



Community Assessment Tools Review

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Scoping review of tools for multidimensional needs assessment of community dwelling older people

Chadborn N¹, Craig C¹, Sands G¹ and Gladman JRF^{1,2,3}

¹National Institute for Health Research CLAHRC East Midlands, University of Nottingham, UK

²School of Medicine, University of Nottingham, UK

³Nottingham University Hospitals NHS Trust

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Address for correspondence:

Dr Neil Chadborn. Institute of Mental Health, University of Nottingham Innovation Park, Jubilee Campus, Nottingham, United Kingdom, NG7 2TU.

E-mail: neil.chadborn@nottingham.ac.uk. Phone: 01158 232471

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ABSTRACT

Background

The use of multidimensional tools to assess the needs of community dwelling older people could help the co-ordination of multiagency interventions and hence prevent ill health and disability.

Objective

To identify tools for assessing multidimensional needs of older people (>65yrs) living in the community.

Method

A scoping review comprising: a systematic search of published literature to identify tools; the examination of selected tools for their administrative and descriptive details and content validity; comparison of the characteristics of tools.

Results

Seventeen multidimensional needs assessment tools for community-dwelling older people were identified. Five tools were comprehensive (assessing all domains of a comprehensive geriatric assessment) – the CANE (Camberwell Assessment of Needs in the Elderly), EASY-Care, GFE (Geriatric Functional Evaluation), MDS-HC (Minimum Data Set for Home Care) and NISAT (Northern Ireland Single Assessment Tool) tools – but the tools varied in the total number of items, time taken for completion, and assessor requirements.

Discussion

Commissioners and providers of integrated services for older people use the evidence presented here to select the tool that best fits their requirements.

INTRODUCTION

The changing demographic in the UK and other developed countries towards an increasing proportion of older people and the associated spiralling costs of health and social care policy has increased interest in the prevention of ill-health and frailty in old age (1). Such prevention efforts could be directed at the promotion of resilience, which refers to being able to resist minor challenges (e.g. having a urinary infection without becoming confused or falling) and also being able to recover rapidly even if initially destabilised as a result of challenge (e.g. returning to full function after having a fall). Many factors contribute to resilience, and hence services and interventions to prevent infirmity include traditional public health behavioural interventions (such as reducing alcohol and tobacco consumption, improving diet and increasing physical activity), but also those dealing with loneliness, social isolation, poor housing, health literacy and self-management skills (2).

There are challenges to those planning and delivering health and social care services to promote resilience. Given the multifactorial nature of resilience, it is likely that a wide range of such services will need to be in place before they are sufficient to promote it. This gives rise to the integration challenge of matching these services to those who might benefit from them, and in a person-centred way (3, 4). Furthermore, health and social care planners have relatively little population-level information to guide them in what they should provide.

One approach to dealing with these challenges is to use a tool for multidimensional needs assessment. Such tools could enable a comprehensive assessment of an individual's resilience factors, and this assessment could facilitate the provision of services to address that individual's needs. If used across a population, the collated data from such standardised assessments could be used to produce a population needs assessment for the promotion of resilience.

Standardised approaches to assessing needs have been available since 1965 (5), and yet recent programmes of screening older people in the UK do not specify a standardised assessment protocol or tool (6). Despite the growth in interest in this field in recent years, the literature in this area has not been reviewed for over a decade when the UK Department of Health reviewed tools suitable for the Single Assessment Process programme (7), and when there were similar initiatives in Australasia (8, 9). Thus it is

timely to review the evidence base on published tools for assessing multidimensional needs of older people (>65yrs) living in the community.

In this paper, our aim was to identify all the tools that have been developed for comprehensive needs assessment in community dwelling older people. Anticipating the use of such tools by multiple agencies and personnel including the voluntary sector, we looked only for tools that did not require a clinical examination or specialist assessment by a single professional but relied on questioning the older person. We aimed to identify needs assessment tools which identified problems experienced by older people and might be used in care planning, and to exclude assessment tools designed to measure quality of life or to be used as outcome measures.

METHOD

Scoping review methodology was used (10, 11) because the aim was to examine the extent, range and nature of research activity in the field.

A systematic search using four academic databases was conducted; Medline, EMBASE, CINAHL and PsycInfo. The following search terms were developed in Medline and adapted for the other databases. The search was limited to papers from 2002 (a decision made following examination of three previous grey literature reviews identified in preparatory work (7-9). The search was carried out in June 2014.

Search terms:

Line 1: "Outcome and Process Assessment (Health Care)"/mt or Needs Assessment/sn or "Outcome Assessment (Health Care)"/mt or Geriatric Assessment/mt

Line 2: (("primary care" or home or community or "self?manage" or "self?care" or "independent living" or "housebound" or "domiciliary" or "mental health" or rehabilitation).ti,ab. or "Activities of Daily Living"/ or Home Care Services/) not Hospitals/ or Nursing Homes/

Line 3: exp Aged/ or ("geriatric" or "elderly" or "older person" or "older people").ti,ab.

Combine: Lines 1 and 2 and 3 (limit to yr="2002 -Current")

Two reviewers (NC, CC) screened the titles and abstracts of citations, according to the inclusion criteria: multi-domain needs assessment and structured questionnaires; English language; participants older than 65 years and community-dwelling. Exclusion criteria were as follows: protocol for a clinical assessment or examination; tools that screened for a specific diagnostic condition; and outcome measures or quality of life measures

Articles which described the characteristics of the tool were identified for data extraction (NC & CC). Data describing the administration of the tool were extracted (number of items, setting where tool used, staff or self-complete, completion time). Information about the domains assessed within each tool was also extracted, using the domains of Comprehensive Geriatric Assessment (CGA) as a framework (12) (social circumstances, functioning, physical medical conditions, environment, mental health). Two reviewers extracted data and categorised the tools' domain names under the CGA framework (NC & CC), with discrepancies in categorisation debated with a third reviewer (JG) until consensus was reached.

RESULTS

Search and Selection

Figure 1 shows the result of the initial electronic searches: seventeen tools were identified meeting the criteria for inclusion. These are listed in Table 1.

Seventeen further searches were conducted, using the name of each tool identified in the above stage, to identify papers including information about the characteristics of these tools. 422 articles in total were found and 137 of these were included.

The quantity of articles identified as describing each tool varied substantially: for four tools we identified nineteen or more articles (MDS-HC, Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire, CANE and EASY-Care; see Table 1) but the remainder were cited within fewer than five articles.

Figure 1: Schematic of search and selection process

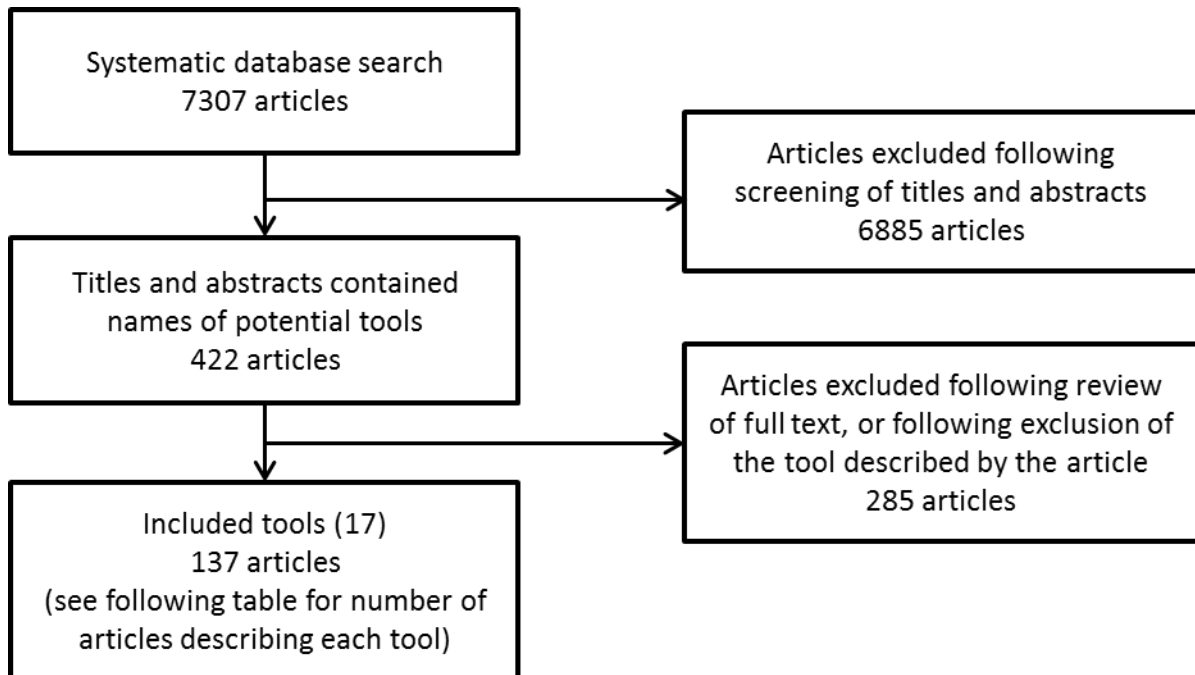


Table 1: Administrative characteristics of tools

Tool (References)	Number of items	Setting where tool used	Who administers (Staff or Self complete)	Completion Time (minutes)
Camberwell Assessment of Needs in the Elderly (CANE) (13-34)	24 (plus 2 for carer)	Community, home	Researcher, nurse	Res: 30 - 70 Nurse: 30
Comprehensive Frailty Assessment Instrument (CFAI) (35-37)	23	Community, home	Self-complete	ND
EASY-Care (16, 38-55)	49	General Practice	Practice nurse Research nurse	39 (range 18 - 30)
Everyday Competence Scale (ECS) (56, 57)	36	Social centres	Researcher	60
Everyday Competence Questionnaire (ECQ) (58)	17	Community	Researcher	60
Geriatric Functional Evaluation (GFE) (59)	35	Home	Self-complete	15 - 20
Geriatric Postal Screening Survey (GPSS) (60)	10	Home	Self-complete	ND
Health Enhancement Lifestyle Profile (HELP) (61-64)	72	Community, home	Self-complete, researcher	20 - 40

Tool (References)	Number of items	Setting where tool used	Who administers (Staff or Self complete)	Completion Time (minutes)
INTERMED for the Elderly Self-Assessment (65-68)	22	Home	Self-complete	ND
Lorensen's Self-care Capability Scale (LSCS) (69)	56	Home	Nurses	ND
Minimum Data Set for Home Care (MDS-HC) (70-119)	238	Home	Social Workers, nurses	Social Worker: 60-90 Nurse: 30
Northern Ireland Single Assessment Tool (NISAT) (120)	None Declared	Community	Self-complete	ND
Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire (OARS-FAQ) (121-144)	70	Outpatient, community	Medical professionals	40
Primary Assessment Form (PAF) (145)	None Declared	Home	Nurses, social science graduates, non-professionals	5-70

Tool (References)	Number of items	Setting where tool used	Who administers (Staff or Self complete)	Completion Time (minutes)
Physical Self-Concept Scale for Older Adults (PSCS-O) (146)	18	Community	Professional staff	30
Self-care Ability Scale for the Elderly (SASE) (147)	17	Home	Self-complete	ND
Standardized Assessment for Elderly Patients (STEP) (148)	44	Primary Care	Staff nurse or self-complete	60



Administration characteristics of assessment tools

The administration characteristics of the seventeen needs assessment tools are shown in Table 1. The number of items varied from 17 (Geriatric Postal Screening Survey) to 238 (MDS-HC) and the time required to complete them ranged from 5 (Primary Assessment Form) to 90 minutes (MDS-HC). Eight tools (Comprehensive Frailty Assessment Instrument, GFE, GPSS, Health Enhancement Lifestyle Profile, INTERMED for the Elderly Self-Assessment, NISAT, Self-care Ability Scale for the Elderly and Standardized Assessment for Elderly Patients) had published evidence in peer-reviewed journals to show they could be completed by the older person, or with assistance from a formal or informal carer. Assessor training was stated to be required for six tools (CANE, EASY-Care, Everyday Competence Scale, Everyday Competence Questionnaire, Lorensen's Self-care Capability Scale and PAF). Three tools (MDS-HC, OARS-MFAQ and PSCS-O) required a health professional to complete the assessment by questioning the older person but are not a clinical examination.

Content of tools

The content of each tool are shown in Table 2, using the domains of the comprehensive geriatric assessment process (CGA). All tools covered at least three of the domains of CGA. The tools that assessed all five domains were the CANE, EASY-Care, GFE, MDS-HC, and NISAT. Some tools also assessed needs that could not be categorised within CGA domains such as the CANE and STEP which also assessed aspects of the respondent's caregiver and were categorised under 'Other'.

Table 2: Content of tools

Tool	Social Circumstances	Functioning	Physical Health & Medical Conditions	Environment	Mental Health	Other
CANE	Company Intimate Relationships Safety (abuse/neglect) Money Benefits	Daytime activities Household skills Mobility/transport Eyesight/hearing Self-care	Physical Health Continence Drugs Food Alcohol	Accommodation Safety (accidental self-harm)	Memory Psychological distress Psychotic symptoms Safety (deliberate self-harm) Behaviour	Caring for someone else Information Carer's need for information Carer's psychological distress
CFAI	Social (social support networks)		Physical	Environmental	Psychological (emotional)	
EASY-Care	Well-being	Looking after yourself Getting around Seeing, hearing & communicating	Staying healthy	Your accommodation & finances Your safety	Your mental health	

Tool	Social Circumstances	Functioning	Physical Health & Medical Conditions	Environment	Mental Health	Other
ECS	Money management	Shopping Symbols used in daily life Utilisation of common electric appliances Transportation	Visiting doctors			
ECQ	Leisure activities	Housekeeping Manual skills Daily routines Sports			Subjective well-being	General linguistic usage
GFE	Community support Social relationships Financial situation	Functional status	Physical condition	Housing	Mental condition	
GPSS		Functional Impairment Falls/balance problems	Weight loss Polypharmacy Pain		Depression Memory loss	Health perceptions

Tool	Social Circumstances	Functioning	Physical Health & Medical Conditions	Environment	Mental Health	Other
			Urinary incontinence			
HELP	Social & leisure activities	Activities of daily living	Chronic illnesses Exercise Diet		Stress	Risk behaviours Spiritual Self-rated health
INTERMED	Social needs		Biological Health care		Psychological	
LSCS	Solitude & interaction	Hygiene Dressing Household duties Mobility	Air intake Developmental Elimination Rest & activity Food intake	Prevention of hazards		Self-concept Health divination
MDS-HC	Social functioning Informal support services	Physical functioning Communicating/hearing patterns	Disease diagnosis Health conditions Dental Status Skin condition	Environmental Assessment	Cognitive patterns Mood &	Service utilisation



		Vision patterns	Medication Continenence Nutrition/ hydration status		behaviour patterns	
Tool	Social Circumstances	Functioning	Physical Health & Medical Conditions	Environment	Mental Health	Other
NISAT	Relationships Work, finance & leisure	Awareness & decision making Personal care & daily tasks Communication & sensory function Walking & movement	Physical Health Medicines management	Living arrangements & accommodation	Mental Health & emotional wellbeing	
OARS-FAQ	Social Resources Economic Resources	Activity of Daily Living Instrumental Activity of Daily Living	Physical Health		Mental Health	
PAF		Activity of Daily Living Instrumental Activities of Daily Living		Socio-demographic	Emotional health	

PSCS-O		Appearance Flexibility Strength	Body fat Health	Ability to live independently		
Tool	Social Circumstances	Functioning	Physical Health & Medical Conditions	Environment	Mental Health	Other
SASE	Loneliness	Hygiene Oral hygiene Housekeeping Shopping Dressing Transfer Strength		Safety	Satisfaction	
STEP	Social circumstances	Functional state	Physical State Significant symptoms Medication		Mental function	Client's perspective & attitudes Primary preventive issues



DISCUSSION

Seventeen multidimensional needs assessment tools for community use were identified. They varied in terms of the administration characteristics such as the time taken to complete and the professional role of the assessor reported to have administered the tool. The tools which took the least time to administer were the Geriatric Functional Evaluation (GFE), Health Enhancement Lifestyle Profile (HELP) and Primary Assessment Form (PAF) tools, all of which could be completed in less than 30 minutes. The tools varied in the comprehensiveness of the assessment, but four covered all five domains of CGA ; Camberwell Assessment of Needs in the Elderly (CANE), EASY-Care, Geriatric Functional Assessment (GFE), Minimum Data Set for Home Care (MDS-HC) and Northern Ireland Single Assessment Tool (NISAT). The other tools covered either three of four of these domains.

The use of a systematic search of electronic databases to identify tools and a second enquiry to sort out tools that met the research aim, means that the list of tools presented here may not be complete. There may be tools that were not identified, such as those published entirely in languages other than English and tools that have not been published or subject to evaluation.

This review adds to previously published understanding by identifying 14 assessment tools that were not included in previous reviews (7-9). These additional tools are Comprehensive Frailty Assessment Instrument (CFAI), Everyday Competence Scale (ECS), Everyday Competence Questionnaire (ECQ), Geriatric Functional Evaluation (GFE), Geriatric Postal Screening survey (GPSS), Health Enhancement Lifestyle Profile (HELP), INTERMED-E-SA, Lorenson's Self-care Capability Scale (LSCS), Northern Ireland Single Assessment Tool (NISAT), Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire (OARS-MFAQ), Primary assessment Form (PAF), Physical Self-Concept Scale for Older Adults (PSCS-O), Self-care Ability Scale for the Elderly (SASE) and Standardized Assessment for Elderly Patients (STEP).

Funders are providers of community services who wish to standardise the needs assessment process of older people living in the community might find this list of 17 tools useful, especially if they are wishing to integrate multiple services. The choice could depend upon whether the assessment is intended to be entirely self-completed by the older person (INTERMED-E-SA, NISAT) or by someone other than a health

professional such as voluntary sector personnel (ECS, PAF), or solely by health professionals (OARS-MFAQ, PSCS-O), or whether a detailed assessment (CANE, MDS-HC) or brief one (GFE, HELP) is required. Detailed assessments might be more valuable when used in care planning for an individual, whereas shorter ones might be more useful for signposting people towards resources or may be more user-friendly and hence more easily implemented. The amount of information recorded by a tool will also affect the richness of the data available for system wide needs assessment (at a population level). There may need to be a compromise between different stakeholders' perspectives. For example a commissioner may require systematic information however patients and keyworkers may find an extensive approach overly burdensome.

Whilst there may be a need to develop more tools or to establish the psychometric priorities of the existing ones further, it is essential for further research to examine the best ways of using these tools in the most efficient systematic way. For example, can tools that have been developed to be administered by a professional maintain validity when self-completed or completed over the telephone, online or via an app? Ultimately, future research should aim to establish an improvement in patient outcomes in complex care systems that employ a systematic assessment, rather than an ad hoc assessment, and this paper provides a starting point for this.

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ETHICAL APPROVAL

This discussion paper has been authorised in alignment with the SOPRANO study, which has received appropriate scientific committee and ethical approval.

CONFLICT OF INTERESTS

None declared

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