Development And Validation of a Questionnaire to assess The Knowledge, Attitude and Behaviour of NSS Programme Officers On 'Common Risk Factor Approach'(CRFA-Q)

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Abstract:

Title of the Study: Development and Validation of A Questionnaire To Assess The Knowledge, Attitude And Behaviour Of NSS Programme Officers On 'Common Risk Factor Approach' (CRFA-Q)

Purpose: To develop and validate an instrument for the assessment of Knowledge, Attitude and Behaviour of NSS Programme Officers on 'Common Risk Factor Approach' (CRFA-Q)

Materials and Methods: The new Questionnaire addressing above purpose was developed using 08 academic dental public health professionals using a mixed-method approach – A Sequential exploratory design combining qualitative-quantitative methodologies.

Results: The new semi structured, validated questionnaire was developed with 31 items which was objectively tested and rated as having a 'good' face validity and further confirmed the content validity using Aiken's index for adequacy of the domains coverage and sufficient number of items to adequately measure the domain of interest.

Conclusion: A new valid instrument CRFA-Q has been developed. This questionnaire appears to be a valuable tool for the assessment of Knowledge, Attitude and Behaviour of NSS Programme Officers on 'Common Risk Factor Approach'.

Keywords: Questionnaire, Development, Validation, Knowledge, Attitude, Behavior, Risk factors.

Introduction

NCDs are the leading cause of death in the world, responsible for 63% deaths worldwide in 2008 and accounts for 53 percent of deaths in India. Treatment cost is almost double for NCDs as compared to other conditions and illnesses. Burden of NCDs and resultants mortality is expected to increase unless massive efforts are made to prevent and control NCDs and their risk factors.[1]

The threat posed by non-communicable diseases and the need to provide urgent and effective public health responses led to the formulation of a global strategy for prevention and control of these diseases. Health promotion strategies are incorporated to address the social determinants of these diseases. The four most prominent NCDs - cardiovascular

diseases, diabetes, cancer and chronic obstructive pulmonary diseases - share common and preventable risk factors that are related to lifestyle.[2]

The WHO Global Strategy for Prevention and Control of Non communicable Diseases, added to the common risk factor approach was a new strategy in 2003 for managing prevention and control of Non-communicable diseases and oral diseases.[2]

The key concept underlying the integrated 'Common Risk Factor Approach' is that promoting general health by controlling a small number of risk factors that may have a major impact on a large number of diseases at a lower cost, greater efficiency and effectiveness than disease specific approaches.

Adopting a mixed approach, these interventions should also reduce inequality, focusing on the socioeconomic determinants, to change the slope of the social gradient. The cornerstone of this approach is the Integrated 'Common Risk Factor Approach.[3]

Settings can be used to promote health as they are vehicles to reach individuals, to gain access to services, and to synergistically bring together the interactions throughout the wider community.

Examples of settings include schools, work sites, hospitals, villages and cities.

The successes of settings-based approaches have been validated through internal and external evaluation and experiences.[4]

The National Service Scheme (NSS) is an Indian Government-sponsored public service program conducted by the 'Department of Youth Affairs and Sports' of the Government of India which was begun in 1969. Its primary aim is personality development of the students and upliftment of the society through social (or community) service through the Universities and through Institutions. The NSS activities are conducted through the NSS Programme Officer, who is a member of the teaching faculty and provides necessary leadership to the youth/NSS students and knows the needs and aspirations of student youth.

In order to enable a NSS Programme Officer to perform his duties he/she undergoes an orientation course conducted by TORC (Training Orientation and Research center) within 3 months of his/her selection. After that he/she attends seminars/workshops periodically every year which are held in various places trying to ensure a geographical representation.[5]

Such seminars/workshops reach over 32,652 NSS Programme officers, which in turn benefits 3.2 million NSS volunteers trained by each one of them,[6] thereby the benefit of the ripple effect can reach the public at large thus the NSS Programme Officers acting as potential Community Mobilizers.

Therefore, for designing such a programme, to help us in monitoring its short- and long-term evaluation, to check its sustainability and its long-term implications and to build up evidence base for advocacy for policy changes, there arises a need for a tool.

Questionnaires are commonly used to look at the basic attitudes/opinions of a group of people relating to a particular issue and to collect 'baseline' information which can then be tracked over time to examine changes.[7] A questionnaire ensures standardization and comparability of the data across interviewers, increases speed and accuracy of recording, and facilitates data processing.

A search in various literature and databases revealed there were no information available regarding CRFA based questionnaire or intervention programs and their efficiency in the World/India.

To address this gap, the aim of this study is to develop and validate a questionnaire to assess the Knowledge, Attitude and Behavior of NSS Programme Officers on 'Common Risk Factor Approach' (CRFA – Q).

Methodology

This study employs a Sequential Exploratory study design. This Questionnaire (CRFA – Q) was developed in a private dental teaching institution in Bangalore; in the context of a study that has taken health promotion initiatives on 'Common Risk Factor Approach' for various target populations.

The study was carried out in the following phases:

Phase 1: Conducting Focus Group Discussion [FGD] for item pool generation

The first part of the study involves a qualitative research design utilizing Focus Group Discussion [FGD] for developing the questionnaire. This method allowed us to explore and identify relevant aspects of 'Common Risk Factor Approach' to be assessed among NSS Programme Officers.

Initially the characteristics of the questionnaire like identification of the domains, number of questions, duration of filling the questionnaire were decided based upon the aim and objectives of the present study.

The study sample consisted of a panel of an NSS Programme Officer, Dental Public Health professionals with Post Graduation qualification in the subject of public health dentistry and post graduate students from the same specialty. Data were gathered by conducting a focus group discussion utilizing a FGD Question guide developed specifically for the present study. The Question guide was developed based on various questions regarding similar topics from the available literature. The Question guide included the objectives and purpose for conducting the FGD and targeted questions that aimed to elicit the necessary feedback from the participants needed for the study. The complete discussion was audio taped using an audio recorder.

Content analysis was used to analyze the data. The recorded focus group interviews were transcribed and then analyzed manually. Themes were identified from the transcripts, providing a basis for generating a new conceptual framework for the questionnaire.

Phase 2: Development of the Questionnaire (CRFA – Q):

From the literature review and from the themes derived from the transcripts of the FGD, a large pool of statements was prepared. The statements were adapted and compiled in framing of 32 items that covered seven sub-domains.

Phase 3: Face and Content validation of the developed Questionnaire (CRFA – Q):
a) Face validity:

A 10-point criterion for face validation was used. The scores for each of the criteria on the 10-point criterion indicated is summed and divided by number of criterion considered for its

assessment. The mean average score of the expert panel is obtained to rate the tool by using an arbitrary scale.

a) Content validity:

An estimate of content validity of a test was obtained by thoroughly and systematically examining the test items to determine the extent to which they reflect and do not reflect the content domain. For the present study, the individual statement was drawn from a large pool of items that covered seven sub-domains. The items on the scale were rated as strongly relevant, relevant, needs modification or irrelevant. The experts reviewed all the 32 items. The statements that were found to be irrelevant and confusing were deleted and those that were rated as needs modification were revised. The suggestions made by the panel were incorporated to enhance clarity and readability of the instrument.

Aiken`s V index:

The generally accepted quantitative index for content is the Aiken`s V index (Annexure 4). This index was used to quantify the ratings of panel experts constituted for evaluating the items in the instrument. The Aiken's V index with 0.80 indicates the good content validity of the measure.

The eight steps of Aiken`s V index for content validity are as follows.

Aiken's V = S / [n*(c-1o)]

Where:

• n = experts rate the degree to which the item taps an objective on a 1 to c on Likert-scale, where c is the maximum score in grading scale

• lo = the lowest possible validity rating (usually, this is 1 on the Likert-scale)

• r = the rating by an expert

• s = r – lo

• S = the sum of s for the n raters

• The range will be from 0 to 1.0

• A score of 1.0 is interpreted as all raters giving the item the highest possible rating

Results

The themes derived from the FGD were utilized to construct the conceptual framework for the development of the new instrument. The conceptual framework consisted of 3 domains (Knowledge, Attitude, Behaviour) and seven sub-domains namely i) NCD s' sharing common risk factors, ii) Oral health – An integral part of general health, iii) Common Risk factor Approach – WHO endorsed Health Promotion strategy, iv) Key Concept of CRFA v) Advantages of CRFA vi) Role & Importance of NSS Programme Officers vii) Implementation of CRFA in their (NSS Programme Officers) daily practice.

For the present study, from the pool of statements arrived at, 32 items were framed with various scales of measurement like multiple choice options, dichotomous scale, 3-point Likert scale and 5-point Likert scale.

Face validation: A 10-point criterion as indicated by J A Oluwatayo was used to assess the face validity of the instrument. The subject matter expert panel scores on the 5 point Likert scale to objectively measure the satisfaction of each of the criterion indicated. Accordingly, the face validity was considered to be 'Good' by the panel with a mean score of 2.7 out of 4

as the maximum value. **Content validation:** Content validity was assessed by a panel of subject matter experts. The purpose was to depict those items with a high degree of agreement among experts. Those 32 items which were initially screened using face validity with experts were subjected to content validity. A Panel of 8 SME were involved for the content validation process.

Content validity of "CRFA - Q" was calculated using Aiken's index. Based on the relevance, SME rated each item in the scale of 1-10, 1 being highly irrelevant and 10 being highly relevant. Out of 32 items that were content validated, 31 items satisfied Aiken's index.

Table 1 - Aiken's index values for each question for content validation

S. No	Items	Aiken's index
1.	What is the leading cause of death among adults of age >30yrs in the world?	0.81
2.	The leading cause of death among adults of age >30yrs in India is?	0.86
3.	Smoking is a risk factor which can lead to the following diseases	0.81
4.	Unhealthy diet is a risk factor leading to the following diseases	0.88
5.	Checking for Oral/Dental signs & symptoms can help in diagnosing the following systemic diseases	0.93
6.	Poor Oral/Dental health can cause absenteeism from work.	0.91
7.	Have you heard about the 'Common Risk Factor Approach' (CRFA)?	0.91
8.	The concept of 'Common Risk factor Approach'	0.85
9.	Common Risk Factor Approach is likely to be more efficient and effective than programs targeting a single disease or condition.	0.83
10.	The Advantage(s) of the 'Common Risk factor Approach' is/are	0.88
11.	One practical solution to reduce Oral/Dental disease burden in India will be?	0.9
12.	Should 'Common Risk factor Approach' be included in the Orientation Course for NSS Programme Officers which is conducted soon after his/her appointment as Programme Officer?	0.86
13.	Would you like 'Common Risk factor Approach' to be included in the regular Refresher courses conducted for the NSS Programme Officers?	0.83
14.	NSS Programme Officers are at an advantage compared to common people who can utilize the concept of 'Common Risk	0.88

S. No	Items	Aiken's index
	Factor Approach' to reduce disease burden.	
15.	Would you like to incorporate the concept of 'Common Risk factor Approach' into the Health education programmes you plan for the public?	0.9
16.	Do you look forward to educate your Student volunteers about 'Common Risk Factor Approach' and its advantages?	0.9
17.	What are the strategies/ways by which you think you can incorporate 'Common Risk factor Approach' effectively in the NSS activities of your institution?	0.9
18.	If you would you like to introduce 'Common Risk factor Approach' to all the students of your institution apart from the NSS volunteers, how would you like to do it?	0.86
19.	How would you like this Common Risk factor Approach' to be incorporated in the NSS regular Refresher courses conducted for the NSS Programme Officers?	0.9
20.	Can you suggest any two Risk Factors prevailing among your family members and the possible measures you would like to take to control those risk factors?	0.9

Discussion

In order to conduct a health education program/workshop and educate the NSS Program officers, on Common Risk Factor Approach, who are the key personnel to disseminate this concept of Health Promotion through the NSS volunteers it is essential to know their current knowledge, attitude and behaviour towards the same.

A search was conducted among the published literatures to find the availability of pre-validated questionnaire to assess the KAB of NSS Programme Officers towards CRFA. There was neither a gold standard instrument nor a pre-validated questionnaire available.

Hence this study was conducted to facilitate the development of a new questionnaire to assess KAB of NSS Programme Officers towards CRFA.

For this study we have used A Sequential exploratory Study design which is a mixed method approach utilizing both qualitative and quantitative study designs. This is a type of study design wherein Quantitative data is used to enhance and complement qualitative results. Instrument construction and development is an example of this type of approach.

An FGD was opted for this study than a one on one interview to obtain diverse ideas and perceptions on our topic of interest i.e. Common Risk Factor Approach and NSS. As this topic has not been explored much in the literature we thought that a FGD would bring out the expression of different points of view with no pressure for consensus on the topic from our participants in a relaxed permitting environment.

Conclusion:

The CRFA – Q instrument assesses the Knowledge, Attitude and Behaviour of NSS Programme Officers on Common Risk Factor Approach under the various domains

identified. The instrument has demonstrated very good face and content validity. Findings show promise in the application of the instrument in evaluating baseline KAB and change due to any intervention for NSS Programme Officers on CRFA. The instrument is applicable in NSS camp settings, workshops, seminars and during the orientation and refresher courses conducted for the NSS Programme Officers.

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