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ophelia

**A new approach to the identification,  
development and testing of health literacy  
interventions**





**VICTORIA**

Optimising health literacy  
to improve health  
and equity



Australian Government  
Australian Research Council

## Australian Research Council Linkage Grant (2012-2015)



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[www.ophelia.net.au](http://www.ophelia.net.au)



# Ophelia - Aims

- The *overarching aim* of the project is to improve health outcomes and reduce health inequalities for people with long-term conditions, by
  - Empowering health/community services and service providers to optimise the health literacy of their clients and community

**Phase 1: Identify health literacy strengths & limitations (needs assessment)**

- Collect data (health literacy, demographic, service use) from target group of interest
- Feed back results to expert clinicians/ managers in workshops to generate intervention ideas

**Phase 2: Co-create health literacy interventions**

- Local stakeholders work together to identify which interventions have potential to address local health literacy needs or improve information/ service access

**Phase 3: implement, evaluate & ongoing improvement of interventions**

- Health literacy interventions are applied within quality improvement cycles and continuously evaluated to improve effectiveness, uptake and sustainability

**Phase 1: Identify health literacy strengths & limitations**

- Collect data (health literacy, demographic, service use) on client group of interest
- Feedback results to expert clinicians/ managers in workshops to generate intervention ideas

## Strongly Agree—Strongly disagree

### 1. Feeling understood and supported by healthcare providers

- I can rely on at least one healthcare provider

### 2. Having sufficient information to manage my health

- I am sure I have all the information I need to manage my health effectively

### 3. Actively managing my health

- I spend quite a lot of time actively managing my health

### 4. Social support for health

- I have at least one person who can come to medical appointments with me

### 5. Appraisal of health information

- When I see new information about health, I check up on whether it is true or not



## Cannot do—Very easy

### 6. Ability to actively engage with healthcare providers

- Discuss things with healthcare providers until you understand all you need to

### 7. Navigating the healthcare system

- Decide which healthcare provider you need to see

### 8. Ability to find good health information

- Get health information in words you understand

### 9. Understand health information well enough to know what to do

- Understand what healthcare providers are asking you to do

## The HLQ has nine individual scales

1	2	3	4	5	6	7	8	9
Health provider support	Have enough info	Actively manages health	Social support for health	Appraisal health info	Active engage with HP	Navigate health services	Find good health info	Understand health info for action

## The HLQ has nine individual scales

1	2	3	4	5	6	7	8	9
<b>Health provider support</b>	<b>Have enough info</b>	<b>Actively manages health</b>	<b>Social support for health</b>	<b>Appraisal health info</b>	<b>Active engage with HP</b>	<b>Navigate health services</b>	<b>Find good health info</b>	<b>Understand health info for action</b>
High	Mod	Low	Very high	Very low	High	Low	Very low	Very high

Provides a picture of health literacy strengths and weaknesses



# Health literacy profiles

	1.	2.	3.	4.	5.	6.	7.	8.	9.			
Understand health info	Find good health info	Navigating health services	Engagement with HCP	Appraisal of health info	Social support for health	Actively managing health	Having sufficient info	Healthcare provider support	Average Number health conditions	Average age	% female	Number of people in cluster
1.20	1.00	1.17	1.50	1.20	2.10	2.70	1.25	2.38	2	76	63%	25

Lucy is a 76 year old refugee from Cambodia. She speaks limited English. She has not been diagnosed with any specific health conditions, but finds she is having increasing difficulties managing independently. She sees a doctor only occasionally (**scale 1**), but because of the language barriers she finds these visits stressful (**scale 6**). Her daughter will take her if she really needs to go, but she doesn't like to ask (**scale 4**). She finds it very difficult to understand any of the information she is given (**scale 9**) and doesn't know where to get good information that is appropriate for her needs (**scales 2, 5, 8**)

Profiles can be used to:

- Explore individual client strengths and limitations

AND / OR

- Strengths and limitations of groups of clients within a service / community

# Example of health literacy profiles of a group of clients (using cluster analysis)

		Range 1-4					Range 1-5			
'Level' of health literacy	% of sample in each cluster	Health provider support	Have enough info	Actively manage health	Social support	Appraise health info	Active engage with HP	Navigate health services	Find good health info	Understand health info for action
Higher	22%	3.68	3.45	3.40	3.50	3.16	4.55	4.40	4.26	4.46
Mixed	24%	3.17	3.01	2.93	2.98	2.76	4.10	4.00	3.83	4.00
	20%	3.35	2.91	3.08	3.12	2.84	3.74	3.47	2.96	2.83
Lower	20%	2.72	2.49	2.74	2.54	2.43	3.44	3.32	3.31	3.71
	14%	2.83	2.39	2.70	2.68	2.23	2.38	2.19	1.94	2.24

## Phase 1: Identify health literacy strengths & limitations

- Collect data (health literacy, demographic, service use) on client group of interest
- Feedback results to expert clinicians/ managers in workshops to generate intervention ideas

Ask expert clinicians/ care workers and their managers “what would you do to improve outcomes for this client/ group of clients?”

Number of people in cluster	% female	Average age	Average Number health conditions	Healthcare provider support	Having sufficient info	Actively managing health	Social support for health	Appraisal of health info	Engagement with HCP	Navigating health services	Find good health info	Understand health info
25	63%	76	2	2.38	1.25	2.70	2.10	1.20	1.50	1.17	1.00	1.20

Lucy is a 76 year old refugee from Cambodia. She speaks limited English. She has not been diagnosed with any specific health conditions, but finds she is having increasing difficulties managing independently. She gets short of breath easily and has had a few falls over the past year. She sees a Dr on occasion, but because of the language barriers she finds these visits stressful. Her daughter will take her if she really needs to go, but she doesn't like to ask. She hasn't told her daughter that she has been having problems lately, as she doesn't want her to worry.

**Phase 1:** Identify health literacy strengths & limitations (needs assessment)

**Phase 2:** Co-create health literacy interventions

**Phase 3:** implement, evaluate & ongoing improvement

# Ophelia Victoria - methods

- Healthcare services from 4 diverse regions invited to apply:
  - community health centres, municipal councils, home nursing and hospital admission risk programs (9 sites in total)
- Sites selected a target group of clients
- Inclusion criteria: over 18 years, cognitively able to answer HLQ
- Ethics approval from universities and participating sites

# Methods

- n=813 clients from nine sites provided HLQ and demographic data
- Semi-structured interviews with 4-6 clients at each site
  - stories behind the HLQ scores to inform vignettes
- Vignettes developed:
  - HLQ + interview data + clinical expertise of research team
- 3-hour workshops with clinicians and managers at each site

# Results

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## Demographic data for overall sample (n=813)

	<i>n (%)</i>	<i>Missing data (n)</i>
Female	505 (63%)	10
Age ≥65yrs	607 (77%)	25
Lives Alone	337 (43%)	35
Lower education	376 (48%)	30
Born in Australia	541 (67%)	8
English spoken at home	723 (91%)	17
>4 chronic conditions	276 (34%)	23
Health Insurance	298 (38%)	19
Assisted with HLQ	291 (37%)	18



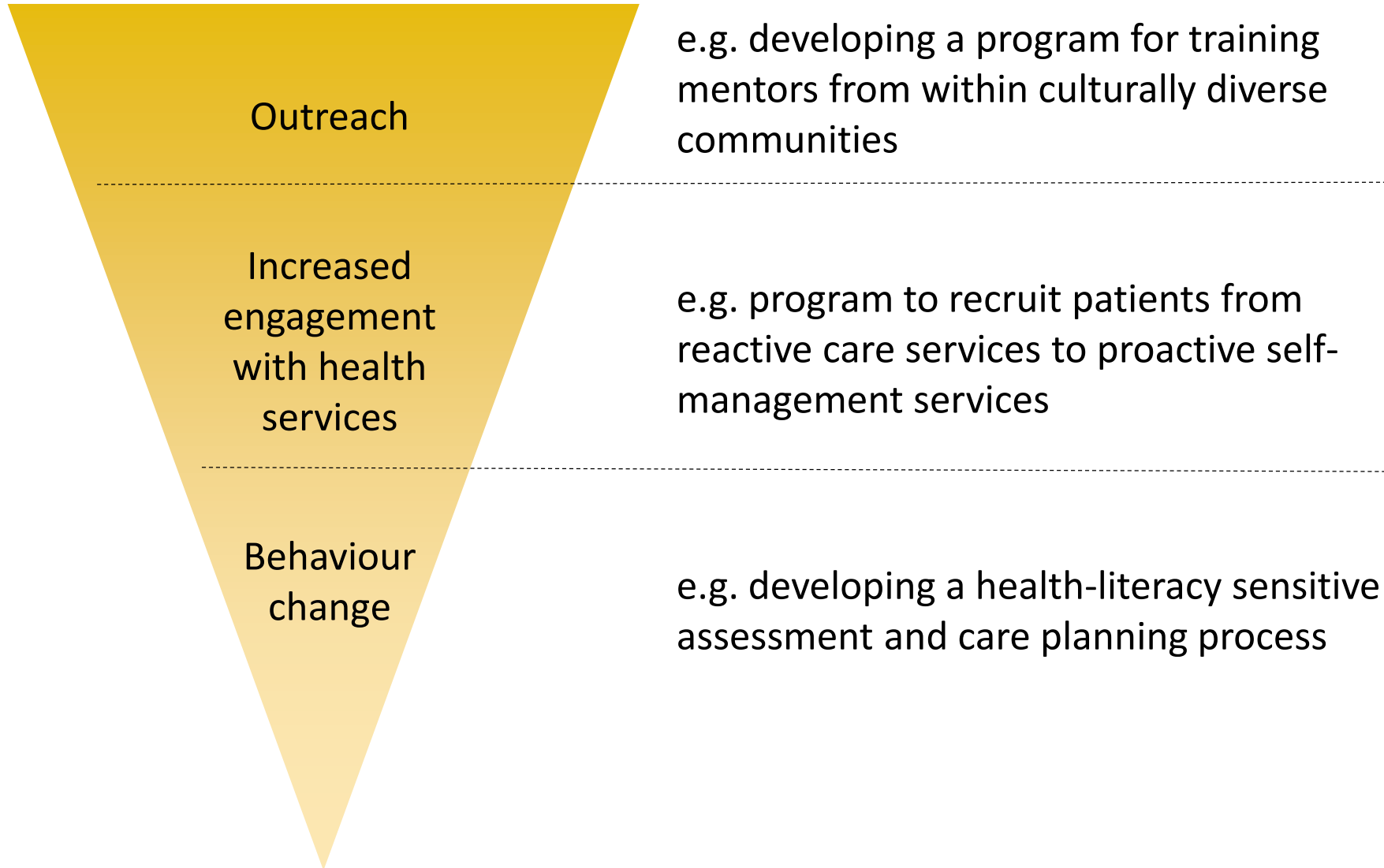
# Results –intervention ideas

- Cluster analysis revealed a wide range of health literacy profiles for each site
- Over 200 intervention ideas generated at feedback workshops:
  - At client, practitioner and organisational levels
- Following the workshops, intervention ideas were:
  - Refined collaboratively using modified program logic models
  - Identified as suitable for pilot testing using quality cycles

# Results – final interventions

Type of intervention	Examples
Organisational-level	<ul style="list-style-type: none"> <li>• Service access policies (e.g. directing clients with chronic disease from ‘one-off’ visits to an ongoing model of care)</li> <li>• Nurse ‘care coordination’ in rural community health centre</li> </ul>
Practitioner-level	<ul style="list-style-type: none"> <li>• Enhanced skills for education of clients (e.g. identification of clients’ preferred learning styles)</li> <li>• Strategies to help clients operationalise care plans (e.g. teach-back)</li> </ul>
Client-level	<ul style="list-style-type: none"> <li>• Improving skills in appraisal of information (e.g. computer courses in a disadvantaged area)</li> <li>• Using volunteers and peers to deliver health literacy messages (e.g., delivered by volunteers in ‘friendly visitor’ programs)</li> <li>• Providing resources for clients to better engage with doctors</li> </ul>

# Interventions related to level of access





Do you prefer it when someone talks through information with you?



Do you prefer someone to write information down for you, or you write it down for yourself?



Do you prefer to be given written information such as brochures?



Do you find videos helpful for learning?



Do you find listening to a CD or iPod helpful?



Do you find pictures and diagrams helpful?



Do you prefer someone to show you how to do something?



Do you prefer to learn things in a group?

HOW do you remember important dates (such as birthdays)?

How would you like to receive health education?		
Text message	Yes	No
Phone call	Yes	No
Face to face	Yes	No
Skype	Yes	No
Email	Yes	No



## ACCESSING CREDIBLE HEALTH INFORMATION ONLINE CHECKLIST

- ☒ **Is the information from a reliable site?**  
Sites that have domain names with a '.gov', '.edu' or '.org' are more likely to hold accurate science based information. Sites with '.net' or '.com' are less likely to be reliable.
- ☒ **Can you find information about the organisation behind the website?**  
Before you believe any health information on the internet, find out what you can about the organisation. Who put the information on the site?
- ☒ **Are the qualifications of the author listed?**  
An author's qualification should be related to the topic and strengthened by the organisation with which they are associated.
- ☒ **Are the contact details of the organisation available?**  
Is the phone number, address or email on the website? This means you can ask further questions or check that the author can be trusted.
- ☒ **Is the information related to research (fact) or opinion?**  
Look at other reliable sites to fully understand the issue. Look for any research or statistics to back up the information. Stay away from sites that offer a 'miracle cure'.

- ☒ **Has the site been sponsored?**  
Some websites are paid for by food or drug companies and may present one-sided information. Avoid sites that ask you to send money or personal details.

- ☒ **Is the website current?**  
Health information changes all the time. Websites that are current should have the date they were last updated.

- ☒ **Are all the links current and working?**

**Source:** Adapted from the Department of Health Western Australia. Healthi: guide to accessing health information. A resource for professionals working with youth. Perth: Department of Health Western Australia

## Assessing and addressing the health literacy of community dwelling older people with diabetes receiving home nursing support

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### Aims and rationale

Health literacy has been described as 'the cognitive and social skills that determine the motivation and ability of individuals to gain access to, understand and use information to promote and maintain good health' (WHO). The aim of RDNS, one of the 8 organisations participating in the OPHELIA Health Literacy project, was to conduct an assessment of the health literacy of clients with diabetes and then develop an intervention to address these needs.

### Methods

A convenience sample of clients were invited to participate in the study. Clients who provided consent were asked to complete the Health Literacy Questionnaire (HLQ) and return it in the accompanying reply paid envelope. Clients unable to complete the HLQ independently received assistance from family members, carers or nursing staff. Cluster analysis was used to analyse the health literacy profile of clients.



Table 1. Participant demographics

Participant demographics		Health conditions	
	n=113		
Age in years (mean, SD)	75 (9.10)	Activity	55 (48.6%)
Female	61 (53.9%)	Back Pain	41 (36.3%)
Living Alone	36 (31.8%)	Heart Problems	60 (53.1%)
Australian born	73 (64.6%)	Respiratory	16 (14.2%)
Speak/understand English	102 (90.3%)	Concussion	15 (13.3%)
Read high school or less	76 (66.7%)	Depression/Anxiety	20 (17.7%)
Private Health Insurance	37 (32.9%)	Stroke	107 (95.5%)
Healthcare card	99 (88.4%)	Other condition	34 (30.1%)
Assisted with questionnaire	73 (64.6%)	Reports no health condition	1 (0.9%)

### Potential uses for this research

- It is feasible that a single source of reliable, simplified information may help patients better understand the requirements for effective self-management, leading to increased independence.
- A trial to evaluate two intervention strategies is proposed:  
1) utilization of a diabetes education checklist by nurses to ensure effective delivery of all key educational messages relating to diabetes;  
2) utilization of the teach back method by nurses providing diabetes education; and  
3) utilization of an online library of diabetes education resources for nurses to use during consumer consultations.

**References:**  
World Health Organisation (WHO)  
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### Findings

- Thirteen clusters displaying a distinct pattern of responses to the HLQ were identified:
- Clients experience difficulties actively managing their health, and have limited capacity to find and appraise health information.
- Many clients reported they struggle with understanding information from many different sources.
- A raft of factors contributing to these health literacy needs, and potential responses to these needs were identified by staff.
- Amongst the key issues identified were inconsistencies in the way diabetes education is delivered across the service, and the amount of information many clients accumulate (but don't necessarily engage with) from a range of sources.



# Conclusions and implications

- Interventions based on comprehensive assessment of health literacy needs and local knowledge of health workers may be more equitable because they specifically target the needs of the local community
- Implementation is likely to be successful as local clinicians/ managers co-created the interventions
- This grounded approach has application in a broad range of settings, including neighbourhoods, workplaces and hospitals

# Thank you

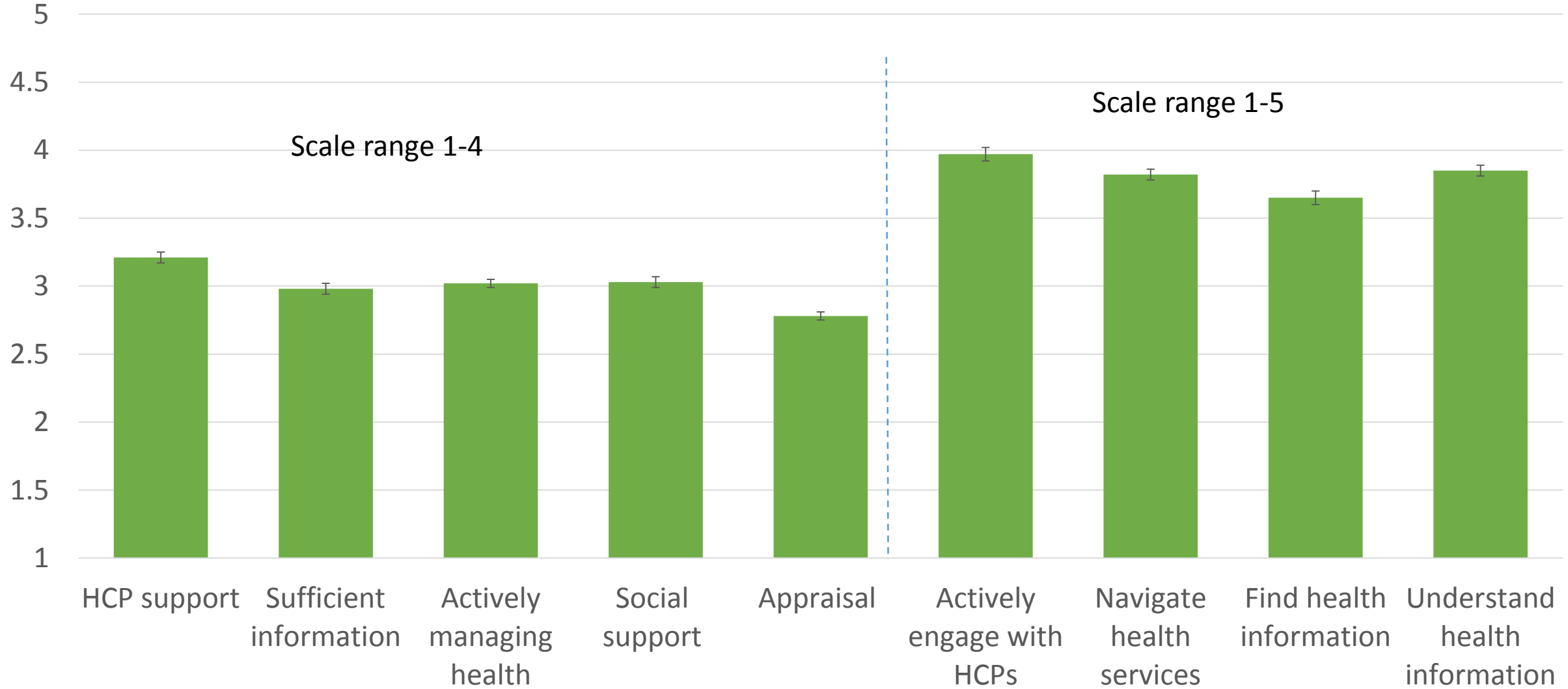
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## HLQ scale scores for overall sample (n=813)



Data represent means and 95% CI