269)=2.19$, $p=0.029$)) scored higher in individuals taking more than two medicines a day.	Similarly, formally guided $t(269)=3.60$, $p=0.001$, and abandoned $t(269)=4.47$, $p<0.001$ showed higher scores in participants taking more than two medicines a day.

Source: Authors.

In the first multivariable linear regression model used to assess the impact of chronic disease interference on empowerment, it was found that: Instrumental activities ($\beta=-0.11$, $p<0.001$, $IC95\%=[-0.15; -0.06]$) and personal growth and relationships ($\beta=-0.11$, $p<0.001$, $IC95\%=[-0.20; -0.03]$) had a negative and statistically significant impact that suggest a decrease in the level of empowerment, showing higher scores as higher the interference of chronic disease in the identified domains. These variables explain the 16.1% total variation of empowerment. The linear model was well adjusted to the data $F(270.2)=25.70$, $p<0.001$, explaining the linear tendency. The second model studied the impact of the therapeutic regimen management styles on empowerment leading to identifying the scores responsible ($\beta=0.55$, $p<0.001$, $CI95\%CI=[0.44; 0.67]$) and abandoned ($\beta=-0.23$, $p<0.001$, $CI95\%=[-0.29; -0.17]$) as statistically significant variables. According to these results, higher levels of empowerment are related to higher scores for responsible and lower scores for abandoned. These two variables represent 40.3% of explanatory power on empowerment with good linear adjustment $F(270.2)=25.70$, $p<0.001$. The linear model was well adjusted to the data $F(270.2)=90.47$, $p<0.001$, explaining the linear tendency. The third model studied the impact of the dimensions of the therapeutic regimen management style on empowerment and found statistically significant results on variables control ($\beta=0.24$, $p<0.001$, $CI95\%CI=[0.10; 0.38]$), self-determination ($\beta=0.21$, $p<0.001$, $CI95\%=[0.13; 0.30]$), attitude towards the disease ($\beta=0.24$, $p<0.001$, $CI95\%=[0.11; 0.38]$), and interaction with professionals ($\beta=-0.11$, $p=0.014$, $CI95\%=[-0.17; -0.02]$). The five variables with statistically significant results had an explanatory power of 37.7% on empowerment. Linear adjustment of data was considered adequate $F(270.2)=90.47$, $p<0.001$. The final model was constructed from the variables with statistical significance ($p<0.05$) from the three previous models, to find the model with the highest predictive capacity on empowerment (Table 3). The variables with statistically significant results on the final model were the instrumental activities ($\beta=-0.05$, $p=0.015$, $CI95\%=[-0.09; -0.01]$), personal growth and relationships ($\beta=-0.07$, $p=0.049$, $CI95\%=[-0.14; -0.01]$), responsible score ($\beta=0.46$, $p<0.001$, $CI95\%=[0.34; 0.58]$), control ($\beta=0.16$, $p=0.018$, $CI95\%=[0.03; 0.29]$), attitude towards the disease ($\beta=0.18$, $p=0.009$, $CI95\%=[0.05; 0.31]$) and interaction with professionals ($\beta=-0.09$, $p=0.018$, $CI95\%=[-0.16; -0.02]$). The explained variance percentage of variables included in the final model was 46.0%. Linear adjustment of data was considered adequate $F(270.7)=32.01$, $p<0.001$. (371)

Table 3: Predictive model of individual empowerment

Independent variables	<u>Coefficient analysis</u>			<u>Fit measures</u>		<u>Collinearity diagnoses</u>	
	β_x (SE)	p-value (t-test)	95% CI β_x	$F_{(270,7)}$	R^2	Tolerance	VIF
β_0 (Constant)	1.01 (0.22)	<0.001	(0.58; 1.45)	32.01***	46.0%	-	-
β_1 Interference in daily life	-0.05 (0.02)	p=<0.015	(-0.09; -0.01)			0.67	1.49
β_2 Interference in personal growth and relationships	-0.07 (0.04)	p=0.049	(-0.14; -0.01)			0.78	1.28
β_3 Responsible score	0.46 (0.06)	p<0.001	(0.34; 0.58)			0.79	1.27
β_4 Locus of control	0.16 (0.07)	p=0.018	(0.03; 0.29)			0.35	2.84
β_4 Attitude towards the disease	0.18 (0.07)	p=0.009	(0.05; 0.31)			0.44	2.29
β_6 Interaction with professionals	-0.09 (0.04)	p=0.018	(-0.16; -0.02)			0.62	1.61

Source: Authors.

Thus, a greater interference of the disease in the instrumental activities and personal growth and relationships, and the interaction with professionals have a negative impact on empowerment, consequently decreasing its levels. On the other hand, higher levels of the therapeutic regimen management style on the responsible, control, and favourable attitude towards the disease types promote the increase of empowerment.

3.3 QUALITATIVE ANALYSIS

The qualitative study sampling included participants selected from the 271 individuals according to their level of empowerment. A total of 68 people were identified with a high level of empowerment corresponding to 25% of the sample, above 3.58. The participants were contacted by the descending order of the empowerment level. Nine of these participants showed high empowerment's levels and agreed to conduct the interview, who decided on the location. Regarding the level of empowerment, it varied from 3.58 to 3.92 except for participant number five who scored 2.4 and showed a predominance of the independent style. The self-management of the therapeutic regimen management styles, the eight participants scored higher for the responsible style.

In the second phase of the study, the theoretical explanation emerged from the interviews' analysis: "***Facilitating decision-making according to each mindset***", including the following three processes/categories or axes, namely,

- *Being aware of the need to change;*
- *Perceiving the ability to change;*
- *Deciding on change.*

Being aware of the need to change is the first stage which was characterized by the following indicators:

- Pre-awareness;
- Individual factors;
- Attitudes (people and health professionals)
- Empowerment facilitating environment

Awareness is a crucial stage in integrating the therapeutic regimen into the person's identity, so the nurse must facilitate awareness of the need to change in the person with chronic disease. It is crucial to promote the reflection about beliefs, values, fears and decisions associated with the disease, and, most importantly, understanding if the person feels capable of changing, and providing all the necessary tools. The next step is perceiving oneself as being capable of change by understanding personal inner power. This perception depends on a set of conditions explained by the:

- Personal attributes the therapeutic regimen management style predominantly the responsible type, and
- Support or help from family and health professionals.

According to the aforementioned, "deciding on change" is one of the important steps, meaning that the person will have to become aware of the need for change, then perceive oneself as capable of change and ultimately decide to change. This stage is characterized by the integration of the therapeutic regimen and the development of a fluid and solid identity. This study portrays some of its indicators, such as:

- Well performed tasks that have become a routine;
- Changing and achieving;
- Keeping balance;
- Living with chronic disease.

These three sub-processes happen when the chronically ill person is confronted with the diagnosis, a crucial moment for the nurse to intervene as a facilitator in the decision-making processes in a holistic and tailored approach. The person's awareness of chronic disease is the main factor for change to take place. Only one participant in this study, who is accompanied at the Portuguese Diabetes Association, refers to the support and nurses' interventions, but in conjunction with medical clinical activities, based on monitoring of body processes, such as weight assessment, capillary glycaemia and standard teaching. It is crucial to understand why more empowered people do not perceive nurses as a resource.

4. DISCUSSION OF RESULTS

The analysis of the correlations between the variables showed that as age progresses, the schooling decreases. This is an important finding because according to international results and the report Health Literacy in Portugal EU (2012) (Espanha, 2015), (Pedro, *et al*, 2016) there is an association between schooling and health literacy: the higher the schooling, the higher the level of health literacy. Also, according to the same report, in Portugal, more than 60% of respondents with higher education have excellent or sufficient literacy levels; in turn, more than 60% of respondents with low schooling have problematic or even inadequate health literacy levels.

The literacy level also tends to decrease with age (Espanha, 2015). The age of the study participants varied from 18 to 65 years, and older people had fewer years of schooling than younger people, with some exceptions.

It was also found that schooling was positively associated with mastery, autonomy and power and, negatively associated with the score formally guided and abandoned. Thus, people with more years of schooling, at the graduate level, for example, have higher levels of mastery, autonomy and power than people with the first cycle of basic education or less, and secondary education, respectively. Cunha *et al.* found similar results revealing that people with higher schooling showed higher scores on empowerment (Cunha *et al.*, 2014). Also, results showed that as schooling increased, the predominance of scores formally guided and abandoned decreased. This finding is also suggested by Mota *et al.* (2017). According to the authors, people with more years of schooling show greater responsibility, and lower formally guided and abandoned scores (Mota *et al.*, 2017). In addition, knowledge about the disease

and management of the therapeutic regimen is commonly found to be associated with schooling (Fumagalli *et al.*, 2015). Also, in a study by with the elderly population, literacy was found to be associated with schooling, showing statistically significant results (Serrão, Veiga & Vieira, 2015).

A therapeutic regimen management style predominantly formally guided and abandoned, is usually associated with lower schooling (Bastos, 2015). This study also showed that the therapeutic regimen management style formally guided exhibited higher results for people aged 61-65 years. The youngest people, aged 18-50 years scored higher for autonomy and power than those aged 51 years or more. However, identity revealed that people aged 61 years scored higher than the youngest participants. Interestingly, this result seems to infer that empowerment is influenced by schooling and the experience from living with chronic disease. Similar to other studies (Bastos, 2015; Mota *et al.*, 2017), this study findings also revealed a statistically significant association between schooling and therapeutic management styles, but this may not be a necessary condition.

Despite having lower schooling than younger people, older people showed higher levels in the identity dimension. Identity is a concept built through our lifespan personal experiences.

This result is corroborated by another study in which the authors state that "the constructed experiential knowledge, as a result of personal experiences or events happening with close ones, has been largely interfering with the individual care" (Sousa *et al.*, 2015 p.58). However, reflected previous experiences, learning and overcome stages of inner growth, e.g. "going through development crises" or transitions (Meleis, 2010), and a wealthy approach, provide the human being with internal resources mobilised during the different crises throughout the lifespan. Lived experiences enable understanding of how each individual reacts to illness condition, and the literature has been stressing the importance of nurses' accessing clients' experiences (Sousa, M. *et al.*, 2015).

The household variable, together with the marital status and either cohabiting or not, also impacts chronic disease, revealing higher scores for people living in hostels or shelters, compared to people who reported living with relatives or friends.

Sousa *et al.* (2015) also suggested similar results. According to the authors, people who perceive better social support also showed higher empowerment. Those who perceive good emotional, informative and instrumental support revealed higher

empowerment. We can infer a positive association between social support and empowerment, implying that users with better social support have higher empowerment. Also, social isolation and poverty are factors associated with a high impact of chronic disease and a decrease in the level of empowerment.

According to Bastos (2015): “poverty is the common denominator to all participants with abandoned therapeutic regimen management style, and this group includes extremely impoverished people (...) users of community social services.” (Bastos, 2015, p. 269. It was also found that the higher the complexity of the therapeutic regimen, the higher the interference of chronic disease making more difficult to manage crises, decreased empowerment and a greater need to reach out to the emergency department, hospitalizations and thus the predominance of the abandoned style.

The variable time living with the disease influences the score for the therapeutic regimen management style predominantly independent, and people living with chronic disease for more than 10 years scored higher for this style. Although people with this therapeutic regimen management style may present a false self-efficacy, they have a strong component of independence and consequently a strong orientation towards self-care, so they are able to find ways of solving the problems and overcome limitations (Bastos, 2015). It was also found that the higher the concomitant diseases, the greater the level of interference in the person's life, the lower the overall empowerment and higher scores in the management styles formally guided and abandoned.

According to Bastos, people with a therapeutic regimen management style - responsible, are mainly people aware of the possibility of relapses, reactivation and aggravation of the disease and specific safety measures to face potential crises. These individual characteristics allow people to effectively manage critical episodes. Thus, an association was found between the impact of the disease and the therapeutic regimen on people's lives and empowerment. A statistically significant association was identified between the levels of interference of chronic disease and individual empowerment. It was also found that the higher the level of interference of chronic disease in the person's life, the lower the individual empowerment. These study results showed that the interference of the chronic disease in the person's life and the interaction with health professionals have a negative impact on individual empowerment, leading to its decrease. This means that the impact of chronic disease

has a negative influence on empowerment. Thus, the negative influence of health professionals on empowerment needs to be further investigated. This outcome may be related to the biomedical model commonly adopted by health services. High levels of the therapeutic regimen management style - predominantly responsible, of inner locus of control, attitude towards the disease, self-efficacy promote individual empowerment.

In the context of primary health care, the interaction with health professionals decreases empowerment, which may indicate that the model of care used by health professionals in the context of chronic disease, is not a promoter of empowerment, being perceived as something that hinders development.

Regarding the second phase of the study, the theoretical explanation of the process "facilitating decision-making according to each mindset" means that the intentionality of therapeutic nursing interventions is to support and promote empowerment, autonomy and accountability according to people's individuality. Each human being has his/her individuality and potential to develop mastery and a fluid identity that will enable acquiring skills to help live with the disease. According to the paradigm of integration and transformation (Kérouak *et al.*, 1996), the theoretical models that support the nursing discipline are oriented towards the person within the environment aiming at empowering this person. Looking at nursing from the perspective of the Transitions Theory (Meleis, 2010) is to integrate the models centred on illness and frame them in the true focus that is the life of individuals, families and the community, favouring empowerment as it focuses attention on "what is changing" and not on the condition of illness (Bastos, 2015).

This process of "facilitating decision-making according to each mindset" is phased, corresponding to steps that have to be resolved for the person to move forward, and these are part of the intentionality of nurses when developing nursing therapies. Intentionality based solely on the acquisition of instrumental skills and adherence often fails to effectively respond to decision-making demands in health care (Bastos, 2015). The awareness phase will be the first challenge for the nurse, from which others will follow. Change is not possible if people are not aware of what to do when facing chronic disease and the integration of the therapeutic regimen, awareness of the need for change, are indicators of outcome and process (Meleis, 2010). Nurses should provide information according to the current persons' needs. The time to integrate the information is determinant; the transmission of information should be

carried out as a strategy promoting empowerment and skills development (Sousa, Martins & Pereira, 2015) based on a therapeutic interaction in which the nurse creates a relational environment promoting growth.

Although some people with a therapeutic regimen management style predominantly responsible, focused on problem-solving, they sometimes find it difficult to deal with the negative emotions and need time to manage these situations. Upon the diagnosis of chronic disease, people must know they have to manage the medication but, most importantly, have to integrate it into their life and identity. Thus, the relationship between the nurse/person requires time and continuity “(...) *the “continuity” of the same professionals across time, who are already “well known” increases the feeling of safety*” (Bastos, 2015 p. 260).

The nine participants in the qualitative study were characterised by high individual empowerment scores, which also culminated in the association with a therapeutic regimen management style predominantly responsible. This means that flexibility and accountability for the therapeutic regimen were more marked in this style than others (Bastos, 2015). We can infer that flexibility and becoming accountable correspond to attitudes favouring empowerment as a result. The nurses' attitudes are also determinant because when dealing with flexible people who are able to take responsibility for the therapeutic regimen, these professionals are required to favour the person's reflection, creating a relational environment which facilitates reflection, criticism and self-knowledge, e.g. an environment that favours empowerment. However, it is important to consider that not all people with chronic disease are prepared for this environment and do not wish to take part in it. It all depends on the therapeutic regimen management style, individual attributes and family support in development transitions and other factors (Bastos, 2015). People with individual attributes of a responsible profile are characterised by being optimistic, independent and proactive. So, they reject the miserably condition and seek to overcome the constraints imposed by the illness condition, seeking the necessary information (Bastos, 2015 p. 260). In people with a high level of empowerment predominantly responsible, the "assumption" of not valuing the disease could indicate effective management of emotions. These are people who are able to mobilize coping strategies focused on problems (Lazarus, 1984). Nurses can act on some of the personal attributes and modify some contexts, making them more favourable. It is well known that variables such as knowledge and skills development are sensitive to nursing

interventions empowering the person to manage the disease and its therapeutic regimen (Bastos, *People with a predominantly responsible profile maintain prevention and maintenance care aware of the high risk of relapses and the fragility of equilibrium, which implies a great need for control.*

One of the indicators of individual empowerment is the need for control. In this case, people understand that despite control does not mean cure (awareness of chronicity), it is best to be in control of symptoms and emotions, intended to keep normality (Bastos, 2015). The development of skills promoting self-management of the therapeutic regimen depends on each person's potential for change and the integration of knowledge. Integration begins with building meaning from the knowledge acquired (Meleis, 1991). When "interpretation, thinking and reasoning about the situation is not based on credible information, it is likely to be based only on individual experience, of people around and cultural beliefs" (Bastos, 2015 p. 307).

Concerning education and knowledge of health resources, the "knowledge of health resources allows not only their use but also mediates expectations" is also an important aspect. (Bastos, 2015, p: 310). We believe that regardless of the style of management of the therapeutic regimen, the nurse's purpose will be to develop skills to help people manage the therapeutic regimen and live with the disease. This means that all human being has this potential. However, depending on the different management styles, tailored nursing therapies are needed "according to each mindset". This stage is determinant for the result of empowerment and at this stage, the person believes in individual power to change. The professional support, particularly provided by the nurse, is a differentiating role in developing this competence: helping the other to feel empowered. We consider this is the "core" or the intentionality of nursing therapies. The way each participant expresses himself/herself may be different, but they are all aware of the need to change, namely by integrating the pharmacological and non-pharmacological therapeutic regimens into their lives. This corresponds to the preparation for change proposed in the trans-theoretical model of Change (Prochaska & Di Clemente, 1982) and awareness of Change (Meleis, 2010).

The process "facilitating the decision-making according to each mindset" is intentional, stimulating the capacity and potential of each person and the nurse, the intentionality of the therapies lies in maintaining the sense of self and in building/reformulating a fluid identity (Bastos, 2015). Again, the cycle begins with new challenges, in which the nurse acts as a facilitator of change. However, these study

findings showed that the participants did not attribute a meaning to nurses as a resource or support in the management of the therapeutic regimen at the level of primary health care. Primary health care seems an excellent context to apply a model focused on the chronically ill person. This is mainly due to the proximity of services to the general population likely to give visibility to nursing. This is especially important when addressing health gains, namely the prevention of early deaths, a decrease in the number of admissions and improvement in the quality of life and well-being of the person with chronic disease.

5. CONCLUSIONS

This study has shown that the greater the impact of chronic disease on people's lives, the lower the levels of empowerment, loss of autonomy and increased dependence, often requiring the caregiver's intervention to help in instrumental activities. The higher the score of therapeutic regimen management style - responsible, the higher the empowerment level. This study has also revealed that the therapeutic regimen management style - abandoned or formally guided, means lower empowerment level.

The personal and environmental factors contributing to individual empowerment of the chronically ill person are:

- The individual traits, such as the incidence of inner locus of control, positive attitude towards the disease, and perception of self-efficacy;
- The prevalence of therapeutic regimen management style - responsible;
- The literacy level;
- The social and family support;
- The low interference of chronic disease in peoples' lives;
- The low complexity in the management of the therapeutic regimen.

This study confirms the association between individual empowerment, the therapeutic regimen management style, and the interference of chronic disease in a person's life.

Identifying the construction process of empowerment as an outcome of the chronically ill person has largely contributed to clarifying the nursing intervention - Enabling (Swanson).

REFERENCES

- Bastos, F. (2015). A Teoria Explicativa sobre a Gestão da Doença Crónica e Regime Terapêutico. A Transição para a doença Crónica. Novas Edições Académicas. Porto.
- Cerezo PG, Juvé-Udina ME, Delgado-Hito P. (2016). Concepts and measures of patient Empowerment: a comprehensive review. *Rev Esc Enferm USP*. 2016;50(4).
- Cunha, M., Chibante, R., & André, S. (2014). Suporte social, empowerment e doença crónica. *Revista Portuguesa de Enfermagem de Saúde Mental* (Ed. Esp. 1), 21-26.
- Devins GM, B. Y. (1983). The emotional impact of end stage renal disease:Importance of patient's perceptions of intrusiveness and control. *International Journal of Psychiatry in Medicine*, 4.
- Espanha, R. Á. (2015). *Literacia em Saúde em Portugal*. Lisboa: Fundação Caloust Gulbenkian.
- Everett. J., Lawrance, S., Phillips, N. (2020). Empowering patient self-management through tailored compression garment regimens. *British Journal of Community Nursing*. Volume 25, Issue Sup10.
- Fumagalli, L., Radaelli, G., Emanuele, L., Bertele, P., & Masella, C. (2015). Patient empowerment and its neighbours: Clarifying the boundaries and their mutual relationships. *Health Policy*, 119(3), 384-394. doi:[10.1016/j.healthpol.2014.10.017](https://doi.org/10.1016/j.healthpol.2014.10.017)
- Hill A, H. M. (2008). *Investigação por Questionário*. Lisboa: Sílabo
- Kérouak, S., & al, e. (1996). *El Pensamiento enfermero* . Barcelona : Masson.
- Kralik, D. L. (2006). Resilience in the Chronic Illness Experience. *Education Action Research*, pp. 187-201.
- Luz, E; Bastos, F, Vieira, M, t al. (2017). Contributos para a tradução e validação da escala *Adapted Illness Intrusiveness Ratings* no contexto português. *Revista de Enfermagem Referência. Série IV - n.º 15*.
- Luz, E; Bastos, F, Vieira, M, t al. (2020). Construção e validação da escala de *Empowerment* individual no contexto da doença crónica. *Revista de Enfermagem Referência. Série V - n.º 3*.
- Marôco, J. (2014). *Análise Estatística com o SPSS Statistics*. Loures: ReportNumber.
- Meireles, M. (2014). *Avaliação das Propriedades Psicométricas do Instrumento de Caracterização do Estilo de Gestão do Regime terapêutico*. Porto: Instituto de Ciências Abel Salazar.
- Meleis. (2010). *Transitions Theory: Middle Range and Situation Specific Theories in Nursing and Practice*. New York: Springer Publishing Company.
- Meleis, A. (1991). *Theretical nursing: Development of transition form staff nruse to head and progress*. Philadelphia: Nursing Management .
- Mota, L.; Bastos, F; Brito, A. (2017). A pessoa submetida a transplante de fígado: caracterização do estilo de gestão do regime terapêutico. *Revista Referência. Série IV-nº 13*.

Pedro, A., Amaral, O., Escoval, A. (2016). Literacia em saúde, dos dados à ação: tradução, validação e aplicação do European Health Literacy Survey em Portugal. *Revista Portuguesa de Saúde Pública*. <http://dx.doi.org/10.1016/j.rpsp.2016.07.002>

Prochaska, J., & Di Clemente, C. (1982). Transtheoretical Therapy: Toward a More Integrative Model of Change. *Psychotherapy: Theory, Research*.

Santis, M; Hervas M; Weinman, *et al.*, (2018). Patient *Empowerment*. RD-ACTION WP2-TASK 2.5 *Output*. Italy.

Serrão, C., Veiga, S., & Vieira, I. (2015). Literacia em Saúde: Resultados obtidos a partir de uma amostra de pessoas idosas portuguesas. *Revista Portuguesa de Saúde mental*, pp. 33-38.

Sousa, M., Martins, T., & Pereira, F. (2015). O reflectir das práticas dos Enfermeiros na abordagem à pessoa com doença crónica. *Referência*, pp. 55-63.

Vainauskiene, V.; Vaitkien R. (2021). Enablers of Patient Knowledge Empowerment for Self-Management of Chronic Disease: An Integrative Review. *Int. J. Environ. Res. Public Health*, 18, 2247. <https://doi.org/10.3390/ijerph18052247>

Zoun, M.H.H., Koekkoek, B., Sinnema, H. *et al.* (2019). Effectiveness of a self-management training for patients with chronic and treatment resistant anxiety or depressive disorders on quality of life, symptoms, and empowerment: results of a randomized controlled trial. *BMC Psychiatry* 19, 46. <https://doi.org/10.1186/s12888-019-2013-y>

World Health Organization. Regional Office for Europe. (2012). Health 2020 policy framework and strategy document. Geneva: WHO; 2012 [cited 2020 junho 7]. Available from: http://www.euro.who.int/_data/assets/pdf_file/0020/170093/RC62wd08-Eng.pdf

