

Supporting health care professionals in evaluating the quality of health educational materials for patient as a new task for medical librarians in Poland

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- ▶ Patient education should be an integral part of any healthcare services, as being informed about one's health care options is essential to a patient's health and well-being



The values of patient education:

- ▶ Reduces patients' anxiety and depression
- ▶ Increases their knowledge
- ▶ Prepares patients for a consultation with healthcare professionals
- ▶ Increases understanding of health problem
- ▶ Improves satisfaction, quality of life, psychological outcomes and adherence to treatment
- ▶ Reduces costs of medical care

Benefits of health information conveyed in written form:

- ▶ It reinforces and supplements information that is provided verbally
- ▶ Facilitates the memorization and recall of information
- ▶ Consistency, reusability and portability
- ▶ It empowers patients to learn at their own pace and enables them to choose the amount of information that suits their information needs
- ▶ It is a cost-effective and time-efficient method of giving health messages

In order to be effective written patient educational materials should meet the following criteria :

- ▶ They should be based on scientific foundation, realistic and current
- ▶ They should be readable, understandable and easy to remember, especially for patients with low literacy skills

Could hospital and public health librarians help health care professionals in quality assessment of patient educational materials?



Aims of the study:

- ▶ To assess the **suitability and readability** of written educational materials being used in particular medical practice (Division of Pain Research and Treatment of the Jagiellonian University Hospital in Kraków)
- ▶ To help health care professionals from Division of Pain Research and Treatment to choose the best available materials for their patients
- ▶ To demonstrate how medical librarians could support the process of patient education in polish hospitals



Refers to how well the educational material could be understood and accepted by the reader

Suitability



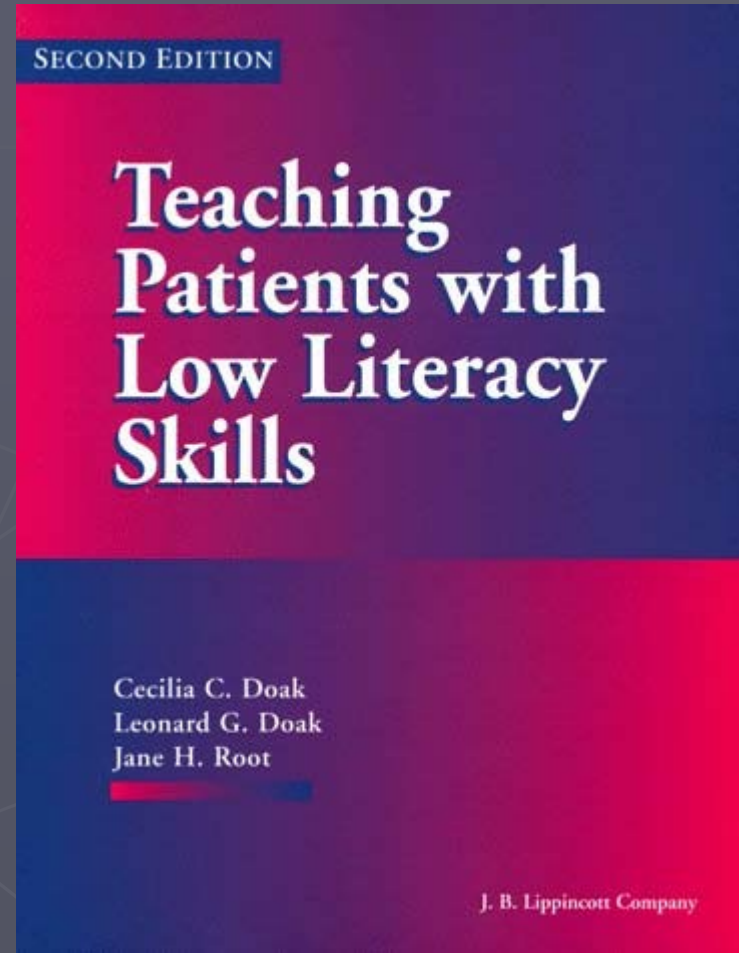
Refers to the reading difficulty of a resource

Readability

Methods

▶ **The Suitability Assessment of the materials (SAM) instrument** was used to assess their suitability of health educational materials and **Gunning-FOG formula** to assess their readability level

- ▶ SAM – the Suitability Assessment of Materials instrument
- ▶ - was developed in 1993 by Leonard and Cecilia Doak and Jane Root, leading experts in health education for adults under the Johns Hopkins School of Medicine Project. It is a part of following book:



SAM rates materials on different factors (22), grouped into six main categories:

- * **Content**
- * **Literacy Demand**
- * **Graphics**
- * **Layout and Typography**
- * **Learning Stimulation and Motivation**
- * **Cultural Appropriateness**

► **Each of the 22 items we rate on a scale of:**

2 points - suitable

1 point - adequate

0 point - not suitable

NA - not applicable

► **Applicable scores are summed and converted into a percentage. The percentage scores are interpreted as follows:**

0-39% = inadequate

40-69% = adequate

70-100% = superior

► **Because the category of cultural appropriateness is not relevant to polish educational materials it was assessed in this study**

Gunning-Fog formula was used to assess the readability of the materials

- * Gunning fog index is a test designed to measure the readability of a sample of writing. It can be calculated with the following algorithm

$$\text{Gunning Fog grade} = 0.4 \times \left[\frac{\text{words}}{\text{sentences}} + \left(100 \times \frac{\text{hard words}}{\text{words}} \right) \right]$$

- * The words which consist of 4 not of 3 words syllables were considered as difficult

Results:

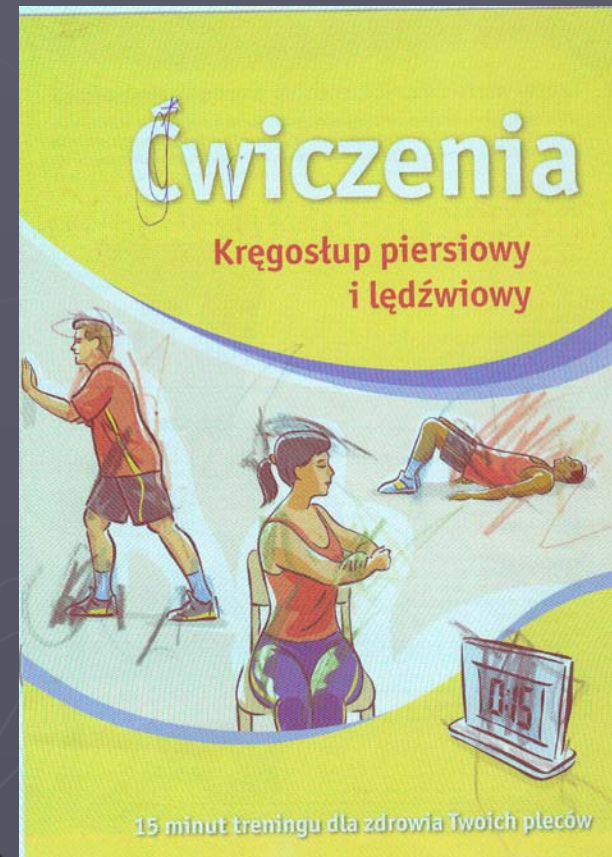
- ▶ Only 12 printed patients educational materials were collected in DPRT (IX 2009 – IV 2010) and assessed in this study
- ▶ 8 leaflets were scored as „superior“, 3 as „adequate“ and 1 as „not suitable“ (Overall „SAM“ score)
- ▶ All of the materials used some sort of advance organizers („road signs“ such as headers and topic captions, that briefly tells what is coming next)
- ▶ Almost all of the materials were of superior quality in terms of typography (n=11) and layout (n=11)
- ▶ In the majority (n=10) of the materials the purpose was either explicitly stated or implied
- ▶ Most of the materials (n=10) modeled specific user behavior or skill

But.....

- ▶ Materials scored very poorly on readability, with 9 leaflets scoring as „not suitable” and 3 scoring as „adequate”. None of the materials was „superior” in terms of readability
- ▶ Only two of materials included some sort of interactive learning stimulation (problems or questions are presented for users response)
- ▶ 9 of the materials did not include a summary or review of the presented information

Characteristics of the best leaflet (Exercises for thoracic and lumbar spine) available in DPRT (overall SAM score: 36 points = 90%):

- ▶ „adequate” readability level (7th grade)
- ▶ throughout use of conversational style, active voice and simple sentence
- ▶ cover graphic presents the purpose of the materials, other illustrations presented key messages visually
- ▶ the purpose of the leaflet explicitly stated
- ▶ it models specific users behaviors (exercises)
- ▶ it is „superior” in terms of typography and layout


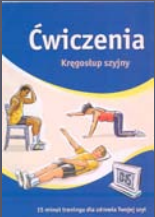





The drawbacks of the brochure („Relief in Pain”) produced by the Polish Pain Society (overall „SAM” score = 55%)

- ▶ exceedingly high literacy demand (16 th grade = level of academic texts)
- ▶ too difficult vocabulary and complex sentence with long phrases
- ▶ nearly all topics focus on non-behavior facts
- ▶ purpose is not explicitly stated
- ▶ no interactive learning or stimulation is provided
- ▶ insufficient use of illustrations
- ▶ no summary or review included



The list of best five leaflets was created:

1.		90%
2.		82,5%
3.		79%
4.		77,50%
5.		76,50%

Limitations of the study:

- ▶ The study was carried out only on a very small sample of patient educational leaflets and on that basis it is not possible to draw conclusions about the general quality of leaflets that are offered in polish pain treatment clinics.
- ▶ Limitations related to SAM instrument:
 - * SAM does not evaluate materials in terms of their general quality, scientific accuracy and completeness, but only in terms of their suitability for patients with low literacy skills
 - * It was not described neither in original research nor in other publications how the SAM instrument was developed and evaluated
 - * The authors of SAM instrument reported the validity of the instrument (face validity), but not the reliability of measure

The importance of the research:

- ▶ it could help health care professionals from Division of Pain Research and Treatment to choose the most suitable materials for patient education in their practice
- ▶ it could indicate which features should be taken into account when designing patient educational materials to maximize their effectiveness
- ▶ it helped to identify specific errors occurring in the brochure produced by the Polish Pain Society, which could impede its proper understanding
- ▶ the study revealed, that too few patient educational materials are produced in Poland. Some improvement is necessary to be done in this area

The new role of health librarian

- ▶ Thanks to their expertise in area of health literacy, medical librarians, especially those working in hospitals, could play a very important role in supporting the process of patient education in a daily medical practice by delivery of the high quality patient educational materials
- ▶ They could also support the process of evaluation of patient educational materials
- ▶ They could refer the health care professionals to other quality assessment instruments which could enable the judgment of the materials in terms of their general quality.

Thank you very much for your attention!



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