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Dodson, S., Beauchamp, A., Batterham, R.W. and Osborne, R.H. 2015, *Health literacy, inequity, and health outcomes*, Deakin University, Melbourne, Vic.

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Health literacy, inequity, and health outcomes

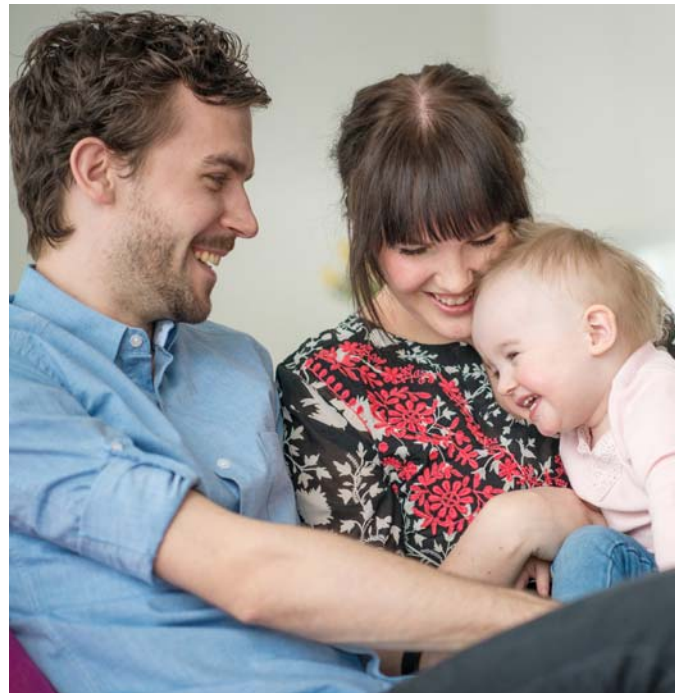
There is potential to improve health and reduce inequity by identifying and responding to the health literacy needs of communities and their members.

Health literacy and the promotion of health

“Health promotion is the process of enabling people to increase control over their health and its determinants, and thereby improve their health. It is a core function of public health and contributes to the work of tackling communicable and noncommunicable diseases and other threats to health.”

(Bangkok Charter for Health Promotion in a Globalized World, 2005)¹

Achieving the aims of health promotion requires coordinated effort at individual, community, national and international levels. The engagement of individuals and communities in sustained and widespread health-related change is critical to success, but continues to prove difficult to achieve. Health literacy is one factor underlying this challenge. Health literacy is not only a key determinant of individual and community health management and service access, it also influences broader engagement in community action.²



Sustained efforts at all levels of the health system and across sectors, with a focus on improving responses to health literacy needs, can help to decrease health and social inequities,^{3,4} promote empowerment,⁵ improve the targeting and impact of health and social development programs,⁵ and strengthen health systems overall.

Links between health literacy, health behaviours and health outcomes

The association between health literacy and a range of health-related outcomes has been demonstrated in numerous studies.* Low health literacy has been associated with:

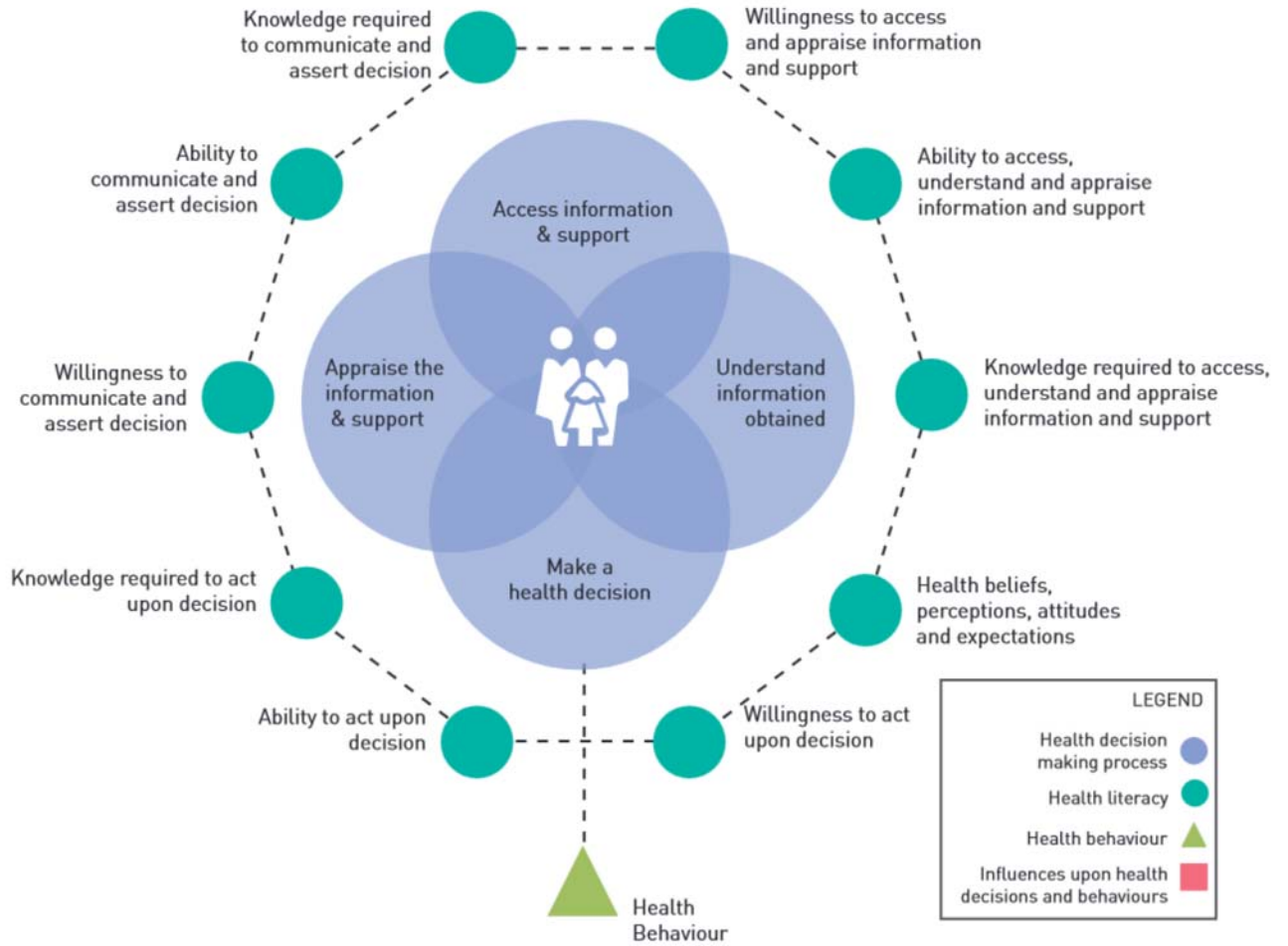
- increased hospital admissions and readmissions⁶
- poorer medication adherence and increased adverse medication events⁷
- less participation in prevention activities^{8,9}
- higher prevalence of health risk factors^{10,11}
- poorer self-management of chronic diseases and poorer disease outcomes¹²
- less effective communication with healthcare professionals¹³
- increased healthcare costs¹⁴
- lower functional status¹⁵ and
- poorer overall health status^{3,16} including increased mortality.¹⁷

** Note: Measures of health literacy used in many of these studies focused on a limited range of health-related literacy and numeracy skills.*

Health literacy influences health outcomes by influencing the decisions people make about their health and health care. Figure 1 shows the elements of health literacy, and the link between health literacy and health behaviours. These personal characteristics and social resources influence which decisions people make, and how effectively they access, understand and appraise information and support during the decision-making process.



Figure 1: Links between health literacy and health behaviours



Salience of health issue and/or behaviour



Cultural beliefs and practices



Societal, political, economic, and environmental circumstances



Personal and situational factors



Treatment and service related factors



Other's reactions to a health decision or behaviour

Other factors influencing health decisions and behaviours include social, political, economic and environmental circumstances, cultural beliefs and practices, the salience of particular health issues and actions, and the responses people receive from others about their actions or intentions. Health decisions will only influence health outcomes to the extent that the decisions are acted on. Health behaviours can only influence outcomes to the extent these outcomes are amenable to change.

Links between health literacy and health inequity

The field of health literacy has always been strongly linked to efforts to improve health equity: equity of access and equity of outcomes.¹⁹⁻²¹ Differences in health literacy are seen in gender, age, ethnicity, insurance status and educational attainment.²² These differences are likely, in part, to explain health inequities. For example, health literacy is shown to explain up to 22% of ethnic differences in health status.³

It is important to note that many studies that explore the association between health literacy and outcomes use tools that measure numeracy and literacy skills only. Given that health literacy encompasses other personal characteristics and social resources (see Figure 1), it is likely that these studies underestimate the true effect of health literacy on health inequities.



References

1. The Bangkok Charter for Health Promotion in a Globalized World. *Health Promot. Int.* 2006, 21 suppl 1: 10-14 (http://heapro.oxfordjournals.org/content/21/suppl_1/10.short#cite-by) [accessed 28 September 2014]).
2. Kickbusch I. Health literacy: addressing the health and education divide. *Health Promot Int* 2001, 16(3):289-297 (<http://heapro.oxfordjournals.org/content/16/3/289.full>) [accessed 28 September 2014]).
3. Howard DH, Sentell TL, Gazmararian JA. Impact of health literacy on socioeconomic and racial differences in health in an elderly population. *J Gen Intern Med* 2006, 21:857-861 (<http://search.proquest.com/docview/68700723?accountid=10445>) [accessed 28 September 2014]).
4. Sentell TL, Halpin HA. Importance of adult literacy in understanding health disparities. *J Gen Intern Med* 2006, 21:862-866 (<http://search.proquest.com/docview/68702219?accountid=10445>) [accessed 28 September 2014]).
5. Nutbeam D. Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promot. Int.* 2000, 15(3):259-267 (<http://heapro.oxfordjournals.org/content/15/3/259.abstract>) [accessed 28 September 2014]).
6. Mitchell SE, Sadikova E, Jack BW, Paasche-Orlow MK: Health literacy and 30-day post-discharge hospital utilization. *J Health Commun* 2012, 17 Suppl 3:325-338 (<http://www.tandfonline.com/doi/abs/10.1080/.VA2RKIYWfZs>) [accessed 28 September 2014]).
7. Lindquist LA, Go L, Fleisher J, Jain N, Friesema E, Baker DW: Relationship of health literacy to intentional and unintentional non-adherence of hospital discharge medications. *J Gen Intern Med* 2012, 27(2):173-178 (<http://link.springer.com/article/10.1007%2Fs11606-011-1886-3>) [accessed 28 September 2014]).
8. von Wagner C, Knight K, Steptoe A, Wardle J: Functional health literacy and health-promoting behaviour in a national sample of British adults. *J Epidemiol Community Health* 2007, 61(12):1086-1090 (<http://jech.bmj.com/content/61/12/1086.long>) [accessed 28 September 2014]).
9. Adams RJ, Piantadosi C, Ettridge K, Miller C, Wilson C, Tucker G, Hill CL: Functional health literacy mediates the relationship between socio-economic status, perceptions and lifestyle behaviors related to cancer risk in an Australian population. *Patient Educ Couns* 2013, 91(2):206-212 ([http://www.pec-journal.com/article/S0738-3991\(12\)00488-0/abstract](http://www.pec-journal.com/article/S0738-3991(12)00488-0/abstract)) [accessed 28 September 2014]).
10. Yamashita T, Kart CS: Is diabetes-specific health literacy associated with diabetes-related outcomes in older adults? *Journal of diabetes* 2011, 3(2):138-146 (<http://onlinelibrary.wiley.com/doi/10.1111/j.1753-0407.2011.00112.x/abstract;-jsessionid=44684E25F8CFAAD74A6E0699DB62FD63.f01t01>) [accessed 28 September 2014]).
11. Aung MN, Lorga T, Srikrajang J, Promtingkran N, Kreuangchai S, Tonpanya W, Vivara-kanon P, Jaiin P, Praipaksin N, Payaprom A: Assessing awareness and knowledge of hypertension in an at-risk population in the Karen ethnic rural community, Thasongyang, Thailand. *Int J Gen Med* 2012, 5:553-561 (<http://www.dovepress.com/assessing-awareness-and-knowledge-of-hypertension-in-an-at-risk-popula-peer-reviewed-article-IJGM>) [accessed 28 September 2014]).
12. Schillinger D, Grumbach K, Piette J, Wang F, Osmond D, Daher C, Palacios J, Sullivan GD, Bindman AB: Association of health literacy with diabetes outcomes. *JAMA* 2002, 288(4):475-482 (<http://jama.jamanetwork.com/article.aspx?articleid=195143>) [accessed 28 September 2014]).
13. Schillinger D, Bindman A, Wang F, Stewart A, Piette J: Functional health literacy and the quality of physician-patient communication among diabetes patients. *Patient Education & Counseling* 2004, 52(3):315-323 (<http://www.sciencedirect.com/science/article/pii/S0738399103001071>) [accessed 28 September 2014]).
14. Herndon JB, Chaney M, Carden D: Health literacy and emergency department out-comes: a systematic review. *Annals of Emergency Medicine* 2011, 57(4):334-345 ([http://www.annemergmed.com/article/S0196-0644\(10\)01465-4/abstract](http://www.annemergmed.com/article/S0196-0644(10)01465-4/abstract)) [accessed 28 September 2014]).
15. Wolf MS, Gazmararian JA, Baker DW: Health literacy and functional health status among older adults. *Arch Intern Med* 2005, 165(17):1946-1952 (<http://archinte.jamanetwork.com/article.aspx?articleid=486704>) [accessed 28 September 2014]).

16. Tokuda Y, Doba N, Butler JP, Paasche-Orlow MK: Health literacy and physical and psychological wellbeing in Japanese adults. *Patient Educ Couns* 2009, 75(3):411-417 ([http://www.pec-journal.com/article/S0738-3991\(09\)00151-7/abstract](http://www.pec-journal.com/article/S0738-3991(09)00151-7/abstract) [accessed 28 September 2014]).
17. Sudore RL, Yaffe K, Satterfield S, Harris TB, Mehta KM, Simonsick EM, Newman AB, Rosano C, Rooks R, Rubin SM et al: Limited Literacy and Mortality in the Elderly. The Health, Aging and Body Composition Study. *Journal of General Internal Medicine* 2006, 21:806-812 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1831586/> [accessed 28 September 2014]).
18. Chervin C, Clift J, Woods L, Krause E, Lee K. Health Literacy in Adult Education: A Natural Partnership for Health Equity. *Health Promot Pract* 2012 (<http://hpp.sagepub.com/content/13/6/738.abstract> [accessed 28 September 2014]).
19. Hasnain-Wynia R, Wolf MS. Promoting health care equity: is health literacy a missing link? *Health Serv Res* 2010, 45(4):897-903 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2910560/> [accessed 28 September 2014]).
20. Rader T, Ueffing E, Garcia-Elorrio E, Idzerda L, Ciapponi A, Irazola V, Welch V, Lyddiatt A, Shea B, Newman S et al. Influencing health equity: role of the effective consumer scale in measuring skills and abilities in a middle income country. *J Rheumatol* 2011, 38(8):1798-1802 (<http://www.jrheum.org/content/38/8/1798.abstract> [accessed 28 September 2014]).
21. Sanders LM, Shaw JS, Guez G, Baur C, Rudd R. Health literacy and child health promotion: implications for research, clinical care, and public policy. *Pediatrics* 2009, 124 Suppl 3:S306-314 (http://pediatrics.aappublications.org/content/124/Supplement_3/S306.abstract [accessed 28 September]).
22. Australian Commission on Safety and Quality in Health Care. Health Literacy. Taking action to improve safety and quality. Sydney: ACSQHC, 2014 (<http://www.safetyandquality.gov.au/publications/health-literacy-taking-action-to-improve-safety-and-quality/> [accessed 28 September 2014]).

Suggested citation

Dodson S, Beauchamp A, Batterham RW and Osborne RH. Information sheet 2: Health literacy, inequity and health outcomes. In *Ophelia Toolkit: A step-by-step guide for identifying and responding to health literacy needs within local communities*. 2015. Retrieved from www.ophelia.net.au

