**Appendix**

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| **Table A.1.** Structure of MS self management module | | |
| **BCT** | **Issues /elements** | **Contents** |
| Instruction | Patient education | Verbal education about MS disease and disease modifying treatments |
| Written information via MS-information leaflet |
| Emphasize the importance of medication adherence |
| Emphasize the importance of nutrition and physical exercise |
| Emphasize the importance and profits of active participation in the treatment process |
| Motivational interview | Symptom monitoring | Emphasize the importance of monitoring their own MS-related symptoms |
| Teaching the methods for symptom management |
| Reminding energy conservation methods |
| Medication adherence | Detailed questioning to detect actual medication adherence |
| Determining the barriers that interfere with the adherence and finding solutions to eliminate the barriers |
| Creating realistic expectations of the treatment |
| Patient referral | Referring the patients to the relevant healthcare profession for minor complaints that may be overlooked during the examination, but may affect the quality of life. |
| Informing about social facility opportunities for MS patients |
| Ensuring that the patients have access to appropriate sources for obtaining accurate and sufficient information about MS |
| Feedback | Patient assignment | Assignment of the patient with the MS-information leaflet to monitor their own symptoms at home in order to maintain awareness on the active participation |
| Applying MMMS scale in the MS-information leaflet at 2 months after the first interview and just before the second interview |
| Follow-up with phone | Empowerment of patient after the first interview and encouraging to maintain the self-management skills gained |
| Questioning the patient's drug-related problems and providing interventions to solve when necessary |
| Drug related problems | | Identifying drug related problems and providing interventions to solve |
| Patient counseling about medications |
| BCT: Behavioral change technique | | |

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| **Table A.2.** Pairwise comparisons of the study and control groups between each time point within each group | | | | | | | |
|  |  |  | **Mean Difference** | **Std. Error** | **Sig.a** | **95% Confidence Interval for Differencea** | |
|  |  |  | Lower Bound | Upper Bound |
| **Study group** | I1 (Baseline) | I2 (4 months) | -14.140\* | 0.747 | **<0.001** | -15.942 | -12.337 |
|  | I3 (8 months) | -10.045\* | 0.750 | **<0.001** | -11.857 | -8.233 |
| I2 (4 months) | I1 (Baseline) | 14.140\* | 0.747 | **<0.001** | 12.337 | 15.942 |
|  | I3 (8 months) | 4.095\* | 0.540 | **<0.001** | 2.791 | 5.399 |
| I3 (8 months) | I1 (Baseline) | 10.045\* | 0.750 | **<0.001** | 8.233 | 11.857 |
|  | I2 (4 months) | -4.095\* | 0.540 | **<0.001** | -5.399 | -2.791 |
| **Control group** | I1 (Baseline) | I2 (4 months) | -1.181 | 0.762 | 0.368 | -3.021 | 0.658 |
|  | I3 (8 months) | -1.138 | 0.766 | 0.416 | -2.987 | 0.710 |
| I2 (4 months) | I1 (Baseline) | 1.181 | 0.762 | 0.368 | -0.658 | 3.021 |
|  | I3 (8 months) | 0.043 | 0.551 | 1.000 | -1.287 | 1.374 |
| I3 (8 months) | I1 (Baseline) | 1.138 | 0.766 | 0.416 | -0.710 | 2.987 |
|  | I2 (4 months) | -0.043 | 0.551 | 1.000 | -1.374 | 1.287 |
| \*The mean difference is significant at the .05 level.  aAdjustment for multiple comparisons: Bonferroni. | | | | | | | |

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| **Table A. 3.** Monitoring My Multiple Sclerosis (MMMS) scale scores of the study group patients. | | | |
|  | **I (1-2) (Mid-interview)**  Median (IQR) | **I2 (4 months)**  Median (IQR) | **p** |
| Physical health | 2.8 (2.4 – 3.1) | 2.8 (2.5 – 3.1) | 0.464 |
| Relationships | 3.0 (2.8 – 3.4) | 3.0 (2.8 – 3.4) | 0.885 |
| Energy | 2.5 (2.0 – 3.0) | 2.7 (2.0 – 3.3) | 0.121 |
| Cognitive/mental functions | 2.8 (2.6 – 3.2) | 3.0 (2.6 – 3.2) | 0.823 |
| Total | 2.8 (2.5 – 3.2) | 2.9 (2.5 – 3.2) | 0.406 |
| IQR: Interquartile range, I1: Interview 1, I2: Interview 2 | | | |

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| **Table A.4.** Drug related problems(n=129). | | |
|  |  | **n (%)** |
| **Problems (P)** | |  |
| P1.1 | No effect of drug treatment despite correct use | 2 (1.6) |
| P1.2 | Effect of drug treatment not optimal | 30 (23.3) |
| P1.3 | Untreated symptoms or indication | 1 (0.8) |
| P2.1 | Adverse drug event (possibly) occurring | 90 (69.8) |
| P3.3 | Unclear problem/complaint | 6 (4.7) |
| *Manifest problem* | | *53 (41.1)* |
| *Potential problem* | | *76 (58.9)* |
| **Causes (C)** | |  |
| C1.3 | Inappropriate combination of drugs. or drugs and herbal medications. or drugs and dietary supplements | 45 (34.9) |
| C1.5 | No or incomplete drug treatment in spite of existing indication | 3 (2.3) |
| C3.1 | Drug dose too low | 1 (0.8) |
| C3.4 | Dosage regimen too frequent | 1 (0.8) |
| C6.1 | Inappropriate timing of administration or dosing intervals by a health professional | 1 (0.8) |
| C7.1 | Patient intentionally uses/takes less drug than prescribed or does not take the drug at all for whatever reason | 8 (6.2) |
| C7.4 | Patient decides to use unnecessary drug | 2 (1.6) |
| C7.7 | Inappropriate timing or dosing intervals | 4 (3.1) |
| C7.8 | Patient unintentionally administers/uses the drug in a wrong way | 31 (24.0) |
| C9.2 | Other cause; vaccination process during the COVID-19 pandemic | 33 (25.6) |
| **Planned interventions (I)** | |  |
| I0 | No Intervention | 2 (1.6) |
| I1.1 | Prescriber informed only | 1 (0.8) |
| I1.2 | Prescriber asked for information | 1 (0.8) |
| I1.3 | Intervention proposed to prescriber | 1 (0.8) |
| I2.1 | Patient (drug) counselling | 123 (95.4) |
| I2.3 | Patient referred to prescriber | 1 (0.8) |
| **Intervention acceptance (A)** | |  |
| A1.1 | Intervention accepted and fully implemented | 115 (89.2) |
| A1.2 | Intervention accepted. partially implemented | 9 (7.0) |
| A1.3 | Intervention accepted but not implemented | 3 (2.3) |
| A3.2 | Intervention not proposed | 2 (1.6) |
| **Status/Outcomes of drug related problem (O)** | |  |
| O0.1 | Problem status unknown | 1 (0.8) |
| O1.1 | Problem totally solved | 103 (79.8) |
| O2.1 | Problem partially solved | 18 (14.0) |
| O3.1 | Problem not solved, lack of cooperation of patient | 1 (0.8) |
| O3.3 | Problem not solved, intervention not effective | 3 (2.3) |
| O3.4 | No need or possibility to solve problem | 3 (2.3) |