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An international survey of Health Literacy Education within schools of pharmacy

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Abstract

Background: Health literacy (HL) influences patients' health status, use of the healthcare system and medication-related behaviours. However, the concept is relatively new to pharmacy and its incorporation in academic curricula has not been examined.

Aims: To explore HL training in pharmacy schools internationally, and academics' opinions in regards to how it should be taught and assessed.

Methods: An anonymous, online survey was administered to academics who teach within pharmacy degree courses from countries where English is the main language.

Results: Responses were received from 21 pharmacy schools in seven countries; 20 stated that HL was taught within their pharmacy degree, in four as a stand-alone topic. Small-group tutorials were thought to be the most beneficial form of teaching health literacy, best assessed using oral and objective structured clinical examinations.

Conclusion: The majority of pharmacy schools taught health literacy and had similar opinions regarding best practice teaching and assessment.

Keywords: *Communication, curriculum, education, health literacy, pharmacy, students.*

Introduction

Health literacy is the degree to which people are able to access, understand, appraise and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course (Kwan *et al*., 2006). The health literacy abilities of patients influence their knowledge and awareness of their own disease and health status, navigation and use of the healthcare system, and knowledge and awareness of health and illness (Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs 1999). Studies have shown that large proportions of the general public and specific patient populations have what is considered a low level of health literacy, and thus may face difficulties accessing, understanding and appropriately utilising health information. The National Assessment of Adult Literacy conducted in the United States in 2003 concluded that 36% of adults aged over 16 years had low health literacy levels. In Australia, the Bureau of Statistics reported that 59% of adults aged between 15 and 75 years were considered to have low health literacy (Kutner *et al*., 2006; Australian Bureau of Statistics 2008).

In the pharmacy setting, low health literacy may affect a number of medicines-related behaviours that increase the likelihood of medication misadventure. These might include incorrect interpretation of medicine labels (for example, directions for use and cautionary ancillary labels), and unintentional medicine non-adherence (Lindquist *et al*., 2006; Davis *et al*., 2006; Mårtensson & Hensing 2011).

Pharmacist and pharmacy intern/student/assistant awareness of health literacy as a barrier to effective patient care in the pharmacy setting coupled with an ability to implement strategies to overcome these issues, are important and necessary components of pharmacy curricula.

The inclusion of health literacy into pharmacy curricula is, in some countries, dictated by the accreditation standards for pharmacy degrees set out by the relevant regulatory authority. In Australia, the current accreditation standards of the Australian Pharmacy Council do not overtly state health literacy training as a requirement in Australian pharmacy curricula. Instead they make overarching, general statements regarding interpersonal skills and the pharmacist's contribution to

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the promotion of good health and disease prevention (Australian Pharmacy Council 2009). In the United States of America, the Accreditation Council for Pharmacy Education includes health literacy as a requirement for the accreditation of all PharmD degrees, stating: "The college or school must ensure that the curriculum addresses…health literacy…" (Accreditation Council for Pharmacy Education 2011). Curricular standards regarding health literacy differ between countries and jurisdictions, and therefore inferences regarding the prevalence of health literacy education in pharmacy curricula cannot be made solely from this information. Also, as no previous studies exist regarding health literacy instruction in pharmacy curricula, inferences cannot be drawn from this source either.

In this study, we explored current methods of teaching health literacy, competency evaluation, and resources used for instruction within pharmacy curricula in universities from English-speaking countries. This was conducted to provide insight into methods for future implementation of health literacy education into current pharmacy curricula, and provide possible guidance for the development of future pharmacy curricula.

Method

Respondents

Pharmacy academics were selected as the population of interest for this study, with two methods of recruitment being used to invite respondents to complete an online questionnaire. The first method involved advertising the survey through the Academic Section of the International Pharmaceutical Federation newsletter. After a low response rate, a second method of recruitment was used. This involved hand-searching publicly available staff directories on university websites in Australia, Canada, Ireland, New Zealand, South Africa, the United Kingdom, and the United States to identify relevant pharmacy academics. We contacted them directly via email with an invitation to be involved in the study. Invited participants were forwarded a reminder email to take part in the survey approximately two weeks following the initial invitation.

Inclusion criteria

a) Currently teaching within or overseeing an accredited pharmacy degree; and

b) English being the language of instruction.

Study design

The questionnaire was specifically designed to assess the current state of health literacy within pharmacy curricula. The literature was consulted to determine topics for inclusion in the questionnaire, which were discussed by the research group. The questionnaire was reviewed by the research team for face and content validity.

The final questionnaire collected information regarding:

1. Demographics (country of institution, type of pharmacy degree program, position held at the institution);
2. Whether health literacy is taught within the pharmacy curriculum;
3. The method of delivery and forms of assessment of health literacy education employed;
4. Opinions as to the importance of health literacy education in pharmacy curricula;
5. Opinions as to how health literacy should be taught and assessed; and
6. Materials and textbooks used to teach health literacy.

The questionnaire comprised 25 questions, of which four allowed the respondent to enter free text.

Respondents had the option of submitting their contact details if they wished to discuss their responses further or to request further information.

The survey was delivered via Survey Monkey® (SurveyMonkey, 2013), an online survey platform. Descriptive analysis was performed using SPSS 19.0 (SPSS Statistics Inc. 2010).

The study was approved by the Monash University Human Research Ethics Committee.

Results

Twenty-three pharmacy academics completed the online survey. Two responses were registered as originating from universities from which a response had already been received, and hence were excluded, resulting in a total of 21 valid responses. Country of origin of respondents is listed in Table I.

Table I: Countries of Employment of Respondents

Country	n
Australia	7
United Kingdom	6
United States of America	4
New Zealand	2
Canada	1
South Africa	1

The types of degree into which respondents taught or which they oversaw are shown in Table II.

Of the 21 respondents, 20 (95.2%) reported health literacy being a component of their institution's pharmacy curriculum.

Lectures and small group learning (*e.g.* tutorials and workshops) were the most common primary forms of delivery of health literacy education, as listed in Table III. One respondent listed the main delivery method as a "combination of lectures, workshops and a health promotion campaign devised and conducted by the students".

Table II: Degree Programs In Which Respondents Teach or Oversee

Degree	n
Bachelor of Pharmacy (BPharm)	12
Master of Pharmacy (MPharm)	10
Doctor of Pharmacy (PharmD)	5
Master of Science (Pharmacy)	1
Total frequency is larger than 20 as respondents were able to select more than one option where more than one pharmacy degree was delivered in their institution of employment.	

Table III: Primary Delivery Methods of Health Literacy Education

Method of delivery	n
Lectures	8
Small-group learning (*e.g.* tutorials, workshops)	8
Experiential learning (*e.g.* clinical practice, practice-based learning)	2
Self-directed learning, including online materials	2
Other	1

The primary delivery methods of health literacy education differed by country. Lectures and small group learning were equally the primary method of delivery in Australia (n=3, 14.3%), while lectures were the primary method in the United States (n=2, 9.5%). In the United Kingdom, lectures were the primary method of delivery for only one institution, with small group learning, self-directed learning, and experiential learning dominating. Both respondents from New Zealand selected small group learning as the primary method of delivery (n=2, 9.1%).

While health literacy was sometimes taught explicitly (n=4, 18.2%), it was more often integrated into various components of pharmacy practice education, such as communication and counselling (n=14, 63.6%).

Assessment of students' health literacy competency was most often done by written examination (n=12, 57.1%), followed by performance-based assessments, e.g. practical exams and objective structured clinical examinations (OSCEs) (n=10, 47.6%). Less common assessment methods included presentations and assignments. Respondents were able to select more than one option when answering this question.

The most commonly reported drivers influencing the incorporation of health literacy into pharmacy curricula were professional practice standards or competency standards, and health literacy being considered part of the scope of practice for pharmacists in that particular country (Table IV).

Of the four respondents from the United States, only two selected 'National/State curriculum standards' as a driver for the incorporation of health literacy into pharmacy curricula, even though it is outlined as a curriculum requirement by the Accreditation Council for Pharmacy Education. In contrast to this, five of the seven respondents from Australia selected the same option, yet at the time of the survey, health literacy education was not a requirement by the Australian Pharmacy Council. The South African respondent selected 'The country has a high number of people with low literacy' as the only driver for its inclusion into the pharmacy curriculum.

Table IV: Drivers for the Incorporation of Health Literacy into Pharmacy Curricula

Drivers	n
Professional practice standards or competency standards	16
Part of the scope of practice for pharmacists in this country	16
Motivation of individual staff members	9
National/State curriculum standards (dictated by an accreditation body or official organisation)	5
The country has a high number of people with low literacy	1
Total frequency is larger than 20 as respondents were able to select more than one option	

When respondents were asked about the content included in the health literacy component of the pharmacy curriculum, the most common content taught were methods to target communication to consumers of varying health literacy needs (n=17, 81%), followed by health literacy concepts (n=15, 71.4%) and awareness of health literacy by health professionals (n=13, 61.9%). Definitions of health literacy were included in 12 of the 21 curricula. Four respondents supplied alternative terms for health literacy that are used within their curricula, these being: 'drug and information literacy', 'evidence based medicine and communication to patients', 'health education', and 'information retrieval'.

The most common time for health literacy to be taught was Year 3 or Year 4 of the pharmacy degree, with responses of 15 (71.4%) and 16 (76.2%), respectively.

A pharmacist academic was usually the primary leader or coordinator of the health literacy component of the pharmacy curriculum in question (n=19, 90.5%).

Respondents were then given the opportunity to provide their opinions regarding the benefit of including health literacy education into pharmacy curricula. A number of responses were provided, including:

"Effectively communicating with patients (and other health care professionals) about their medicine is essential if they are to be used correctly and safely."

"It is fundamental to [know] how information for consumers is appropriately tailored by a pharmacist."

"Vital to the existing and developing roles of pharmacists."

"So that pharmacists can become more culturally competent, improve their communication skills and contribute to improving health outcomes for those with low health literacy."

Opinions were also collected regarding the methods of teaching and assessment respondents believe are best to teach health literacy in their institution. Small group learning (n=7, 33.3%) and self-directed learning (n=6, 28.6%) were the most common responses, whereas lectures were selected by three respondents. In regards to assessment, the highest responses were for oral examinations (n=5, 23.8%), OSCEs (n=5, 23.8%), and experiential placement assessment by a preceptor or supervisor (n=5, 23.8%). Only one respondent selected written examinations as their desired method of assessment.

Finally, respondents were provided the opportunity to list materials and resources used in their pharmacy curricula to teach health literacy. Seven respondents reported using textbooks or other resources, including: "Health Promotion for Pharmacists" (Blenkinsopp *et al.,* 1999), "Health Psychology: Topics in Applied Psychology" (Abraham, Connor et al. 2008), "Sociology and Healthcare" (Sheaff 2005), and "Foundation in Pharmacy Practice" (Whalley *et al.,* 2008). One institution reported using YouTube videos on motivational interviewing in their curricula.

Discussion

Health literacy has been incorporated into pharmacy curricula in a number of English-speaking countries using a variety of teaching and assessment methods.

Regarding course content, it was expected that definitions of health literacy would be a fundamental concept in health literacy education; however, only 12 respondents reported that this was the case. Similarly, it might be expected that the influence of health literacy on culturally and linguistically-diverse consumers, a population group in which low health literacy is known to have a significant impact, would also be considered, but only 12 respondents reported this (Weinick & Krauss 2000; Fiscella *et al*., 2002; Wilson *et al*., 2005; Hawkins 2010). It raises the question as to whether or not training is addressing the full scope of health literacy, or whether it is being blended with general communication issues. On the other hand, techniques for communicating with consumers with low health literacy abilities and assessment of the health literacy suitability of educational materials for consumers were taught in the majority of pharmacy curricula, confirming these as important concepts in health literacy education.

The majority of respondents reported that health literacy was most commonly taught in the later years of the degree, specifically, Year 3 or Year 4 of the pharmacy degree (15 [71.4%] and 16 [76.2%], respectively). Due to the importance of health literacy in pharmacy practice, and the significant impact low health literacy can have on consumer health care, its introduction into pharmacy curricula in earlier years could be warranted. Introducing the topic to students at an earlier level, and building their knowledge over a number of years, may allow for the concept to be better understood, and readily applied at later year levels, and when practising as a pharmacist. Although due to the complexity of health literacy, a certain level of experience and maturity may be required of the student for them to appreciate the concept completely.

Knowledge of the current methods of delivery of health literacy education within pharmacy curricula may help guide future delivery of health literacy education. Ten respondents (47.6%) reported that small-group learning formed a part of health literacy education within their pharmacy curricula, the highest reported method of delivery, although it was not possible to determine the exact methods used in these small group learning sessions. Respondents also believed that small group learning was the best method of teaching health literacy. There is evidence to show that the small-group approach has positive outcomes on learning, including the promotion of deep learning, as opposed to surface learning, leading to a more long-term change in the learner's memories and abilities (Jones, 2007), development of skills in self-reflection and self-discipline, and the fostering of self-motivation as a result of active involvement in learning (Norman & Schmidt 1992; Schwartz, 1997).

The majority of respondents reported that health literacy was included in their pharmacy curriculum because it was considered to be part of the scope of practice of a pharmacist. This underscores the importance of competency frameworks. Regarding the drivers for including health literacy in pharmacy curricula, only a small number of respondents reported that health literacy was included in the curriculum due to national or state curriculum standards dictated by an accreditation body, with only the United States including health literacy in pharmacy degree accreditation standards. As mentioned in the results, it was interesting to note the influence that perceived accreditation requirements have on the inclusion of health literacy in pharmacy curricula, even if the requirement does not exist. Given that health literacy has a significant impact on consumer health care, a case may reasonably be made to incorporate health literacy as a requirement in pharmacy curricula accreditation standards.

Regarding assessment, the majority of respondents reported that health literacy knowledge was assessed in the form of a written examination, yet when respondents were asked to provide their opinions regarding the best way to measure the health literacy knowledge of students, the majority selected oral examination and OSCEs as their most preferred method, whereas only one respondent preferred written examinations as the method of assessment. This reflects the practical nature of health literacy education. Being a skill in communication, and consumer interaction and understanding, it could be most practical to measure students' abilities in this field through practical, oral examination, rather than in written format.

While the survey identified that health literacy training is delivered and assessed by a variety of methods, the effectiveness of these teaching methods and assessments was not explored. Such information would be useful in assessing teaching strategies for adult learners to guide curriculum development. Having now identified a number of universities that deliver health literacy education in variety of ways, a more intensive evaluation of the methods of assessment employed seems appropriate. This would inform development of strategies for wider implementation of health literacy education.

The low response rate (around 5%) limits the generalisation of the results. This was anticipated given that schools without such a focus were unlikely to respond. Whilst it would have been useful to determine the prevalence of health literacy education in pharmacy curricula internationally, the low response rate precluded such a conclusion being made. Given that the prevalence of health literacy education in pharmacy curricula reported in the survey was close to 100%, it is likely that self-selection bias occurred when respondents chose to complete the survey. Although the invitation explicitly explained that the survey was relevant both for schools that teach health literacy and those that do not, potential respondents from schools not teaching health literacy may have opted not to respond, believing that they had nothing of interest to report. The questionnaire could have included a section that allowed Schools who do not currently teach health literacy to explain why not, and possible routes they may envisage taking if they were to integrate health literacy in their curriculum.

Broader inclusion criteria may have also provided for greater generalisation of results, such as the inclusion of countries where English is not the main language of instruction; however, resource and time constraints precluded this.

Future research should attempt to determine the methods of health literacy education in more depth, particularly the variety of content employed in its delivery in pharmacy schools internationally. It would also be useful to determine the effectiveness and appropriateness of methods used in its delivery.

Conclusion

Health literacy training is currently included in pharmacy curricula in a number of English-speaking countries. Delivery, assessment and drivers for inclusion into the curriculum are common among responding institutions. Opinions on the methods of delivery and assessment of health literacy education differed from what is currently being used in practice.

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Conflict of interest

We certify that there is no conflict of interest with any financial organisation regarding the material discussed in the manuscript.

References

Abraham, C., Connor, M., Jones, F. & O'Connor, D. (2008) *Health Psychology: topics in Applied Psychology*. London, Hodder Education.

Accreditation Council for Pharmacy Education (2011) *Accreditation standards and guidelines for the professional program in pharmacy leading to the Doctor of Pharmacy degree*. Chicago, Illinois

Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs (1999) Health literacy: report of the Council on scientific affairs. American Medical Association. *Journal of the American Medical Association*, **281**, 552-557.

Australian Bureau of Statistics (2008) Adult literacy and life skills, summary results (reissue), (online). Available at: http://www.abs.gov.au. Accessed 23rd January, 2012.

Australian Pharmacy Council (2009). *Accreditation Standards*. Canberra, ACT 1.

Blenkinsopp, A., Panton, R. & Anderson, C. (1999) *Health Promotion for Pharmacists.* Oxford, Oxford University Press.

Davis, T.C., Wolf, M.S., Bass, P.F., Middlebrooks, M. Kennen, E., Baker, D.W., Bennett, C.L., Durazo-Arvizu, R., Bocchini, A., Savory, S. & Parker, R.M. (2006) Low Literacy Impairs Comprehension of Prescription Drug Warning Labels. *Journal of General Internal Medicine,* **21**(8), 847-851.

Fiscella, K., Franks, P., Doescher, M. & Saver, B. (2002) Disparities in health care by race, ethnicity, and language among the insured: findings from a national sample. *Medical Care,* **40**(1), 52-59.

Hawkins, A. (2010) Health literacy: a potential barrier in caring for underserved populations. *Disease-a-Month,* **56**(12), 734-740.

Jones, R. (2007) Learning and teaching in small groups: characteristics, benefits, problems and approaches. *Anaesthesia and Intensive Care,* **35**(4), 587.

Kutner, M., Greenberg, E., Jin, Y. & Paulsen, C. (2006). *The health literacy of America's adults - results from the 2003 National Assessment of Health Literacy*. Department of Education. Washington DC, National Center for Educational Statistics.

Kwan, B., Frankish, J. & Rootman, I. (2006). *The development and validation of measures of "health literacy" in different populations*. Vancouver, University of British Columbia Institute of Health Promotion Research & University of Victoria Centre for Community Health Promotions Research.

Lindquist, L., Go, L., Fleisher, J., Jain, N., Friesema E. & Baker, D. (2011). Relationship of Health Literacy to Intentional and Unintentional Non-Adherence of Hospital Discharge Medications. *Journal of General Internal Medicine,* **27**(2), 173-178.

Mårtensson, L. & Hensing, G. (2011) Health literacy – a heterogeneous phenomenon: a literature review. *Scandinavian Journal of Caring Sciences,* **26**(1), 151-160.

Norman, G. & Schmidt, H. (1992) The psychological basis of problem based learning: a review of the evidence. *Academic Medicine,* **67**, 557-565.

Schwartz, P. (1997) *Perservering with problem-based learning*. London, Kogan Page.

Sheaff, M. (2005). *Sociology and health care*. Berkshire, Open University Press.

SPSS Statistics Inc. (2010). IBM SPSS Statistics.

SurveyMonkey® (2013) Available at http://www.surveymonkey.com.

Weinick, R. & Krauss, N. (2000) Racial/ethnic differences in children's access to care. *American Public Health Association,* **90**(11), 1771-1774.

Whalley, B., Fletcher, Weston, K., Howard, R. & Rawlinson, C. (2008) *Foundation in Pharmacy Practice*. London, Pharmaceutical Press.

Wilson, E., Chen, A.H., Grumbach, K., Wang, K. & Fernandez, A. (2005) Effects of Limited English Proficiency and Physician Language on Health Care Comprehension. *Journal of General Internal Medicine*, **20**(9), 800-806.

Appendix 1

International survey of health literacy education provided within pharmacy curricula.

1) In which country do you work? (Required)

2) With which university or academic organisation do you hold this position? (Optional)

3) If applicable, what type of pharmacy degree do you teach within? BPharm (Bachelor of Pharmacy)/MPharm (Master of Pharmacy)/ PharmD (Doctor of Pharmacy)/Other. (Required)

4) What is your position or role within the university or academic organisation? (Optional)

5) This survey explores the teaching of Health Literacy in Pharmacy Schools. As this term may not be used in all settings, a useful definition is: H*ealth literacy is the ability of people to obtain, understand and use health information to promote and maintain health*. Are other terms used to describe the concept of Health Literacy in your country? Please list:

a) _____
i) _____
ii) _____
iii) _____

6) Is the concept of Health Literacy explicitly taught by your university or academic organisation? Yes/No

(if you answered 'Yes', please complete Questions 7-20)

No (if you answered 'No', please go to Question 21)

7) In what context is Health Literacy taugh

i) Explicitly as stand-alone topic

ii) Explicitly, integrated into various components (e.g.communication, counselling)

iii) Not explicitly; implied in other course content

iv) Other: _____

8) At what stage in the pharmacist career does your university or academic organisation deliver Health Literacy training? (Select all that apply; select Not Applicable [NA] if your organisation is not involved in training at that level)

i) Year 1 undergraduate □ NA □
ii) Year 2 undergraduate □ NA □
iii) Year 3 undergraduate □ NA □
iv) Year 4 undergraduate □ NA □
v) Year 5 undergraduate □ NA □
vi) Year 6 undergraduate □ NA □
vii) Optional undergraduate elective □ NA □
viii) Professional internship year □ NA □
ix) Continuing education for all pharmacists □ NA □
x) Postgraduate qualification □ NA □
xi) For specialised pharmacist roles □ NA □
xii) Pharmacy technician/pharmacy assistant training □ NA □

9) What is the main method of teaching Health Literacy in your university or academic organisation? (Select one option)

i) Lectures

ii) Small-group learning, e.g. tutorials, workshops

iii) Self-directed learning (including online materials)

iv) Experiential learning (i.e. clinical practice; practice-based learning)

v) Other: _____

10) What are the other additional methods of teaching are used to complement the main method? (Select all options that apply)

i) Lectures

ii) Small-group learning, e.g. tutorials, workshops

iii) Self-directed learning (including online materials)

iv) Experiential learning, i.e. clinical practice, practice-based learning

v) Other: _____

11) In your university or academic organisation, is Health Literacy taught

i) To Pharmacy students/pharmacists separate to other professions?

ii) In an interprofessional learning environment (more than one profession taught together)?

12) What is/are the background(s) of the person(s) leading or coordinating Health Literacy teaching in your university or academic organisation? (Select all options that apply)

i) Pharmacist academic

ii) Pharmacist teacher/practitioner

iii) Sociologist

iv) Psychologist

v) Other social scientist

vi) Medical academic

vii) Medical practitioner

viii) Other: _____

13) What were the key drivers/reasons for inclusion of Health Literacy in the curriculum in your university or academic organisation? (Select all that apply)

i) National/State curriculum standards dictated by an accreditation body or official organisation)

ii) Professional practice or competency standards

iii) Part of the scope of practice for pharmacists in this country

iv) Motivation of individual staff members

v) Direction from administration/management

vi) Other: _____

14) Which of the following elements are included in the Health Literacy curriculum in your university or academic organisation? (Select all that apply)

i) Definitions of Health Literacy [e.g.... Institute of Medicine; World Health Organisation definitions]

ii) Health Literacy concepts

iii) Awareness of Health Literacy by health professionals

iv) Raising awareness of Health Literacy in consumers

v) How to assess Health Literacy capacity of consumers

vi) How to target communication to consumers' Health Literacy needs

vii) Assessment of Health Literacy suitability of educational materials (e.g. consumer information leaflets and other resources)

viii) Assessment of Health Literacy of students

ix) Health Literacy and culturally and linguistically-diverse consumers

x) Health Literacy in special settings (schools, nursing homes, etc.)

xi) Health Literacy issues for pharmacy staff (including technicians and assistants)

xii)Other: _____

15) How does your university or academic organisation assess learning outcomes following delivery of Health Literacy education or training? (select all that apply)

i) Written examination

ii) Oral examination (viva voce)

iii) Individual written assignment tasks

iv) Group written assignment tasks

v) Presentations

vi) Task-oriented assessments (OSCE, practical exams)

vii) Experiential placement assessment by preceptor/supervisor

viii) Not assessed

ix) Other: _____

16) Do you use any textbooks or other resources to assist learners to understand the concept of Health Literacy? Yes/No

17) If you answered yes, please list the textbooks or resources.

18) Do you use any textbooks or other resources to illustrate methods or strategies that can be employed to teach the concept of Health Literacy? Yes/No

19) If you answered yes, please list textbooks or resources.

20) This project also seeks to review Health Literacy educational material and resources to assess common effective educational strategies in Health Literacy, for the purposes of developing an educational package for community pharmacists and pharmacy assistants in Australia.

With consent, we would be very grateful to have access to your curriculum or educational resources (de-identified if you wish) to be included in our review. A summary of the nature, extent and impact of various resources reviewed will be published in the pharmacy education literature. No materials created or developed by any institution or individual will be used in any way other than the summary review, without explicit permission of the appropriate person.

If you consent to be contacted regarding your curriculum, materials and resources, please provide the following contact information.

a) Title and Name

b) Position

c) Organisation and address

d) Email address

e) Brief summary of potential resources

If you answered 'Yes' to Question 6, you have now completed the questionnaire. Thank you for your participation.

21) Do you believe that dedicated Health Literacy training or education should be delivered by your university or academic organisation? Yes/No

22) Please provide reasons for your answer to Question 21

_____
_____
_____
_____
_____
_____

If you answered 'No' to question 21, you have now completed the questionnaire. Thank you for your participation.

If you answered 'Yes' to Question 21, please answer questions 23-26.

23) In pharmacy practice education, at what stage do you believe Health Literacy should be delivered? (Select all that apply, select NA if not relevant to your university or academic organisation)

i) Year 1 undergraduate □ NA □

ii) Year 2 undergraduate □ NA □

iii) Year 3 undergraduate □ NA □

iv) Year 4 undergraduate □ NA □

v) Year 5 undergraduate □ NA □

vi) Year 6 undergraduate □ NA □

vii) Optional undergraduate elective □ NA □

viii) Professional internship year □ NA □

ix) Continuing education for all pharmacists □ NA □

x) Postgraduate qualification □ NA □

xi) For specialised pharmacist roles □ NA □

xii) Pharmacy technician/pharmacy assistant training □ NA □

24) If you were to introduce Health Literacy education/training, what would be your preferred method(s)? (Select all that apply)

i) Lectures

ii) Small-group learning, e.g. tutorials, workshops

iii) Self-directed learning (including online materials)

iv) Experiential learning, i.e. clinical practice, practice-based learning

v) Other: _____

25) What elements of Health Literacy would you include in the curriculum? (Select all that apply)

i) Definitions of Health Literacy [e.g.... Institute of Medicine; World Health Organisation definitions]

ii) Health Literacy concepts

iii) Awareness of Health Literacy by health professionals

iv) Raising awareness of Health Literacy in consumers

v) How to assess Health Literacy capacity of consumers

vi) How to target communication to consumers' Health Literacy needs

vii)Assessment of Health Literacy suitability of educational materials (e.g. consumer information leaflets and other resources)

viii) Assessment of Health Literacy of students

ix) Health Literacy and culturally and linguistically-diverse consumers

x) Health Literacy in special settings (schools, nursing homes, etc.)

xi) Health Literacy issues for pharmacy staff (including technicians and assistants)

xii) Other: _____

26) How would you suggest Health Literacy be assessed within the curriculum? (Select all that apply)

i) Written examination

ii) Oral examination (viva voce)

iii) Individual written assignment tasks

iv) Group written assignment tasks

v) Presentations

vi) Task-oriented assessments (OSCE, practical exams)

vii) Experiential placement assessment by preceptor/supervisor

viii) Other: _____

Thank you for your participation