

Validating an Informative E-Booklet on Structured Teaching Programme to Promote Preventive Measure of Cervical Spondylosis on Undergraduates College Students

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ABSTRACT: Study aimed at developing and validating the content of a booklet (Structured teaching program in printed form) about the cervical spondylosis to undergraduate's college students.

In this study, there are two steps that were followed first was to search and collect the literature mentioned for prevention and treatment of cervical spondylosis for educating and second was to validate the content of the E-booklet that has been designed by experts using Delphi method and while developing the booklet all the recommendations given by the Hoffman were considered as a base.

The CVI for the overall e-booklet was 1.0, indicating a high level of content validity. All items had a CVI of 1.0, suggesting that the e-booklet had a high level of relevance, accuracy, clarity, and completeness. The experts provided valuable feedback, which was incorporated into the final version of the e-booklet.

In this study in single phase validation process only, 100% of the items reached acceptable levels (above 0.80) for the all Six domain: Time and objective, content, writing language, illustration, layout and general feature.

Keywords: Structured Teaching Program, Cervical Spondylosis, E-booklet, Validating, Undergraduates.

INTRODUCTION

Education is an important component of one's life as it plays a vital role in developing ones personality, behavior, improves health and lifestyles (Dos Santos Ferreira Viero & De Farias 2017).

Educating one about the health can lead to the development of new knowledge, not only for a common person but also for a health care provider as it motivate them to search, develop information about various new approaches to prevent and treat various disorders (Silva *et al.*, 2017).

In order to develop new possible approaches its required to communicate between the institutions, Professionals and a common person worldwide (Marins & Araujo 2016) (Freitas & Rezende Filho 2010) and best way is to use printed educative resources like – as posters, books, booklets, handouts and/or pamphlets etc (Marins & Araujo 2016; Lima Silva *et al.*, 2017; Moura *et al.*, 2017; da Costa *et al.*, 2016).

They provide the information, guidelines and thus aids in decision making for one and on the basis of information given, one can decide what to do and what not, even they helps in becoming a medium to educate a common person by a professionals (Freitas & Rezende Filho 2010; Reberte *et al.*, 2012; Carvalho *et al.*, 2009). These type of document are widely used in today's world by health care professional to aware people or to inform one about lifestyles changes, diet modification,

exercises, do and don'ts. But concern is whether information written is scientifically correct or true Therefore development of these types of documents must follow certain Principles:

- a) be scientifically based (Alexandre *et al.*, 2020; Teixeira *et al.*, 2016);
- b) have a meta-educational approach to the intended audience (de Oliveira *et al.*, 2014);
- c) be both readable and understandable to the intended audience (Demir *et al.*, 2008 ; Alexandre *et al.*, 2020; Sousa & Turrini, 2012; Mousinho *et al.*, 2008);
- d) be evaluated by judges regarding its content, language, structure, design/layout, illustrations, and general composition (Sousa & Turrini 2012; Demir *et al.*, 2008)

The booklet should be attractive, in simple language and common vocabulary must be used so that one can easily understand and message can be delivered to target audience with ease (Mousinho *et al.*, 2008).

The content must be validated first by specialized judges with expertise in the field and then by the public audience (Mousinho *et al.*, 2008; Hortense *et al.*, 2018; De Sabino *et al.*, 2018).

In Physiotherapy profession booklet are used to aware one about the exercise prescription as per there conditions including information how to prevent the disease or disorder from prognosis and ways to treat them. One of the major problem from which people has to deal in any part of their life is cervical spondylosis.

Cervical spondylosis until few decades ago was a form of age-related diseases and a very few young people suffered from cervical spondylosis, but now due to life style changes people suffering from cervical spondylosis can be seen in all age groups the ages, even in adolescents and college student (TG & E 2018).

Increase use of computer is influencing the development of cervical spondylosis among adults 20% of college students began using computer before they where 9 years. Departure from normal sitting posture while using computer is the main etiology of neck and shoulder pain among computer users (Wanlidf, 2010) therefore there is a need to give awareness regarding cervical spondylosis among college students since in this contemporary world computer has become an indispensable element of life, majority of them are unaware of the side effect of hi-tech life style on themselves thus researcher think on educating college students regarding cervical spondylosis.

Thus, this study aimed at developing and validating the content of a booklet (Structured teaching program in printed form) about the cervical spondylosis to undergraduate's college students.

METHOD

In this study there two steps that were followed first was to search and collect the literature mentioned (Silva *et al.*, 2017; da Costa *et al.*, 2016 ; Teixeira *et al.*, 2016 ;Demir *et al.*, 2008) for prevention and treatment of cervical spondylosis for educating and second was to validate the content of the E-booklet that has been designed by experts using Delphi method (Mousinho *et al.*, 2008) and while developing the booklet all the recommendations given by the Hoffman (Hoffmann & Worrall, 2004) were considered as a base.

Development of Booklet. The material was developed following the recommendations mentioned in the literature for preparing educative material (Silva *et al.*, 2017; da Costa *et al.*, 2016; Ribeiro *et al.*, 2021; Teixeira *et al.*, 2016). This stage was divided into four phases:

1) Literature review, to develop the scientific basis for the content: Articles were searched from the database on the basis of selection criteria from the period of ten year.

2) Content organization: content was organized in order to make content simple ,effective measure for one to understand in the following by describing them in below mention points -Definition, Incidence/Epidemiology, Anatomy and physiology of cervicals spine, Risk factors, Causes, Symptoms, warning signs, diagnostic test or tool used for diagnosis of cervicals pndylosis and treatment, prevention strategies.

3) Development of the booklet's content, illustrations and layout: Booklet contents was developed in Microsoft word and illustrated by keeping in view that anyone can easily understand the concept by keeping special attention to the core information that is necessary for prevention and management of cervical spondylosis by using photograph, to the point description.

Participants. According to the protocol described by Polit *et al.* (2007), 07 Indian researchers, with proven scientific track records in the field of physiotherapy, pharmacy, English language, physician that were dealing with the patient of cervical spondylosis and having the depth knowledge about the cervical spondylosis, were invited to participate in the present study. The length of experience of the participants ranged from 05 to 25 years, and among the 7 researchers, who agreed to participate, 6 had Master's degrees and 1 had Doctoral degrees in the area of study. Expert reported that they have the excellent or good knowledge of cervical spondylosis and its management. In this study only single phase of content validation were carried out, 6 experts responded within a specified period. In this study along with the medical practioner (physiotherapist, physician), an pharmacist and English language expert had participated for booklet validation process.

Procedures. A single phase of content validation were performed, in which the initial and modified versions of the instrument were subjected to content validity by a committee of 6 experts with representation and recognition in the area of interest of this study. Thus, a content validation questionnaire was developed in English, which evaluated the content organization, language is simple and easy understanding, and relevant to the topic. Adequacy and clarity of each item was developed (Polit *et al.*, 2006; Polit *et al.*, 2007, Gadottic *et al.*, 2006; Grant *et al.*, 1997). Booklet was mailed to the each expert on their email id respectively after taking consent from them for participating in the study through telephonic call.

Statistical Analysis. The content validity of the developed instrument was statistically analyzed by a Content Validity Index (CVI). To calculate the CVI, each item was ranked on a two-point scale (1 =agree, 0= disagree and neutral is also considered =0) for each item, the CVI was calculated as the number of experts who provided a rank of 3 or 4, divided by the total number of experts. Six experts participated in the first phase of content validation, the acceptable CVI value for each item ranged from 1.00 to 0.80. In the second phase, the items considered as acceptable were those that had a CVI ranging from 1.00 to 0.80.

RESULT

The first version of the instrument was developed with a total of 19 items divided into six domains: Time and objective (2), content (5), writing language (2), illustration (2), layout (5) and general feature (3).

The Single phase of content validation

In first domain, It consist of two question among them question no 1 and 2 shows respectable CVI score i.e. 1 respectively and second domain, results were also satisfactory, it consist of five questions (Q3-Q7) in which all question shows CVI score 1 and in Writing language and illustration both consist of two question(Q8-Q9) and (Q10 –Q11) respectively and all show CVI score of 1. and in layout domain consist of 5 question (Q12-16) whereas in general feature consist of 3 question (Q17-Q19) and all shows CVI score of 1

only.

DISCUSSION

Content validity is related to the robustness of score interpretations of an instrument and indicates the degree to which these scores measure what they claim to measure (Grant *et al.*, 1997; Roebianto *et al.*, 2023). In the present study, only single content validation phases were performed for the final set of items to obtain a consensus among the experts. According to Benson *et al.* (1982), when absolute agreement is not reached for an item, the item must be revised until a consensus is reached. However, some items will never reach this standard despite several revisions and should therefore be excluded from the instrument (Koo & Li 2016).

But in this study in single phase validation process only, 100% of the items reached acceptable levels (above 0.80) for the all Six domain:- Time and objective, content, writing language, illustration, layout and general feature. Now the reliability of the booklet needs to be established by conducting a pilot study and it can be considered for future reference.

CONCLUSIONS

The study conducted a single-phase validation process, evaluating a range of items across six distinct domains: Time and Objective, Content, Writing Language, Illustration, Layout, and General Features. Remarkably, all the items achieved levels of acceptability exceeding 0.80 in each domain. This outcome underscores the excellence of the items assessed, attesting to their superior quality in terms of timely delivery, content accuracy, language clarity, visual aids, layout effectiveness, and overall user experience.

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Conflict of Interest. None.

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