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Supplementary table 6. Summary of studies on the identification of suboptimal self-management

1st Author, publication year	Study design	Study population (n)	Disease activity (mean)	Disease duration of RA (mean)	Diagnostic test Description	Cut-off (if applicable)	Reference standard Description	Cut-off (if applicable)	Time interval	Correlation coefficient (95% CI, p-	Other	Comparison of factors for succesful self-management between groups Description of factors for succesful self-management	Group 1	Frequency in group 1	Group 2	Frequency in group 2	Other	Risk of bias[*1]	Risk of bias of individual studies	Concerns regarding applicability
Diagnostic tests to assess suboptimal self-management																				
Palmer, 2010	Cross-sectional	RA patients (102)	NR	8.8Y	Modified Rheumatology Attitude Index (mRAI, score 0-10, higher score reflects a higher degree of helplessness)	NA	Combined questionnaire for functional impairment and quality of life assessment - Depressive symptoms	NA	Same time point	0.884	p<0.01							L/L/U/L		H/L/H
					Modified Rheumatology Attitude Index (mRAI, score 0-10, higher score reflects a higher degree of helplessness)	NA	Pain score (NRS pain, score 0-10, higher score reflects higher level op pain)	NA	Same time point	0.881	p<0.01										
					Modified Rheumatology Attitude Index (according to NRS global assessment, score 0-10, higher score reflects more symptoms)	NA	Patient global assessment (according to NRS global assessment, score 0-10, higher score reflects more symptoms)	NA	Same time point	0.781	p<0.01										
					Modified Rheumatology Attitude Index (mRAI, score 0-10, higher score reflects a higher degree of helplessness)	NA	Functional disability (according to functional impairment questionnaire by El Miedany (2009), score 0-3, higher score reflects higher level of disability)	NA	Same time point	0.746	p<0.01									
Sinclair, 2004	Cross-sectional	Women with RA (90)	NR	10.3Y	BRCS (Brief Resilient Coping Scale)	NA	NA				test-retest reliability: 0.71; internal consistency: alpha=0.64 (first BL), 0.76 (second BL), 0.69 (end of program), 0.71 (3M follow-up); stability: 0.68							L/L/U/L		H/L/L
					Personal coping resources (part of BRCS) - Helplessness	NA	Arthritis Helplessness Index (5-item helplessness subscale)	NA		-0.32	p<0.05									
					Personal coping resources (part of BRCS) - Psychological vulnerability	NA	Psychological Vulnerability Scale	NA		-0.26	p<0.05									
					Personal coping resources (part of BRCS) - Dispositional optimism	NA	Life Orientation Test	NA		0.5	p<0.01									
					Personal coping resources (part of BRCS) - Perceived health competence	NA	Perceived Health Competence Scale	NA		0.39	p<0.01									
					Personal coping resources (part of BRCS) - Self-efficacy (pain)	NA	Arthritis Self-Efficacy Scale	NA		0.48	p<0.01									
					Personal coping resources (part of BRCS) - Self-efficacy (arthritis symptoms)	NA	Arthritis Self-Efficacy Scale	NA		0.37	p<0.01									
					Pain coping behaviors (part of BRCS) - Reappraisal	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI) shortened version	NA		0.6	p<0.01									
					Pain coping behaviors (part of BRCS) - Active problem solving	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI) shortened version	NA		0.57	p<0.01									
					Pain coping behaviors (part of BRCS) - Seeking social support	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI) shortened version	NA		0.24	p<0.05									
					Pain coping behaviors (part of BRCS) - Acceptance	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI) shortened version	NA		0.36	p<0.01									
					Pain coping behaviors (part of BRCS) - Catastrophizing	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI) shortened version	NA		-0.38	p<0.01									
					Pain coping behaviors (part of BRCS) - Venting	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI) shortened version	NA		-0.22	p<0.01									
					Psychological well-being (part of BRCS) - Positive affect	NA	Positive and Negative Affect Schedule (PANAS); and Life Satisfaction Scale	NA		0.5	p<0.01									
					Psychological well-being (part of BRCS) - Negative affect	NA	Positive and Negative Affect Schedule (PANAS); and Life Satisfaction Scale	NA		-0.28	p<0.01									
					Psychological well-being (part of BRCS) - Life satisfaction	NA	Positive and Negative Affect Schedule (PANAS); and Life Satisfaction Scale	NA		0.25	p<0.05									
		RA patients (140)	NR	5.25Y	BRCS (Brief Resilient Coping Scale)	NA	NA				internal consistency: alpha=0.68									
					Personal coping resources (part of BRCS) - Helplessness	NA	Arthritis Helplessness Index (5-item helplessness subscale)	NA		-0.32	p<0.01									
					Personal coping resources (part of BRCS) - Psychological vulnerability	NA	Psychological Vulnerability Scale	NA		-0.17	p<0.05									
					Personal coping resources (part of BRCS) - Dispositional optimism	NA	Life Orientation Test	NA		0.41	p<0.001									
					Personal coping resources (part of BRCS) - Perceived health competence	NA	Perceived Health Competence Scale	NA		0.39	p<0.01									
					Personal coping resources (part of BRCS) - Self-efficacy (pain)	NA	Arthritis Self-Efficacy Scale	NA		0.18	p<0.05									
					Personal coping resources (part of BRCS) - Self-efficacy (arthritis symptoms)	NA	Arthritis Self-Efficacy Scale	NA		0.3	p<0.001									
					Pain coping behaviors (part of BRCS) - Reappraisal	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI)	NA		0.56	p<0.001									
					Pain coping behaviors (part of BRCS) - Active problem solving	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI)	NA		0.4	p<0.001									
					Pain coping behaviors (part of BRCS) - Seeking social support	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI)	NA		0.23	p<0.01									
					Pain coping behaviors (part of BRCS) - Acceptance	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI)	NA			ns									
					Pain coping behaviors (part of BRCS) - Catastrophizing	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI)	NA		-0.41	p<0.001									
					Pain coping behaviors (part of BRCS) - Venting	NA	Vanderbilt Multidimensional Pain Coping Inventory (VMPCI) shortened version	NA		-0.25	p<0.01									
					Psychological well-being (part of BRCS) - Positive affect	NA	Positive and Negative Affect Schedule (PANAS); and Life Satisfaction Scale	NA		0.47	p<0.001									
					Psychological well-being (part of BRCS) - Negative affect	NA	Positive and Negative Affect Schedule (PANAS); and Life Satisfaction Scale	NA		-0.3	p<0.001									
					Psychological well-being (part of BRCS) - Life satisfaction	NA	Positive and Negative Affect Schedule (PANAS); and Life Satisfaction Scale	NA		0.24	p<0.01									
					Psychological well-being (part of BRCS) - CES-D	NA	Center for Epidemiological Studies-Depression Scale	NA		-0.3	p<0.001									
Garratt, 2014	SLR: 15 studies (unspecified)	RA patients (1192), total of 3527 patients with rheumatic diseases	NR	NR	Arthritis Self-efficacy Scale (score 10-100, higher score reflects higher self-efficacy)	NA	NR	NA			#>1; Fifteen articles met the inclusion criteria that included the arthritis SE scales(ASES), generalized SE scale (GSES), joint protection SE scale (JP-SES), Marcus & Resnick SE exercisebehaviour (SEEB) instruments, and RA scale (RASE). The ASES and RASE have undergone more than one evaluation. There was little formal evaluation of content validity for the instruments. Evidence for the RASE suggests that it is not unidimensional. The JP-SES and SEEB were evaluated using modern psychometric methods. The instruments require further evaluation before application. The quality of the evidence for the ASES and RASE is generally poor. The generic focus of the GSES limits its relevance.The JP-SES and SEEB have only undergone one evaluation and that relating to the latter was narrow inscope. Future studies should address these methodological weaknesses.						Moderate	Moderate-High	
					Generalized self-efficacy scale	NA	NR	NA			#>1									
					Joint protection self-efficacy scale	NA	NR	NA			#>1									
					Marcus & Resnick self-efficacy exercise behaviour instruments	NA	NR	NA			#>1									
					RA self-efficacy scale	NA	NR	NA			#>1									
Factors associated with successful self-management, as assessed by patients and rheumatologists																				
Gibofsky, 2018	Cross-sectional	RA patients (1805) + physicians (1736)	NR	7Y	NA		NA					Information	RA patients	55%	Physicians	64%		L/L/L/H		H/L/L
												Dialogue/discussion		52%		76%				
												More/longer/additional visits		41%		65%				
												Treatment goals		38%		57%				
												Access to visits/treatment		36%		62%				
												Tools/classes		35%		52%				
Silvers, 1985	Cross-sectional	RA patients (101) + rheumatologists (28)	NR	14.2Y	NA		NA					Do patients want to know more about arthritis?	Patients	92%	Rheumatologists	70%		L/L/L/L		H/L/L
												Extremely/very important role of allied health professionals in facilitating arthritis education: physical therapist					ns			
												Extremely/very important role of allied health professionals in facilitating arthritis education: pharmacist		73%		39%	p<0.001			
												Extremely/very important role of allied health professionals in facilitating arthritis education: occupational therapist					ns			
												Extremely/very important role of allied health professionals in facilitating arthritis education: nutritionist		69%		14%	p<0.001			

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Extremely/very important role of allied health professionals in facilitating arthritis education: nurse		ns	
Extremely/very important role of allied health professionals in facilitating arthritis education: trained group leader		ns	
Extremely/very important role of allied health professionals in facilitating arthritis education: arthritis representative		ns	
Extremely/very important role of allied health professionals in facilitating arthritis education: social worker		ns	
Extremely/very important topics in arthritis patient education: psychosocial needs	~65%	Higher in physicians	p<0.001
Extremely/very important topics in arthritis patient education: activities of daily living		Higher in physicians	p<0.001
Extremely/very important topics in arthritis patient education: sexual concerns		Higher in physicians	p<0.015
Extremely/very important topics in arthritis patient education: community resources		Higher in physicians (68-89%)	p<0.015
Extremely/very important topics in arthritis patient education: disease process	Higher in patients (91-95%)		p<0.001
Extremely/very important topics in arthritis patient education: diagnostic process	Higher in patients (72-82%)	56%	p<0.001
Extremely/very important topics in arthritis patient education: nutrition	Higher in patients (72-82%)		p<0.001
Extremely/very important topics in arthritis patient education: interpersonal communication between physician and patient	91-95%	100%	ns
Extremely/very important topics in arthritis patient education: medication	91-95%	96%	ns
Extremely/very important topics in arthritis patient education: maintaining ambulation	72-82%	68-89%	ns
Extremely/very important topics in arthritis patient education: recognising quackery	72-82%	68-89%	ns
Extremely/very important topics in arthritis patient education: rest and relaxation	72-82%	68-89%	ns
Extremely/very important topics in arthritis patient education: special pain relief	72-82%	68-89%	ns
Extremely/very important topics in arthritis patient education: prescribed exercise	72-82%	68-89%	ns
Extremely/very important topics in arthritis patient education: cooperative disease management	72-82%	68-89%	ns
Extremely/very important topics in arthritis patient education: surgical procedures	72-82%	68-89%	ns
Extremely/very important topics in arthritis patient education: energy conservation	~65%	59%	ns
Extremely/very important topics in arthritis patient education: weight management	~65%	46%	ns
Most important education channel: individual meeting between patient and physicians	78%	86%	
Very important education channel: planned education group	45%	85%	p<0.002