

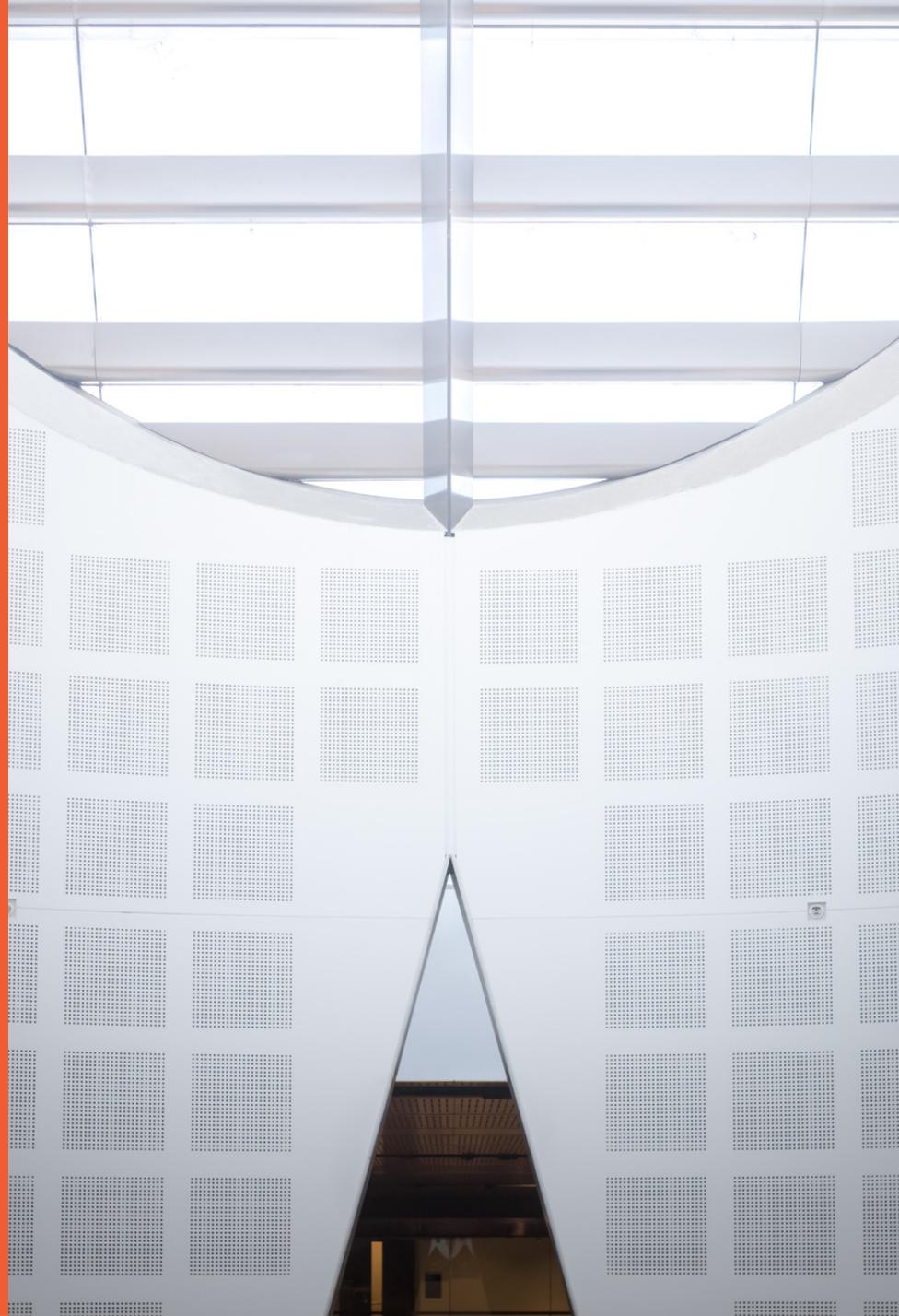
Health Literacy and its Impacts on Recovery Following Injury

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Background

- Health literacy - “the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health” (WHO, *Health Promot Int* 1998;13)

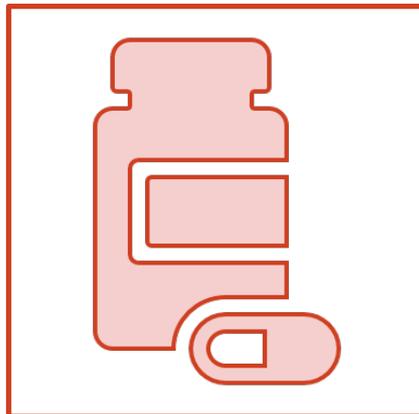
Hospitalisation



Higher mortality risk



Low adherence to meds



Difficulty communicating



Health Literacy of Injured Persons and Outcomes

- One in every four trauma patients had low health literacy (*Swartz T et al. *J Trauma Acute Care Surg* 2018)
- Ethnicity (i.e. Hispanic vs Caucasian), low SES, and education level*
- Low health literacy associated with poor understanding of injuries and treatment provided to them*
- Higher health literacy was associated with better mobility and less anxiety (*Hahn EA et al. Health Literacy Research Practice* 2017)

Specific Aims

Aim 1

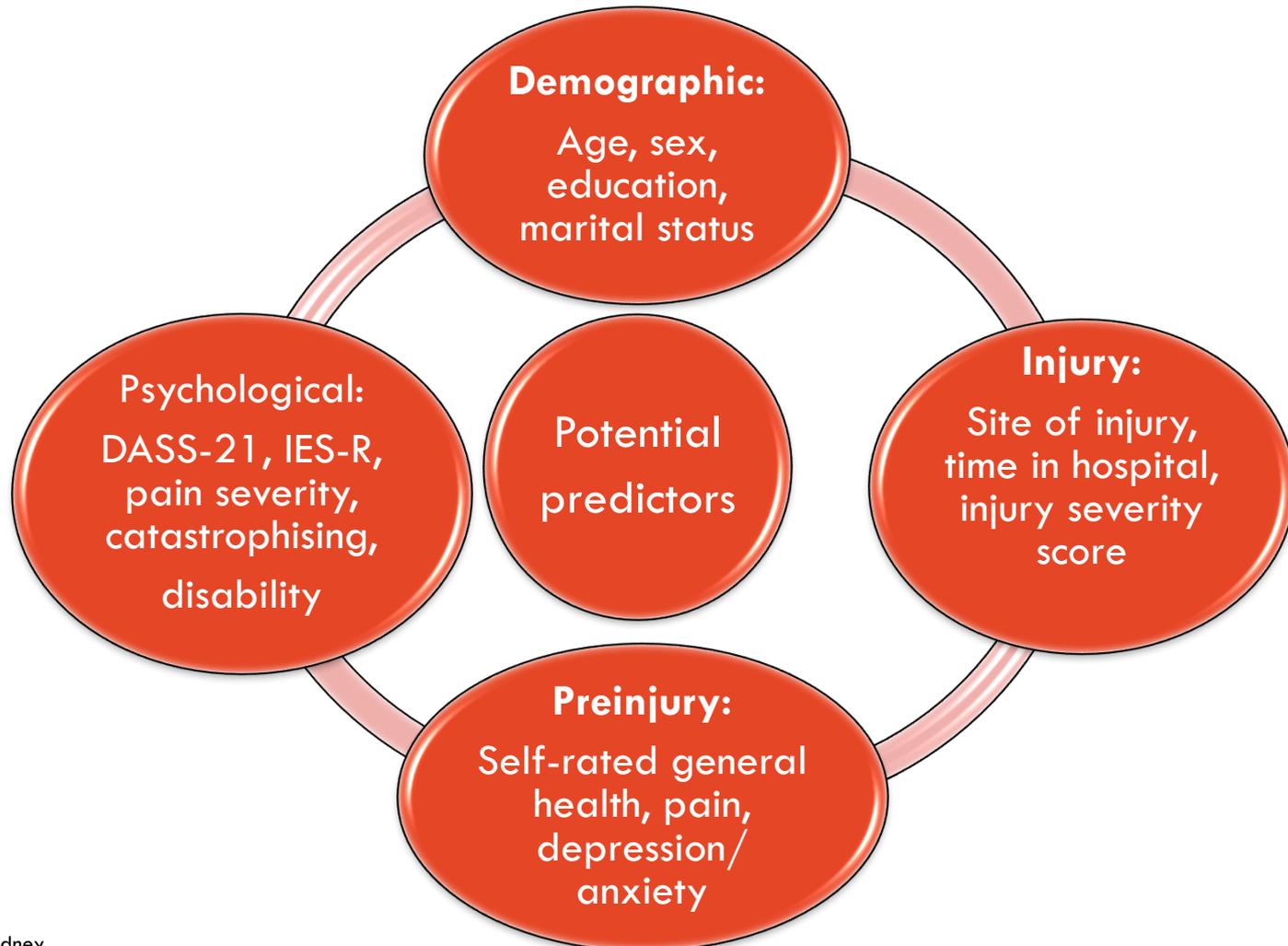
- Establish the proportion and characteristics (e.g. socioeconomic, pre-injury, psychological factors) of injured persons with low health literacy

Aim 2

- Assess longitudinal associations between low health literacy and health outcomes (e.g. pain severity, quality of life and psychological distress) post-injury

FISH Study

- Participants aged 17+ years who sustained a physical injury assessed by a registered health care practitioner



Health Literacy

1) Understand health information well enough to know what to do ('Understanding')

Please indicate how easy or difficult the following tasks are for you to do now?

	01 Cannot do	02 Very difficult	03 Quite difficult	04 Quite easy	05 Very easy
Confidently fill medical forms in the correct way					
Accurately follow the instructions from a health provider					
Read and understand written health information					
Read and understand all the information on medication labels					
Understand what healthcare providers are asking you to do					

Osborne RH *et al.* The grounded psychometric development and initial validation of the Health Literacy Questionnaire (HLQ). *BMC Public Health* 2013;13:358

Health Literacy

2) Ability to actively engage with healthcare providers ('Engagement')

Please indicate how easy or difficult the following tasks are for you to do now?

	01 Cannot do	02 Very difficult	03 Quite difficult	04 Quite easy	05 Very easy
Make sure that healthcare providers understand your problems properly					
Feel able to discuss your health concerns with a healthcare provider					
Have good discussions about your health with doctors					
Discuss things with healthcare providers until you understand all you need to					
Ask healthcare providers questions to get the health information I need					

Osborne RH *et al.* The grounded psychometric development and initial validation of the Health Literacy Questionnaire (HLQ). *BMC Public Health* 2013;13:358

Level of health literacy in FISH

	6-months ('baseline'), n=493	
All participants	Mean (SD)	Scored <4 (low), n (%)
'Understanding'	4.49 (0.70)	83 (16.9)
'Engagement'	4.40 (0.74)	92 (18.7)
'Understanding'	Mean (SD)	Scored <4 (low), n (%)
Men	4.52 (0.70)	51 (16.1)
Women	4.44 (0.71)	32 (18.2)
p value	0.22	0.62
'Engagement'		
Men	4.45 (0.73)	48 (15.2)
Women	4.30 (0.76)	44 (24.9)
p value	0.03	0.01

Factors Associated with Low Health Literacy

- Factors associated with low score on ‘engagement’ scale:
 - Sociodemographic (female gender)
 - Preinjury factors (EQ5D, anxiety/depression)
 - Crash-related (type of road user, perceived sense of danger/ death)
 - Claim status
 - Pain severity ratings
 - Psychological factors (DASS21, IESR, pain catastrophising)
- Factors associated with low score on ‘understanding’ scale:
 - Sociodemographic (education level, paid employment)
 - Preinjury factors (physical comorbidities, EQ5D, anxiety/depression)
 - Social satisfaction
 - Crash-related (type of road user, perceived sense of danger/ death)
 - Claim status
 - Pain severity ratings
 - Psychological factors (DASS21, IESR, pain catastrophising)

	Low HL (score <4 for 'Engagement' scale)	
Health Outcomes (each unit-increase)*	β (95% CI)	P value
SF-12 PCS	-3.77 (-6.64, -0.89)	0.01
SF-12 MCS	-3.80 (-6.52, -1.07)	0.01
EQ5D summary score	-0.078 (-0.15, 0.007)	0.03
WHODAS (disability)	9.44 (4.92, 13.95)	<0.0001
Pain severity ratings	0.71 (0.04, 1.37)	0.04
DASS-21 total score	7.37 (3.92, 10.82)	<0.0001
IESR total score	0.96 (0.34, 1.58)	0.003
Pain Catastrophising	4.47 (1.25, 7.68)	0.01

*Adjusted for age, sex, education, social satisfaction, remoteness, preinjury factors (anxiety/depression, EQ5D, comorbidities and work), crash role, ISS, hospital admission, baseline pain, perceived danger, baseline psychological factors (DASS, IESR, catastrophising) and claimant status

	Low HL (score <4 'Understanding' scale)	
Health Outcomes (each unit-increase)*	β (95% CI)	P value
SF-12 PCS	-5.15 (-7.99, -2.32)	0.0004
EQ5D summary score	-0.10 (-0.17, 0.03)	0.004
WHODAS (disability)	9.04 (4.53, 13.55)	<0.0001
Pain severity ratings	0.68 (0.02, 1.34)	0.04
DASS-21 total score	4.17 (0.67, 7.66)	0.02
IESR total score	0.95 (0.32, 1.56)	0.003
Pain Catastrophising	4.46 (1.27, 7.66)	0.01

*Adjusted for age, sex, education, social satisfaction, remoteness, preinjury factors (anxiety/depression, EQ5D, comorbidities and work), crash role, ISS, hospital admission, baseline pain, perceived danger, baseline psychological factors (DASS, IESR, catastrophising) and claimant status

Summary

- Around 17%-19% of persons who had sustained minor MVC injury had low health literacy
- A wide range of correlates (sociodemographic, pre-injury, psychological, and crash-related factors) were associated with low health literacy in participants
- Low health literacy was associated poorer recovery outcomes:
 - Higher levels of catastrophising, disability and distress
 - Higher pain severity ratings
 - Lower quality of life and physical functioning

Take home message



- High risk for a decreased understanding of their health information due to the nature of unexpected psychological and physical stresses experienced in the MVC
- Risk factors to identify individuals with low health literacy can be easily communicated to healthcare professionals
- Early identification of injured persons with low health literacy and developing appropriate interventions may help improve recovery outcomes in the long-term

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Thank You!

Knowledge is not power, it is only potential.
Applying that knowledge is power.
Understanding why and when to apply that
knowledge is wisdom!

~ Takeda Shingen