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## Post-graduate education for medical specialists focused on patients with medically unexplained physical symptoms; development of a communication skills training programme

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### ABSTRACT

**Objective:** Stepwise description of the development of a post-graduate communication skills training programme for medical specialists focused on patients with medically unexplained physical symptoms (MUPS) to improve specialist interaction with MUPS patients.

**Methods:** Using the 'intervention mapping approach' we accomplished a needs assessment (literature study and pilot) to formulate intervention objectives and identify methods and techniques for a MUPS-focused communication skills training programme for medical specialists.

Results: A 14-h training programme which consists of experiential learning, role-play and feedback. Using skills from Cognitive Behavioural Therapy, medical specialists are stimulated to explore interrelating factors that reinforce symptoms, to reassure patients effectively and to provide plausible and understandable explanations for MUPS. Dealing with complex referrals and informing GPs properly are also practiced.

Conclusion: By applying the 'intervention mapping approach' we were able to create a feasible and promising intervention to improve specialist interaction with MUPS patients. Intervention effects are currently being assessed in a randomized controlled trial.

Practice implications: If the RCT demonstrates sufficient effectiveness and efficiency of the MUPS focused communication skills training programme for medical specialists the intervention could be embedded in post-graduate education of medical specialists and residents.

## 1. INTRODUCTION

Experiencing physical symptoms is quite normal. In community population surveys 85–95% of respondents report at least one symptom during the preceding week <sup>[1]</sup>. In general practice 30–50% of the presented physical symptoms remain medically unexplained. In hospital practice this figure is even higher: 40–60% <sup>[2]</sup>. Although most of these symptoms disappear within several months, 20–30% of medically unexplained physical symptoms (MUPS) still persist for more than one year <sup>[3]</sup>. Patients with persistent MUPS often have reduced subjective health with impaired physical, mental or social functioning, increased prevalence of co-morbid depressive or anxiety disorders and increased sick-leave <sup>[4]</sup>. MUPS are more prevalent among women and associated with older age, lower education, employment disability and unemployment <sup>[5]</sup>.

When physicians (such as GPs, neurologists, gynaecologists, gastroenterologists, rheumatologists) have no medical explanation for persisting physical symptoms many patients feel that they are not being taken seriously, whereas doctors often feel unable to come to an agreement with their patients on problem definition <sup>[6]</sup>. Patients are easily offended by incongruent messages about supposed non-somatic origins of the symptoms, and experience lack of empathy and acceptance for the physical symptoms <sup>[7]</sup>. These experiences hamper adequate doctor-patient interactions, a proper exploration of problems and management for persistent MUPS <sup>[8]</sup>. Several studies of patients' perspectives on consultations point to the importance of patients seeking legitimacy for their problems <sup>[9]</sup> and <sup>[10]</sup>. Qualitative analyses have shown how doctors' explanations can create common ground that allows patients and doctors to address both psychosocial and physical aspects of the symptoms and to avoid unnecessary somatic interventions <sup>[11]</sup>, <sup>[12]</sup> and <sup>[13]</sup>.

Teaching about symptom explanation in medical education is, however, limited and explanatory skills are underestimated in the curriculum <sup>[6]</sup>. MUPS-focused

communication skills training is available in Dutch post-graduate education for GPs and GP-trainees<sup>[14]</sup>, but not for medical specialists and residents. Comorbidity, lack of clear guidelines and limited knowledge about MUPS among non-psychiatric specialists<sup>[15]</sup>,<sup>[16]</sup> and<sup>[17]</sup> often cause unnecessary medical interventions and unintentionally reinforce somatization<sup>[18]</sup>. Normal test results of additional specialist investigations do not naturally reassure MUPS patients<sup>[19]</sup> and<sup>[20]</sup>. Medical specialists sometimes choose to leave patient-centred explanations about MUPS to the GP, and feel incompetent or unsatisfied about their consultations with MUPS patients<sup>[21]</sup>. To improve the quality of the consultation the medical specialist needs effective tools for determining the optimal strategy for patients with MUPS.

Development of post-graduate education programmes for medical specialists focused on MUPS patients might improve specialist MUPS care.

The purpose of this paper is to describe the development of an evidence-based training programme for medical specialists focused on patients with MUPS, which provides physicians with optimal communication tools for effective specialist MUPS care.

## 2. METHODS

We used the intervention mapping framework to systematically apply theories, empirical evidence and practice perspectives in the development of a MUPS-focused communication skills training programme for medical specialists<sup>[22]</sup>. Intervention mapping (IM) comprises six steps, which are shown in Fig. 1. In the first step we accomplished a needs assessment, including literature study and a pilot training programme for neurologists (staff and residents). The second step contained the description of the intervention objectives. In the third step we selected educational methods and techniques to match the intervention objectives. Then, in the fourth step we elaborated the intervention content, which is the MUPS-focused communication skills training programme for medical specialists. In the fifth step we formulated the implementation plan. In the final step we wrote a research protocol for a randomized controlled trial to evaluate the effectiveness and efficiency of the intervention. This section describes how the steps were operationalized.

### [FIGURE 1]

#### 2.1. Step 1. Needs assessment

We used results from our literature study on determinants of non-psychiatric specialist communication focused on patients with MUPS. The publications were retrieved from PubMed, PsychInfo and Embase till April 2011. Medically Unexplained Physical Symptoms was searched in four different ways. The word 'unexplained' and its synonym was combined with 'subjective symptoms' and its synonyms, with behaviours often occurring in MUPS patients and for general complaints (such as headache) combined with factors that make it unexplained (such as chronic). This search for MUPS was combined with a search for non-psychiatric specialist or secondary care and their synonyms and with a search for interaction as a combination of synonyms for the word professional near the word patient.

A pilot training programme, based on the existing Dutch GP training programme for MUPS patients<sup>[14]</sup>, was performed for the Department of Neurology of the Erasmus University Medical Centre Rotterdam in 2007/2008. We measured attendance, and self-reported evaluation of the 22 participating physicians about the content and set-up of the training programme, by a questionnaire.

## **2.2. Step 2. Intervention objectives**

The result of the pilot training programme was discussed by the Central Education Committee of the Erasmus University Medical Centre Rotterdam as well as six trainers from the MUPS-focused communication skills training programme for GPs. To achieve the overall aim of the intervention (to improve specialist care for MUPS patients) specific objectives for change of the specialists' behaviours were formulated, based on literature and pilot.

## **2.3. Step 3. Methods and techniques to change the doctor's behaviour**

Literature about educational methods and communication strategies for medical specialists in consultations with MUPS patients were studied to identify appropriate methods and techniques in accordance with the intervention objectives.

## **2.4. Step 4. Intervention content**

The intervention objectives and selected methods and techniques were written down in a training programme. A manual for participants and a separate manual for trainers were developed. Three draft versions of this programme were discussed by the chairman of the Central Education Committee, two educational advisors of the Erasmus Medical University Centre Rotterdam and six trainers, already selected for the implementation of this training programme in six different hospitals.

## **2.5. Step 5. Implementation**

Implementation of the intervention was realized in cooperation with six Dutch hospitals as part of a research project on the effectiveness and efficiency of a MUPS-focused communication skills training programme for medical specialists and residents. A total of 120 doctors was recruited and trained in groups of twelve persons by two senior-trainers; the trainings group could be extended to a maximum of 15 persons, in which case a third assistant-trainer was added.

## **2.6. Step 6. Evaluation**

To measure the effects of the intervention on doctor and patient outcomes we drafted a research proposal for a randomized controlled trial.

# **3. RESULTS**

## **3.1. Needs assessment**

We performed a literature review to determine which communication skills are known to have a positive influence on outcome and use of health care in MUPS patients<sup>[23]</sup>. The results confirmed the importance of communication in specialist

care for MUPS patients. Perceiving patients' expectations correctly enables specialists to influence patients' cognitions and attributions, to reduce patients' anxiety and to improve patients' satisfaction<sup>[24]</sup>. Providing patients with information about normal test results prior to investigation helps patients to feel more reassured after the consultation (12). Patients report less symptoms and health anxiety when symptoms are explained properly for example by using a communication protocol and an information leaflet in which the MUPS are explained<sup>[25]</sup>. Positive doctor-patient interaction and positive feedback from the doctor contribute to reduced use of health care and better coping with the symptoms<sup>[21]</sup>,<sup>[26]</sup>,<sup>[27]</sup>,<sup>[28]</sup>,<sup>[29]</sup> and<sup>[30]</sup>. These elements were integrated in the training programme.

A 14-h pilot training programme was conducted in two groups for a total of 22 neurologists (staff and residents), directed by two senior trainers. The training model was based on experiential learning and particularly focused on the improvement of exploration and information skills of medical specialists<sup>[31]</sup>. Table 1 shows the results of the pilot evaluation. Nineteen of the 22 enrolled physicians attended the course completely and completed the questionnaire.

#### [TABLE 1]

Participants evaluated the specific skills for symptom exploration, informing patients about the nature of medically unexplained symptoms and effectively reassuring patients as very useful. Skills that required more than one consultation, like symptom diaries and reattribution, or were perceived to be the domain of other health care professionals (such as psychologists or GPs), were evaluated as less useful in specialist practice and removed from the training programme.

### 3.2. Intervention objectives

Based on the literature the achievement of knowledge about the epidemiology, aetiology and treatment of patients with MUPS and somatoform disorders was selected to be the first objective in the training programme<sup>[18]</sup>. The acquisition of skills in explanation such as informing patients about the nature of MUPS and effectively reassuring patients with MUPS was chosen as the second major objective<sup>[6]</sup>. Answering patients' main concerns, performing attention to the somatic symptoms, sharing conclusions based on findings and using clinical experience are key elements of effective reassuring<sup>[32]</sup>. Adequate report to the GP who had referred the patient, containing the explanation and advice given to the patient about MUPS was defined as the third main objective of the course<sup>[33]</sup>.

### 3.3. Methods and techniques to change doctors' behaviours

The Structured Learning Technique (SLT) and Cumulative Micro Training (CMT) were used in the design of the communication skills training programme for medical specialists<sup>[34]</sup> and<sup>[35]</sup>. Structured learning focuses on shaping conditions that facilitate acquisition of skills and transfer of these skills to daily practice. Cumulative Micro Training (CMT) is a method in which theoretical instruction, modelling,



practicing by role plays, feedback, social and self reinforcement and identifying personal learning points improve professionals' competence in communication skills. Techniques from Cognitive Behaviour Therapy were adjusted to improve the exploration of symptoms and explanation of MUPS by medical specialists<sup>[36]</sup>. In the exploration phase of the consultation for example doctors were taught explicitly to use the CBT-scheme in their search for connections between patients' cognitions, emotions, behaviour that might reinforce the symptoms.

### **3.4. Intervention content (duration per session 4 h, the last session 2 h)**

#### *3.4.1. First session*

As a result of the previous steps we started the training programme with an exercise, which enabled the medical specialists to gain awareness of their personal thoughts, feelings and behaviour towards patients with MUPS. They were invited to write associations about a MUPS patient in key-words and categorize these key-words under the headings Cognitions, Emotions and Behaviour. Plenary discussion and a search for interrelating factors that reinforce symptoms led to explanation of the theoretical principles of Cognitive Behaviour Therapy. Practical exercises on symptom exploration on Somatic, Cognitive, Emotional, Behavioural and Social aspects of patient's symptoms (SCEBS symptom exploration) was the second exercise. The skills were demonstrated by a physician and a simulated patient and shown on a DVD. Summarizing the patient's worries and informing patients about interrelating factors that reinforce their symptoms was the third exercise. This session ended with a practical exercise in which doctors were taught to present their analysis of the interrelating factors that reinforce symptoms in a drawn vicious circle or downward spiral. Homework consisted of applying the skills in their consultations and reading the manual.

#### **3.4.2 Second Session**

The session started with sharing the results of practicing the skills of the first session during the homework exercise. Effectively reassuring MUPS patients was practiced. Skills necessary in the management of the expectations of MUPS patients were demonstrated by a DVD and practiced. Discussions about complex referrals and cooperation with the referring physician were facilitated. In exercises skills such as 'how to inform a patient prior to testing' and 'informing GPs properly' were practiced. Homework consisted again of using the skills in real consultations and reading the next section of the manual.

#### **3.4.3 Third session**

This session started with the exchange of reports to the GP, written by the specialist about a MUPS patient in the interval between sessions. Discussion about the quality of the letters and feedback by peers and trainers aimed to improve the specialist care and cooperation with the referring GPs. Information and instruction about referring patients to mental health care was provided. In dyad the medical specialists presented cases in which they practiced the new skills from previous sessions and discussed

failures and successes. Homework consisted of watching their own videotaped consultations with MUPS patients prior to the training.

### **3.4.4 Fourth session**

The fourth session started with a self-efficacy questionnaire about the required skills for dealing effectively with MUPS<sup>[37]</sup>. The skills on which the doctors evaluated themselves as being less competent were practiced once more. A goal setting exercise at the end of the training reinforced the implementation of the MUPS-focused consultation skills. Participants formulated a personal, specific goal to strengthen their skills during the next weeks in their consultations with MUPS patients. This specific goal was sent back to them on a post-card after a month as a reminder. An evaluation form about the set-up and the content of the training was the closing activity of the training programme. <sup>Table 2</sup> presents a summary of the MUPS-focused doctor-patient communications skills and <sup>Table 3</sup> shows an overview of the content of the original GP MUPS-focused training programme and the final specialist MUPS-focused training programme.

[TABLE 2] [TABLE 3]

## **3.5 Implementation**

In August 2011 the training was completed. An introduction leaflet was developed and a website with information about the course was designed. Medical specialists and residents of six Dutch hospitals could register online as participants of the randomized controlled trial, with courses scheduled in 2012 and 2013.

## **3.6 Evaluation**

We designed a research protocol for a randomized controlled trial to measure the effectiveness and efficiency of this communication skills training programme for medical specialists focused on MUPS patients. The objective is to improve medical specialist care for MUPS patients.

## **4. DISCUSSION AND CONCLUSION**

### **4.1. Discussion**

#### *4.1.1. Main findings*

The purpose of our paper was the stepwise description of the development of an evidence-based training programme for medical specialists focused on patients with MUPS in order to provide physicians with optimal communication tools for effective specialist MUPS care.

Medical specialists reported to profit from the skills in exploring, informing and reassuring patients with MUPS and experienced more satisfaction in their medical encounters with MUPS patients. Specialists and residents experienced the consultation skills training programme focused on MUPS patients as useful for their clinical practice.

#### *4.1.2. Comparison with literature*

A recent overview of systematic reviews on effective training strategies for teaching communication skills to physicians by Berkhof et al. [38] showed that effective training programmes include active, practice-oriented strategies. They identified twelve systematic reviews on communication skills training programmes for physicians. Training programmes were effective if they lasted for at least one day, were learner-centred, and focused on practising skills. The best training strategies within the programmes included role-play, feedback, and small group discussions. In a crossover randomized controlled trial Fosli Jensen et al. [39] evaluated the effectiveness of a short course in clinical communication for 51 hospital doctors. They demonstrated that a 20-h course based on the original American Four Habits model could be generalized across medical and national cultures, resulting in a significant improvement in communication skills as measured by the Four Habits Coding Scheme among hospital employed doctors across specialties. These Four Habits were: invest in the beginning, elicit the patient's perspective, demonstrate empathy and invest in the end. Both studies were recently performed and confirmed the chosen set up for our training course for hospital doctors.

#### *4.1.3. Strengths and limitations*

The feasibility of the training programme was measured by the attendance of the doctors to the course, which was 86%. Second, the training programme had a very strong connection with the daily, clinical practice. Based on the steps of the Intervention Mapping the content of the final training has gained more focus and efficiency.

The evaluation of the pilot training programme was based on self report, which can be seen as a limitation. Another limitation is that the trainees of the pilot programme were all neurologists and residents in neurology. Therefore it is questionable whether the results can be generalized to other medical specialisms.

### **4.2. Conclusion**

Medical specialists value this evidence-based training programme as highly relevant in their consultations with MUPS patients and are willing to participate in this 14-h consultation skills training programme focused on MUPS patients based on experiential learning, modelling, role-play, feedback and techniques from Cognitive Behavioural Therapy. Further research on the effectiveness and efficiency of consultation skills training programmes for medical specialists focused on MUPS patients aimed at improving medical specialist care for MUPS patients is recommended. We welcome international evaluation of and collaboration on post-graduate MUPS focused education programmes for medical specialists and residents.

### **4.3. Practice implications**

If the randomized controlled trial demonstrates effectiveness and efficiency of the MUPS focused communication skills training programme for medical specialists the intervention could be embedded in post-graduate education of medical specialists and residents.



#### **CONFLICTS OF INTEREST STATEMENT**

The authors indicated no potential conflict of interest

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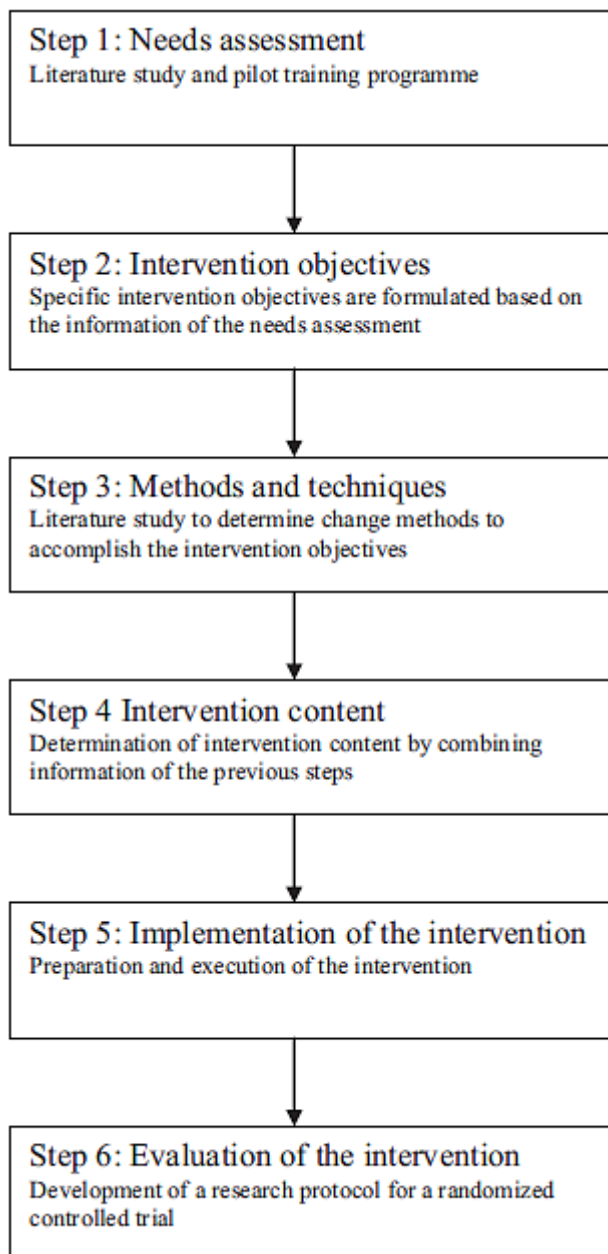
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## TABLES AND FIGURES

Fig. 1. Model of intervention mapping.



**Table 1**  
Evaluation of pilot training programme (N=22; 3 participants did not fill out the form).

	Not useful	Rather useful	Very useful
<i>Content of the course</i>			
Literature	0	7	11
<i>Practicing skills</i>			
SCEBS symptom exploration	0	1	18
SCEBS informing	0	5	14
SCEBS planning	1	11	7
instruction symptom diary	1	8	7
discussing symptom diary with patient	1	7	11
retribution	0	11	8
effective reassurance	0	3	16
negotiating a final test	0	1	14
challenging alarming thoughts (practised in one group)	1	5	4
Discussing experiences/patient case	0	3	15
<i>Course materials</i>			
Literature	0	6	13
<i>Volume of the training course</i>	Too long	Just right	Too short
Duration of the course	2	15	2
Intervals between the sessions	2	16	1
Time investment for the different elements of course	0	18	0
<i>Approach by trainers</i>	Inadequate	Mediate	Good
Instructions	0	0	19
Theoretical knowledge	0	3	16
Feedback	0	0	19

**Table 2**  
MUPS-focused doctor-patient communication skills.

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<b>Skills Exploration with SCEBS</b>	
1	Explores physical symptoms (which, where, when, etc.) (Somatic)
2	Interested in patient's understanding of problem (Cognitions)
3	Encourages expressions of emotions related to symptoms (Emotions)
4	Shows interest in impact of symptoms on patient's activities (Behaviour)
5	Shows interest in impact of symptoms on patient's social environment (Social)
6	Acknowledges the reality of patient's symptoms
<b>Skills Informing about findings and explains perpetuating factors</b>	
7	Summarizes information on all SCEBS aspects using patient's perspective
8	Frames information in positive language
9	Explains that symptoms aren't caused by disease
10	Explains perpetuating factors
11	Uses drawings in the explanation of MUPS
12	Acknowledges perspectives of patient concerning symptoms and treatment options
13	Explains perspectives of doctor concerning symptoms and treatment options
14	Connects perspectives of doctor AND patient
15	Allows time for information to be absorbed
<b>Skills Follow up and appointments</b>	
16	Explains rationale/possible outcomes of test results prior to testing
17	Effectively tests for comprehension
18	Encourages involvement in decision-making
19	Explores acceptability of treatment/follow-up plan
20	Explores barriers to implementation of treatment/follow-up plan
21	Summarizes plans for follow-up
22	Displays facilitating non-verbal behaviour in the consult

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**Table 3**  
Original GP and final specialist MUPS training programme.

Original GP MUPS-focused training course	Specialist MUPS-focused training course
<p><i>First session</i> Introduction Exploring learning goals</p> <p>Practicing skills: Exploring Somatic, Cognitive, Emotional, Behaviour and Social Aspects of the complaints (SCEBS) Informing patients about MUPS Planning Discussion and homework</p> <p><i>Second session</i> Exchange of experiences Practicing skills: Instruction of symptom diary Evaluation of symptom diary Reattribution</p> <p>Discussion and homework</p> <p><i>Third session</i> Exchange of experiences Practicing skills: Reassuring patients with persistent illness worry Quit reassuring patients with persistent illness worry Challenging alarming thoughts Negotiating final test Referring to mental health care Discussion and homework</p> <p><i>Intervision with participants in small groups</i></p> <p><i>Fourth session</i> Presentation of case-material Feedback on audio/video-tapes Practicing what is still difficult Discussion and evaluation of course</p>	<p><i>First session</i> Introduction Exploring learning goals Reflection on personal cognitions, emotions and behaviour towards MUPS patients Practicing skills: Exploring Somatic, Cognitive, Emotional, Behaviour and Social Aspects of the complaints (SCEBS) Informing patients about MUPS Drawing vicious circle of maintaining factors for MUPS Discussion and homework</p> <p><i>Second session</i> Exchange of experiences Practicing skills: Reassuring effectively Management of expectations Dealing with complex referrals Report findings in letter to GP Discussion and homework</p> <p><i>Third session</i> Exchange and discussion of their letters to GP Treatment of MUPS in Mental Health Care Presentations in couples of case-material and new skills</p> <p>Discussion and homework</p> <p><i>Individually watching of own video-taped MUPS consultations</i></p> <p><i>Fourth session</i> Self-efficacy of their MUPS consultation skills Practicing what is still difficult SMART intention for keeping skills in shape Discussion and evaluation of course</p>