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Training specialists to write appropriate reply letters to general practitioners about patients with medically unexplained physical symptoms; A cluster-randomized trial.

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ABSTRACT

Objective: To evaluate effects of a communication training for specialists on the quality of their reply letters to general practitioners (GPs) about patients with medically unexplained physical symptoms (MUPS).

Methods: Before randomization, specialists included ≤3 MUPS patients in a multi-center cluster-randomized trial. In 14 h of MUPS-specific communication training, 2.5 h focused on reply letters. Letters were discussed with regard to reporting and answering GPs' referral questions and patients' questions, and to reporting findings, explaining MUPS with perpetuating factors and giving advice. After the training, all doctors again included ≤3 MUPS patients. Reply letters to GPs were assessed for quality and blindly rated on a digital scale.

Results: We recruited 478 MUPS patients and 123 specialists; 80% of the doctors wrote ≥1 reply letters, 285 letters were assessed. Trained doctors reported (61% versus 37%, OR = 2.55, F(1281) = 6.60, $p_{group*time}$ = .01) and answered (63% versus 33%, OR = 3.31, F(1281) = 5.36, $p_{group*time}$ = .02) patients' questions more frequently than untrained doctors.

Conclusion: Training improves reply letters with regard to patients' questions, but not with regard to the following: GPs' referral questions, somatic findings, additional testing, explaining, and advice.

Practice implications: Training specialists to write appropriate reply letters needs more focus on explanation and advice.

1. Introduction

Patients with medically unexplained physical symptoms (MUPS) are substantially prevalent in the caseload of general practitioners and medical specialists [1,2]. Medical specialists find patients with invalidating symptoms without underlying pathology much more difficult to handle than patients with symptoms that are medically explained [3]. Specialists use a predominant disease-

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centered approach that seems inadequate for many of these symptom-prompted encounters [4]. On the other hand, many patients with MUPS do not feel understood, and belief that their symptoms are not taken seriously and need further investigation [5,6]. Repeated referrals and medical investigations suggest that patients' needs are unmet and that healthcare is used inefficiently–suggestions that may be reinforced if the exchange of information in general practitioners' (GPs') referrals and specialists' reply letters is inadequate [7–11]. Various studies have indicated that while GPs should be more specific about their reasons for referral, specialists should focus more on meeting GPs' need for information [11–13]. After an outpatient clinic visit, GPs often discuss specialists' findings with the patient; if necessary, they can correct the patient's misinterpretations and aim to increase patients' quality of life by perpetuating factors that maintain the symptoms. As MUPS can be explained and interpreted in various, sometimes inconsistent ways, it is important for specialists' reply letters to contain valid information that supports GPs and patients in gaining trust, reassurance and effective follow-up care [14]. To improve reply letters regarding MUPS patients, we therefore developed postgraduate training for medical specialists that included communication at the interface between specialist care and primary care [15]. To determine whether this training improved specialists' communication to GPs we measured whether reply letters about referred MUPS patients of trained medical specialists contained more specific information than reply letters of untrained medical specialists.

2. Methods

2.1. Study design

We designed a multi-center cluster-randomized trial to evaluate the effectiveness of a communication skills training for medical specialists to improve MUPS specialist care. Part of this training focused on specialists' reply letters to GPs. Medical specialists and residents from six different hospitals[1] in the Netherlands were involved in this study. To participate they had to have consultation hours, in which they encountered patients with MUPS as well as symptoms stemming from a somatic disease that are more severe than might be expected on the basis of disease parameters.

The medical receptionist briefly informed the patients about the study. Patients' participation was voluntary; they could decide to end it at any time, with their data being deleted immediately upon their request. The medical specialists and residents were instructed to include new and follow-up patients at the end of a consultation only when 'no medical explanation or just a partial medical explanation defined patient's symptoms. After the consultation the research assistant informed the patient about all study-related procedures, including further use of data and completion of web-based questionnaires. To prevent patient-induced bias during the consultation, more detailed information about the scope of the study was given by the research assistant afterwards. A patient information letter was provided, and patients were included in the study only after written informed consent had been obtained. Upon non-participation or withdrawal, all data were deleted by the research assistant.

After the medical specialists and residents had obtained up to three MUPS patients, a web-based randomization program was used to allocate them at random to the intervention or the control group. To ensure overall balance and balance within each group, they were stratified by a minimization procedure. Stratification factors were medical center and clinical experience (medical specialist versus resident).

Approximately six months after randomization, the research assistants contacted the specialists and residents to organize the post-measurement inclusion of MUPS patients. For post-measurements, new patients were recruited who had not participated in the pre-measurements. Doctors allocated to the intervention group were trained in MUPS communication skills, whereas doctors allocated to the control group treated patients with care as usual.

2.2. Intervention

The MUPS-focused communication skills training for medical specialists and residents consisted of four sessions with a total duration of 14 h; it has been described extensively elsewhere [15]. To summarize: the training was organized in small groups (7 to 12 participants) and provided by two trainers experienced in post-graduate education and MUPS skills for medical specialists. All the trainers were instructed (by AW and AHB) about the training model. Medical specialists were informed about the Dutch multidisciplinary guideline for MUPS and somatoform disorders and they practiced patient–centered communication [15].

One hundred and fifty minutes of the overall training were devoted to reply letters. Participants exercised on writing referral letters and peer-reviewed each other's real-practice reply letters. Letters were discussed with regard to the following: reporting and answering GPs' referral questions and patients' questions, reporting of findings, explaining MUPS with perpetuating factors, and giving advice.

2.3. Data collection

Specialists' reply letters to GPs about the MUPS patients included were retrieved by a research assistant (GL), collected through the electronic patient records and anonymously uploaded into the research database. If reply letters had not been traced six months after the consultation date, the researcher (AW) defined them as missing.

2.4. Outcome measure: quality of reply letters

The quality of reply letters was derived from the insights of the Dutch multidisciplinary guidelines on MUPS. It was measured on the basis of each of the eight following items, and also by the sum of these items: (1) reporting and (2) answering GPs' referral questions; (3) reporting and (4) answering patients' questions; (5) reporting of somatic findings; (6) reporting of additional testing; (7) explaining MUPS and perpetuating factors; (8) and giving advice to patient and GP [16].

Each item was coded on a digital scale (0 = no or non-specific information, 1 = specific information).

2.5. Rating procedure

Six trained doctors, (two neurologists (MW, EV), two internists (PD, AB), one gastroenterologist (AO) and one GP (AHB)) were instructed in a workshop about rating procedures. They blindly scored the reply letters independently, which meant that they had no knowledge about doctor or patient, no knowledge about when the reply letters had been written (before or after the training period) and no knowledge about the intervention or control status of the doctor. The researcher (AW) randomly allocated the reply letters to the raters. To obtain adequate inter-rater reliability the

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first 10 reply letters were rated by all raters, differences in rating were discussed and rating procedures sharpened. We considered the rating GP (AHB) to be the gold standard for the right scores. To measure inter-rater reliability, another 14 reply letters were assessed in four different rounds by all six raters. After each round, the researcher (AW) discussed the ratings with the GP, resolved disagreements by arguments and provided feedback to all the raters.

2.6. Statistical analysis

The dependent variables for this paper were the eight, dichotomous items that were or are not present in the reply letters, together with their sum score. The independent variables were the treatment group (control versus intervention) and the time of the measurement (pre-training or post-training of the intervention group). All analyses were performed (LA, AW, JS) with the use of SPSS software, version 21. Nominal variables were calculated with frequencies and cross tables. Means and standard deviations (SDs) of the scale scores were calculated for the intervention group and control group. Differences between pre- and post- measurements for both groups were compared across the groups using the generalized linear mixed model, taking account of the nominal measurement level of the dependent variable and of the clustering of patients within doctors. A random doctor effect was included in the models to accommodate for the correlation among patients within the same doctor. We calculated the odds ratios of the intervention group versus the control group on the measurements before and after the training of the intervention group. To check whether there was a difference between the OR's before versus after the training, we looked at the *p*-value of the interaction effect of treatment group by measurement time (before or after the training). To check whether the difference between the sumscore before and after the training varied across the control group versus the intervention group, we looked at the F-statistic and the corresponding p-value of the interaction effect of treatment group by measurement time (before and after the training), based on the generalized linear mixed model with the sumscore as dependent variable.

The significance level was set at .05.

2.7. Medical ethics review and approval

The Medical Ethics Research Committee of the Erasmus MC reviewed the study design and approved the study. The Boards of the other five participating hospitals officially agreed to participate in the study, on the basis of advice by their local Medical Ethics Committees. The trial was registered at the Dutch Trial Registration (NTR2612).

3. Results

3.1. Participants

Between November 2011 and April 2014, a number of 123 medical specialists and residents from eleven specialties were included in the study. Sixty-two doctors were allocated to the intervention and 61 to the control group. All participants had included at least one MUPS patient in the pre- measurements. Eighty percent completed the study by including at least one MUPS patient in the post-measurements. There were no statistically significant differences between intervention and control doctors with regard to background characteristics (Table 1). The CONSORT diagram of the study is described in Fig. 1.

Table 1
Doctor characteristics.

Participating doctors	Interventions $N = 62$	Controls $N = 61$
Gender		
Male	$n = 28$ (45%)	$n = 24$ (39%)
Female	$n = 34$ (55%)	$n = 37$ (61%)
Resident/specialist		
Resident	$n = 36$ (58%)	$n = 38$ (62%)
Specialist	$n = 26$ (42%)	$n = 23$ (38%)
Age (SD)	36.7 (8.9)	36.6 (10.1)
Years of experience (SD)	7.5 (7.9)	7.9 (9.4)
Specialism		
Anesthesiology	$n = 2$	$n = 4$
Dermatology	$n = 2$	$n = 0$
Gynecology	$n = 2$	$n = 5$
Internal medicine	$n = 30$	$n = 25$
ENT	$n = 0$	$n = 4$
Lung diseases	$n = 1$	$n = 1$
Gastroenterology	$n = 4$	$n = 7$
Neurology	$n = 13$	$n = 9$
Rheumatology	$n = 6$	$n = 1$
Cardiology	$n = 1$	$n = 0$
Rehabilitation medicine	$n = 1$	$n = 3$
Hospital		
Albert Schweitzer Hospital Dordrecht	$n = 2$	$n = 4$
Diakonessenhuis Utrecht	$n = 15$	$n = 11$
Erasmus MC University Medical Centre Rotterdam	$n = 18$	$n = 22$
Maasstad Hospital Rotterdam	$n = 3$	$n = 2$
MC Haaglanden The Hague	$n = 13$	$n = 12$
St Antonius Hospital Nieuwegein	$n = 11$	$n = 10$

3.2. Reply letters about MUPS patients

A total of 478 MUPS patients participated in the study, 278 at baseline and 200 at follow-up, of whom 170 (61%) respectively 115 (58%) had a reply letter to the GP in their electronic patient record. Over half of the patients were female (63%); their average age was 46 (SD = 16). Patients visited the outpatient clinics for Internal Medicine (37%), Neurology (31%), Gastroenterology (7%), Anesthesiology (6%) or one of the other clinics (19%). On the basis of the symptoms described in the reply letters, they were classified into the following clusters: fatigue (26%), gastrointestinal (11%), musculoskeletal (18%), malaise (3%), other symptoms such as headache or dizziness (15%), or combinations of two or more symptom clusters (26%). The majority of the patients (72%) had symptoms in one cluster, which indicates mild MUPS including fair chances for recovery. Patients with combined symptoms had fatigue more than they had other symptoms. Table 2 shows the patient characteristics.

From 193 patients (40, 4%) the reply letters were lacking, mainly because no letter was found in their electronic patient record six months after the consultation ($n = 119$); often these patients appeared to be chronic patients with co-morbid MUPS. In some

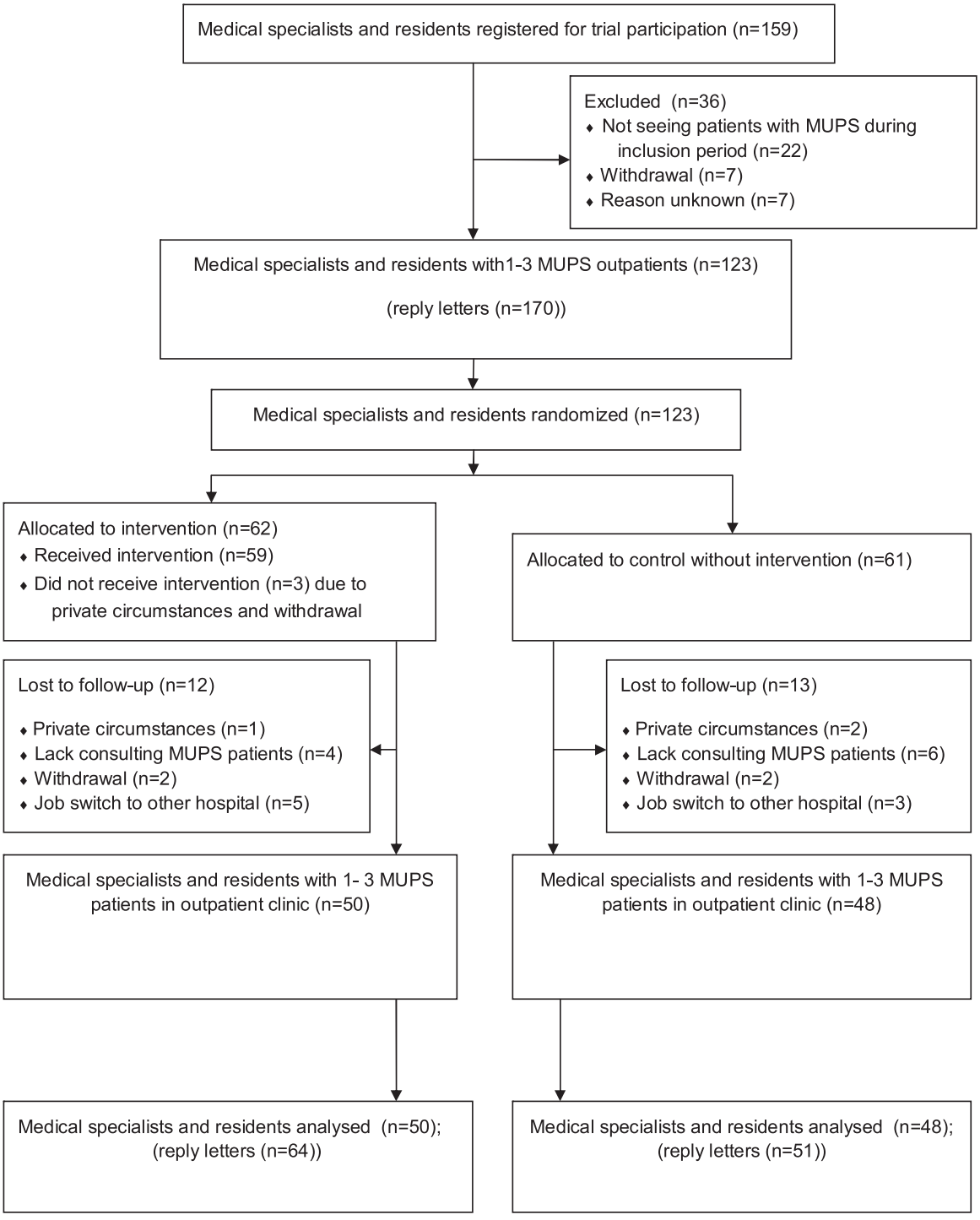

Fig. 1. CONSORT diagram.

cases the hospital policy prohibited access to electronic patient records ($n = 35$) or the receptionist lacked time to search for the letters ($n = 16$). In a few cases technical problems-such as the file could not be opened or modified- ($n = 7$), and invalid patient identification numbers ($n = 7$) caused problems in retrieving reply letters. Exclusion of non-MUPS patients ($n = 5$), or patients' withdrawal ($n = 4$) were reasons for not retrieving patient's reply letter.

Post-measurements were performed an average of 82 days (SD 54, 1-287) after the training. The reply letters were written an average of 112 days (SD 97, 2-361) after the training.

3.3. Assessment of the reply letters

Twenty-four of the 285 reply letters were assessed by all six medical doctors (see paragraph 2.5). These letters had sufficient inter-rater reliability (Kappa 0.6 and Phi 0.6) between the rating GP (AHB) as the gold standard and the other five raters.

Table 3 shows the effects of the intervention on the quality of reply letters. We found no differences on baseline scores between control and intervention group on all variables. The effects of the training were significantly increased frequencies of reporting (61% versus 37%, OR = 2.55, $F(1281) = 6.60$, $p_{group*time} = .01$) and answering (63% versus 33%, OR = 3.31, $F(1281) = 5.36$, $p_{group*time} = .02$) patients' questions. No significant effects were found with regard to GPs' referral questions, somatic findings, additional testing, explaining and advice. The average of the sumscores is about 4 (Table 3). Since we were coding 8 features, this means that the reply letters contained about 50% of the information we would have expected. Less than 2% of the letters contained no features at all, while about 7% of the letters contained all eight features. Sixty percent of the letters included four or less features. The modus of the number of features was equal to three, 20% of all letters contained 3 features. The most frequent combinations of the features mentioned in the letters were "Reporting of somatic findings" + "Reporting of additional testing"+"Giving advice to patient and GP" (10% of the letters), "Reporting of somatic findings"+"Reporting of additional testing" (10%) and "All eight features" (7%). The sumscore of all eight items showed no statistically significant overall effect of the training ($F(1281) = 3,22$, $p = .07$).

Table 2
Patient characteristics.

Participating patients with reply letters (285)	Interventions ($n = 156$)	Controls ($n = 129$)
Gender		
Female	103 (66%)	76 (59%)
Male	53 (34%)	53 (41%)
Age in years (SD)	45.3 (17.0)	46.9 (15.5)
Specialism		
Anesthesiology	6	11
Dermatology	2	0
Gynecology	3	9
Internal medicine	63	42
ENT	0	6
Lung diseases	0	3
Gastroenterology	12	9
Neurology	52	35
Rheumatology	13	0
Rehabilitation medicine	5	7
MUPS clusters		
Fatigue	37 (24%)	36 (28%)
Gastrointestinal	17 (11%)	14 (11%)
Musculoskeletal	31 (20%)	20 (16%)
Malaise	3 (2%)	5 (4%)
Other symptoms	26 (17%)	16 (12%)
Combined symptoms	41 (26%)	34 (26%)
Missing	1 (1%)	4 (3%)
Hospital		
Albert Schweitzer Hospital Dordrecht	10	9
Diakonessenhuis Utrecht	37	32
Erasmus MC University Medical Centre Rotterdam	32	28
Maasstad Hospital Rotterdam	7	5
MC Haaglanden The Hague	19	16
St Antonius Hospital Nieuwegein	26	20

4. Discussion and conclusion

4.1. Discussion

4.1.1. Main findings

While trained medical specialists and residents reported and answered patients' questions more in their reply letters to GPs than untrained doctors did, the only effect of our training involved the improved frequency with which patients' questions were addressed in reply letters. The negative findings in the items 'reporting GP's referral question' and 'answering GP's referral question' can be explained by the fact that these items are dependent on the information in the GP's referral letter to the specialist. If a GP does not present a referral question, the specialist cannot report or answer it. Our observation that GPs' questions are hardly answered, means that both medical specialists and GPs need to be trained in writing appropriate referral and reply letters in order to improve health care for patients with MUPS. Unsurprisingly, the items 'reporting of somatic findings' and 'reporting additional testing' were well developed among specialists and left little room for improvement. 'Explaining MUPS with perpetuating factors' and 'giving advice to patient and GP' were reported in only 27–41% and 54–69% of the reply letters.

Our study showed that specialists write fewer reply letters concerning patients with a chronic disease and co-morbid MUPS, most of whom are under continuing specialist care, of which the GP has been notified in earlier correspondence.

4.1.2. Comparison with literature

We found no equivalent research on specialists' reply letters concerning MUPS patients. By broadening our scope of interest, we found research by Gol et al. on 451 GP letters concerning patients referred to internal medicine outpatient clinics. This showed that referral letters concerning MUPS patients contained vague and non-specific information in lay terms more often than referral letters about patients whose somatic symptoms had been explained by a general medical diagnosis [17].

4.1.3. Strengths and limitations

A first strength of our study is the fact that the engagement of 123 doctors from various hospitals and specialties in the study enabled us to assess the effectiveness of the training in different medical settings. A further strength is that the outcomes at doctors' level were rated at the highest level of performance according to Miller, a four-level scale that discerns *knows* (level 1), *knows how* (2), *shows* (3) and *does* (4), where the *does* level refers to measurement of clinical performance in real practice [18]. As most letters were written four months after the training, and as patients' questions were reported and answered more frequently by the intervention doctors, we conclude that the intervention was effective over time.

A limitation of the study is the low number of reply letters per doctor. Our finding that more than 70% of the MUPS patients had symptoms in only one cluster may be an overestimation: even

Table 3
Doctor communication scores in reply letters.

	Pre-training measurements			Post-training measurements			
	Control ($n=78$)	Interventio ($n=92$)	OR_Pretraining	Control ($n=51$)	Intervention ($n=64$)	OR_Posttraining	*P* value OR_Pre versus OR_Post[2]
GP's referral question is reported	$n=26$ (33%)	$n=33$ (33%)	1.04 (0.48–2.28)	$n=16$ (32%)	$n=28$ (44%)	1.73 (0.74–4.05)	F(1, 281) = 1.40, $p=.24$
GP's referral question is answered	$n=23$ (30%)	$n=34$ (37%)	1.33 (0.63–2.82)	$n=17$ (33%)	$n=26$ (41%)	1.37 (0.59–3.22)	F(1, 281) = 0.04, $p=.84$
Patient's question is reported	$n=32$ (41%)	$n=30$ (33%)	0.69 (0.35–1.35)	$n=19$ (37%)	$n=39$ (61%)	2.55 (1.06–6.12)	F(1, 281) = 6.60, $p=.01$*
Patient's question is answered	$n=25$ (32%)	$n=30$ (33%)	1.03 (0.51–2.09)	$n=17$ (33%)	$n=40$ (63%)	3.31 (1.47–7.46)	F(1, 281) = 5.36, $p=.02$*
Reporting of somatic findings	$n=63$ (81%)	$n=79$ (86%)	1.67 (0.60–4.63)	$n=43$ (84%)	$n=57$ (91%)	1.71 (0.55–5.34)	F(1, 281) = 0.03, $p=.86$
Reporting of additional testing	$n=55$ (71%)	$n=75$ (82%)	2.15 (0.86–5.38)	$n=39$ (77%)	$n=48$ (75%)	0.99 (0.33–2.92)	F(1, 281) = 2.11, $p=.15$
Explaining MUPS and perpetuating factors	$n=23$ (30%)	$n=25$ (27%)	0.87 (0.41–1.81)	$n=16$ (31%)	$n=26$ (41%)	1.50 (0.59–3.81)	F(1, 281) = 1.07, $p=.30$
Giving advice to patient and GP	$n=48$ (62%)	$n=50$ (54%)	0.75 (0.35–1.57)	$n=35$ (69%)	$n=42$ (66%)	0.82 (0.33–2.06)	F(1, 281) = 0.02, $p=.89$
Sum score (mean (s.e.)	3.8 (0.23)	3.9 (0.21)	$b=0.06$ (0.38)	4.0 (0.25)	4.8 (0.27)	$b=0.78$ (0.44)	F(1, 281) = 3.22, $p=.07$

though a patient could suffer from MUPS in several clusters, a medical specialist may focus mainly on symptoms within their specialty.

As we did not retrieve or study the GPs' referral letters about the included patients, we could not give reasons why 50–75% of GPs' referral questions were not reported or answered by specialists. Grol showed that GPs' referral questions were often unspecified, and led to unspecific answers [11].

4.2. Conclusion

Training increases the quality of reply letters only with regard to addressing patients' questions: medical specialists and residents report and answer patients' questions more frequently. Their explanations of MUPS with perpetuating factors remained relatively few.

4.3. Practice implications and further research and training

Specialists' reply letters need to be improved with regard to explaining MUPS with perpetuating factors and advice to patients and GPs. This would create greater consistency in the information patients received from the medical specialist and GP about their symptoms. Future training programs for medical specialists should therefore pay greater attention to rehearsing explanations and advice. Training should have a greater focus on MUPS-tailored explanatory models and expressions, that specialists could transfer into automatic generated text that helped them to report on MUPS explanations in reply letters. If referral and reply letters about MUPS patients were discussed with experts, more would be learned about ways of improving the exchange of valid information in MUPS care at the interface between primary and secondary care.

Authorship statement

All authors fulfilled the criteria for authorship and contributed to this paper.

Conflicts of interest

The authors indicated no potential conflict of interest.

[2] The difference between the % in the Control group and the % in the Intervention group on the Pre-training Measurements on the one hand, compared to the difference between the % in the Control group and the % in the Intervention group on the Post-training Measurements on the other hand, tested by the interaction effect with the Generalized Linear Mixed Model (main effects: Group and Time), with a logit link for the dichotomous scores and an identity link for the sum score.

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References

[1] T.C. Olde Hartman, H. Woutersen-Koch, H.E. Van Der Horst, Medically unexplained symptoms: evidence, guidelines, and beyond, Br. J. Gen. Pract. 63 (2013) 625–626.
[2] C. Nimnuan, M. Hotopf, S. Wessely, Medically unexplained symptoms: an epidemiological study in seven specialities, J. Psychosom. Res. 51 (2001) 361–367.
[3] A.J. Carson, J. Stone, C. Warlow, M. Sharpe, Patients whom neurologists find difficult to help, J. Neurol. Neurosurg. Psychiatry 75 (2004) 1776–1778.
[4] K. Kroenke, A practical and evidence-based approach to common symptoms. A narrative review, Ann. Intern. Med. 161 (2014) 579–586.
[5] S. Levy, M. Segev, R. Reicher-Atir, A. Steinmetz, N. Horev, Y. Niv, et al., Perceptions of gastroenterologists and patients regarding irritable bowel syndrome and inflammatory bowel disease, Eur. J. Gastroenterol. Hepatol. 2 (2014) 40–46.
[6] A.M. Van Dulmen, J.F. Fennis, H.G. Mokkink, H.G. Van der Velden, G. Bleijenberg, Doctor-dependent changes in complaint-related cognitions and anxiety during medical consultations in functional abdominal complaints, Psychol. Med. 25 (1995) 1011–1018.
[7] A. Weiland, R. Van de Kraats, A.H. Blankenstein, J.L.C.M. Van Saase, H.T. Van der Molen, W.M. Bramer, et al., Encounters between medical specialists and patients with medically unexplained physical symptoms; influences of communication on patient outcomes and use of health care. A literature overview, Perspect. Med. Educ. 1 (2012) 192–206.
[8] C. Burton, K. McGorm, G. Richardson, D. Weller, M. Sharpe, Healthcare costs incurred by patients repeatedly referred to secondary medical care with medically unexplained symptoms: a cost of illness study, J. Psychosom. Res. (2012) 242–247.
[9] H.L. Crimlisk, K.P. Bhatia, H. Cope, A.S. David, D. Marsden, M.A. Ron, Patterns of referral in patients with medically unexplained motor symptoms, J. Psychosom. Res. 49 (2000) 217–219.
[10] K. McGorm, C. Burton, D. Weller, G. Murray, M. Sharpe, Patients repeatedly referred to secondary care with symptoms unexplained by organic disease: prevalence, characteristics and referral pattern, Fam. Pract. 27 (2010) 479–486.
[11] R. Grol, N. Rooijackers-Lemmers, L. van Kaathoven, H. Wollersheim, H. Mokkink, Communication at the interface: do better referral letters produce better consultant replies, Br. J. Gen. Pract. 53 (2003) 217–219.
[12] R. Jenkins, Quality of general practitioner referrals to outpatient departments: assessment by specialists and a general practitioner, Br. J. Gen. Pract. 43 (1993) 111–113.
[13] P.S. Ong, L.T. Lim, L. Barnsley, R. Read, General practitioners' referral letters–do they meet the expectations of gastroenterologists and rheumatologists? Aust. Fam. Physician 35 (2006) 920–922.

[14] J. van Ravenzwaaij, T.C. Olde Hartman, H. van Ravesteijn, R. Eveleigh, E. van Rijswijk, P. Lucassen, Explanatory models of medically unexplained symptoms: a qualitative analysis of the literature, Ment. Health Fam. Med. 7 (2010) 223–231.
[15] A. Weiland, A.H. Blankenstein, M.H.A. Willems, J.L.C.M. Van Saase, H.T. Van der Molen, A.M. Van Dulmen, et al., Post-graduate education for medical specialists focused on patients with medically unexplained physical symptoms; development of a communication skills training programme, Patient Educ. Couns. 92 (2013) 355–360.
[16] C.M. van der Feltz-Cornelis, R. Hoedeman, E.J.W. Keuter, J.A. Swinkels, Presentation of the Multidisciplinary Guideline Medically Unexplained Physical Symptoms (MUPS) and Somatoform Disorder in the Netherlands: disease management according to risk profiles, J. Psychosom. Res. 72 (2012) 168–169.
[17] J.M. Gol, H. Burger, K.A.M. Janssens, J.P.J. Slaets, R.O.B. Gans, J.G.M. Rosmalen, PROFSS: a screening tool for early identification of functional somatic symptoms, J. Psychosom. Res. 77 (2014) 504–509.
[18] G. Miller, The assessment of clinical skills/competence/performance, Acad. Med. 65 (1990) S63–7.