RELATIONSHIP BETWEEN THE USE OF HEALTH SERVICES AND HEALTH LITERACY AMONG UNIVERSITY STUDENTS

[1]CLÁUDIA MARGARIDA DE SOUSA PINTO, [2]AMÂNCIO ANTÓNIO DE SOUSA CARVALHO

[1]Specialist Nurse at Felgueiras Community Care Unit; Vale de Sousa Norte Health Centre Group,
Master in Community Nursing, Felgueiras, Portugal
[2]Professor, Health School – University of Trás-os-Montes and Alto Douro (UTAD);
PhD, Chil Studies; Vila Real, Portugal. CIEC - Research Centre on Child Studies. http://orcid.org/0000-0002-1573-5312
E-mail: amancioc@utad.pt

Abstract - Background: Health literacy (HL) can be defined as the set of cognitive and social skills that determine the ability of individuals to access, understand and use information to promote and maintain a good health status. Objective: To analyze the relationship between the level of HL and the use of health services by university students. Methodology: This is a descriptive- correlational, cross-sectional study with a quantitative approach, with a sample of 351 undergraduate students. IBM SPSS (25.0) was used for data collection, using descriptive and inferential statistics. The level of significance was 5%. Results: Most of the students were female (69.5%), belonged to the age group of 18-23 years (72.4%) and were attending an undergraduate degree (65.05%). The ages were between 18 and 54 years, the mean being 23.54±7.43 years old. The highest proportion of students used the NHS (59.3%), used a doctor in the last 12 months 1 to 2 times (51.6%) and other health professionals 1 to 2 times (44.2%). Most students had limited literacy (66.4%). The categories of Global HL differed among students who used other health professionals in the last 12 months (χ^2: $p < 0.010$), with the proportion of students who used 6 or more times being higher in the category of Excellent HL. Conclusions: Students' Global LS is predominantly limited, in convergence with the results obtained by other studies. The HL is related to the frequency with which students resorted to other health professionals, and these professionals seem to be the ones who most increase the HL.

Keywords - Public Health; Health Literacy; University Students; Health services.

I. INTRODUCTION

Health Literacy (HL) was a concept introduced in the 1970s, of the last century, but it has acquired a growing importance in public health over time. This phenomenon focuses on people's ability to effectively respond to the increasingly complex health-related demands in a modern and constantly changing society (Silva, Saboga-Nunes, & Carvalho, 2019). On the other hand, it has recently become a relevant topic for researchers, health professionals and health policy ideologues, being transversal to several disciplines (Okan, et al., 2019). The World Health Organization launched a first definition of HL considering it as the set of cognitive and social skills that determine the motivation and ability of individuals to access, understand and use information in order to promote and maintain a good state of health. This implies the acquisition of knowledge, personal skills and confidence to act in a healthy way through changes in lifestyle and living conditions (WHO, 1998). Later Dodson et al. (2015) highlighted the community aspect of HL, conceptualising it as the personal characteristics and social resources required for individuals and communities to access, understand, evaluate and use information to make health decisions. Even more recently, in Portugal, the National Programme for Health, Literacy and Self-Care defined HL as the "Capacity to make informed decisions about health, in everyday life, and also in what concerns the development of the Health System, as it contains essential elements of the educational process and provides indispensable skills for self-care..." (Despacho nº 3618-A/2016, p. 8660(5)).

The importance of this theme began to emerge when it was found that HL levels condition how people make decisions about their health, affecting the quality of life of individuals, as well as that of those who depend on them. Its importance, however, is not limited to the individual level, but also has implications at a more macro level, in the costs for health systems and their organisation (Silva et al., 2019; Spain & Avila, 2016). There is now considerable evidence that education, literacy and self-care are of great importance not only for the promotion and protection of the population's health, but also for the effectiveness and efficiency of health care provision, and are therefore a critical factor for the sustainability of Health Services (Despachon.º 3618-A/2016). According to Espanha, Ávila, and Mendes (2016), the importance of HL lies in the fact that it conditions how the individual is able to make decisions that are more favourable to health, disease prevention, and healthy lifestyles, having implications for health expenditure and the costs and forms of organization of each country's health systems. The DGS (2017) adds to these implications the association between low levels of HL and various diseases such as diabetes mellitus, obesity, cardiovascular diseases or cancer, due to the reduced use of preventive and screening health services, with individual and collective consequences. The promotion of HL is thus considered a priority for the Portuguese National Health Service (NHS) (DGS, 2017; ERS, 2017). Espanha and Ávila (2016)

presented the results of the European study on HL, highlighting that 10.9% of respondents had an inadequate level of HL and about 38.1% had a problematic level, and that Portugal was below the average of the other countries participating in the study. Evidence has also shown that adequate levels of HL translate into health benefits for the population, as they are consistent with an adequate empowerment of each individual, thus promoting greater and better responsibility of the individual in his/her health process, better participatory citizenship, as well as a better quality of life (Almeida, 2013). In the current context of the COVID-19 pandemic, the promotion of HL is a central strategy in the response and a tool for Public Health, facilitating the articulation and development of intersectoral work, being decisive for the implementation of preventive measures in this area, having acquired increased importance among individuals, communities and organizations (Direção-Geral da Saúde, 2020). Silva et al. (2020) also refer to this topic, highlighting the indispensability of LS as an information tool about the routes of infection of SARS-COV-2, which is also effective in terms of disease prevention, health promotion and treatment. There is also scientific evidence of the association between lower levels of HL and lower use of preventive services, difficulty in the control of chronic diseases which lead to hospital consultations and admissions, as well as worse health conditions. In addition to all this, people with low levels of HL have difficulties ranging from reading medication labels, interpreting blood glucose values, complying with medication schedules, understanding educational flyers and the text of informed consents, difficulty processing oral communication, difficulty defining health risks, listing their medications and using them correctly, describing their indications and understanding their condition and maintenance, self-care and disease control (Rodrigues, Matos, Tenani, & Batista, 2022). According to WHO (2014), limited HL is associated with lower participation in the process of health promotion and disease prevention of individuals. In turn, it relates an inadequate level of HL with late screening activities, risky behavior, more occupational accidents, poor management of chronic diseases, low adherence to medication, medication errors, misdiagnosis due to poor communication between providers and patients, increased rates of hospitalization and readmission, and increased premature morbidity and mortality. Communication is relevant in the relationship between users and the health team, and low HL can affect this interaction, affecting the therapeutic process and the operationalization of the care plan (Silva et al., 2020). Therefore, HL is considered a relevant tool to prevent diseases and complications, promote health, improve the level of quality of life, as well as assist in the citizen's ability and motivation for healthier choices (Saboga-Nunes et al., 2019; Silva et al., 2020). As for the costs to health systems of low HL, Europe spends millions of euros on healthcare, and it is estimated that these costs may account for 3% to 5% of total healthcare costs (Eichler, Wieser&Bruegger, 2009). From all of the above, the importance of conducting studies to measure and monitor HL emerges, as it is a relevant instrument within the scope of health promotion (WHO, 2014), in the various stages of the human life cycle, in order to facilitate and improve health education (HE) (Quemelo, Milani, Bento, Vieira, &Zaia, 2017). It is within this scope that this study arises, which has the general objective of analyzing the relationship between the students' HL of the sample and the use of health services.

II. MATERIAL AND METHODS

This is an observational, descriptive-correlational, cross-sectional study with a quantitative approach (Vilelas, 2020). The target population consisted of students from a higher education institution of the northern region of the country. The following inclusion criteria were established: i) Being a student of a higher education institution in the northern region of Portugal; ii) Having Portuguese nationality; iii) Being aged 18 years or more. The population was composed of 1317 students. The sample is defined by the exclusion criteria, which in the present study were: i) Students who were not present at the date of data collection; ii) Students who had not completed at least 43 of the items of the LS scale. A total of 399 questionnaires were obtained, of which 48 were excluded from the statistical treatment, as they presented less than 43 answers of the 47 items that constitute the scale. Thus, the sample was composed of 351 students. The data collection instrument used was a questionnaire composed of 3 parts: i) sociodemographic characterization; ii) European Health Literacy Questionnaire - HLS-EU-PT, which allowed assessing the participants' level of HL (Saboga-Nunes & Sorensen, 2013); iii) questions on the use of health services (user's health subsystem, frequency of service use, and professionals consulted). The HLS-EU-PT scale, translated and validated for the Portuguese population, has a 5-option response scale (very easy, easy, difficult, very difficult, and don't know/no answer). Saboga-Nunes and Sorensen (2013) consider option 5 of the scale (don't know/no answer) to be essential in the statistical treatment, where a value of zero should be assigned, keeping the formula for calculating literacy levels the same. The scale score ranges from zero to 50 points. Higher score means better HL. The cut-off points that limit the four categories of HL: Inadequate (0-25), Problematic (>25-33), Sufficient (>33-42) and Excellent (>42-50). The data collection process was carried out via email, by means of a hyperlink, which referred to an anonymous self-completion questionnaire and online response. This questionnaire was sent by the Academic Services of the Higher

School of the Northern region of Portugal, thus ensuring the required anonymity throughout the process, and the researcher did not have access to the participants' email address. This questionnaire was developed through Google® Forms, and the participants' answers were sent to the researcher. The data collection period took place from 23 October to 26 November 2018. In order to ensure the informed consent of each participant, the data collection instrument provided the contextualization and objectives of the research, informed the confidentiality of the information collected and ensured the participant's anonymity and privacy, as well as a question validating the student's consent. The Ethics Committee of the University of Trás-os-Montes and Alto Douro (Opinion no. 38/2018) was asked for an opinion, as well as a formal request for permission to apply the study to the President of the School of Higher Education of the Northern Region of Portugal, which were approved. Data processing and analysis were performed using the IBM SPSS Statistics 25.0® software for Microsoft Windows®. Absolute and relative frequencies were used for the nominal measurement level variables and means and standard deviations for the ratio variables. In terms of inferential statistics, the t-test and ANOVA were used. The level of statistical significance was 5% (Marôco, 2021).

III. RESULTS

Sociodemographic characterization of the sample - From the total sample (n=351), most students were female (69.5%), aged between 18 and 23 years (72.4%) and undergraduate students (65.05) (Table 1). The sample of students was aged between 18 and 54 years, with a mean age of 23.54±7.43 years (Data not shown in the table).

Variables		n	%
Gender			
	Male	107	30.5
	Female	244	69.5
Age			
	18-23 yearsold	254	72.4
	24 yearsorolder	97	27.6
Courseofstudy			
	Higher technical course	37	10.5
	Undergraduate degree	228	65.0
	Master degree	86	24.5

Table 1. Socio-demographic characterization of the sample (n=351)
Legend: n – Absolut frequency; % - Relative frequency.

A slight majority of the students in the sample (59.3%) refer that the health system or insurance they use is the National Health Service. Regarding the frequency of use of health services, in the last 12 months, the largest group of students used a hospital service 1-2 times (45.3%), had a consultation with a doctor, 1 to 2 times (51.6%) and with other health professionals (dentist, physiotherapist, psychologist, nutritionist, orthoptist, etc.) 1 to 2 times (44.2%), as shown in table 2.

Use of Health Services		n	%
System/Healthinsurance	No	20	5.7
	NHS	208	59.3
	Private	21	6.0
	Public and private	77	21.9
	DK/DA	25	7.1
Number of times a hospital service was used in the last 12 months	0 Times	96	27.4
	1-2 Times	159	45.3
	3-5 Times	65	18.5
	6 Times or more	19	5.4
	DK/DA	12	3.4
Number of times having consulted a doctor in the last 12 months	0 Times	26	7.4
	1-2 Times	181	51.6
	3-5 Times	103	29.3
	6 Times or more	37	10.5
	DK/DA	4	1.1
Number of times you used the services of other health professionals in the last 12 months	0 Times	68	19.4
	1-2 Times	155	44.2
	3-5 Times	63	17.9
	6 Times or more	62	17.7
	DK/DA	3	0.9

Table 2. Characterization of the use of health services (n=351)
Legend: DK – DA – Not answer; DK – Doesn´t know;n – Absolut frequency; % - Relative frequency.

Health Literacy - The mean score of the Global HL Index (Global HLI) obtained was 31.30±8.19 points which still corresponds to problematic HL, although almost at the limit of Sufficient HL, having ranged between 0 and 50 points. The highest percentage related to the categories of the Global HLI is located in the problematic HL category (47.9%) and the lowest in the Excellent category (11.7%) (Table 3).

Variable	Inadequate		Problematic		Sufficient		Excellent	
	n	%	n	%	n	%	n	%
Global HLI	65	18.5	168	47.9	77	21.9	41	11.7

Table 3. Distribution of the categories of the Global Health Literacy Index (n= 351)
Legend:n – Absolut frequency; % - Relative frequency

If we group the two lower and the two upper categories of the Global HLI, two other categories emerge: "Limited health literacy" and "Unlimited health literacy" (Saboga-Nunes & Sorensen, 2013). When analyzing these two new categories, we observed that most students had limited health literacy in the Global HLI (66.4%), constituting a high percentage of limited health literacy in the Global HLI in this sample. Relationship between the level of Global HLI and the use of health services - The proportion of the categories of Global HLI does not differ significantly among students who are users of different health systems (χ^2: p≥0.357), with different frequencies of use of some hospital service in the last 12 months (χ^2: p≥0.161), among students with different frequencies of going to the medical consultation (χ^2: p≥0.061), as shown in Table 4.The proportion of the categories of the Global HLI differs significantly among students who marked different frequencies of consultation to other health professionals, in the last 12 months (χ^2: p<0.010), with students who resorted to other professionals 0 times, in the last 12 months obtaining an Adjusted Residual (AR) of +3.1 cases in the Inadequate HLI category, with a percentage of 30.9% and students who resorted 6 or more times obtained an AR of -2.3 cases (11.3%) in the Sufficient HLI category and +2.0 cases (19.4%) in the Excellent HLI category. In other words, the greater the frequency of consultation with these professionals the more they fall into the HLI Excellent category (Table 4).

Health service utilisation variables	Categories Global HealthLiteracy								Test value	p value
	Inadequate		Problematic		Sufficient		Excellent			
	AR	%	AR	%	AR	%	AR	%		
Health System										
No	2.1	35.0	-1.7	30.0	0.8	30.0	-0.9	5.0	χ^2: 9.924	0.357
NHS	0.9	19.2	-0.2	48.1	-0.7	21.2	0.1	11.5		
Private	-0.4	14.3	0.8	57.1	-0.4	19.0	-0.3	9.5		
Public and private	-1.9	10.4	0.7	51.9	0.5	24.7	0.5	13.0		
Hospitalar Service										
0 Times	-1.1	13.5	1.8	56.3	-0.1	21.9	-1.3	8.3	χ^2: 13.407	0.161
1-2 Times	-0.1	17.0	-1.6	44.0	0.2	22.6	2.3	16.4		
3-5 Times	0.0	16.9	-0.4	50.8	-0.1	21.5	-0.4	10.8		
6 Times or more	2.4	36.8	-0.6	42.1	-0.1	21.1	-1.7	0.0		
Consulta médica										
0 Times	1.2	26.9	0.6	53.8	-0.3	19.2	-1.9	0.0	χ^2: 16.293	0.061
1-2 Times	-1.4	15.5	-0.7	46.4	0.6	23.2	1.9	14.9		
3-5 Times	-1.1	14.6	1.3	53.4	-0.4	20.4	-0.1	11.7		
6 Times or more	2.8	35.1	-1.3	37.8	0.0	21.6	-1.3	5.4		
Consultation with other										
HP	3.1	30.9	-1.8	38.2	0.0	22.1	-0.8	8.8	χ^2: 21.720	0.010
0 Times	-0.7	16.1	0.5	49.7	1.5	25.8	-1.8	8.4		
1-2 Times	-0.8	14.3	-0.4	46.0	0.4	23.8	1.1	15.9		
3-5 Times	-1.5	11.3	1.7	58.1	-2.3	11.3	2.0	19.4		
6 Times or more										

Tabela 4. Resultados dos testes estatísticos entre as categorias da LS Global e as variáveis de utilização dos serviços de saúde
Legend: HP – Health Professionals; NHS – National Health Service.

IV. DISCUSSION OF RESULTS

The results showed that there was a predominance of female students (69.5%) compared to male students, which coincides with the data from the Directorate-General for Higher Education (2017) that identify 46.2% males and 53.8% females in higher education (PORDATA, 2018). Most respondents used health services sporadically (1 to 2 uses in the last 12 months), with the most frequent uses relating to going to medical consultation. The results obtained converge with those of the research of Tomás (2014), in a sample of 1215 adolescents aged between 14 and 20 years, where most respondents reported having

visited the doctor once or twice in the past six months, highlighting this difference. As regards HL, for the sample under study, the average obtained in the Global HLI reveals a problematic HL level, but almost at the limit of a sufficient HL, with an average of 31.3 points. The results show that 66.4% of the respondents had limited HL (inadequate or problematic HL). These results are similar to those obtained in the research of Silva et al. (2019), where the average Global HLI was 32.15, with more than 50% of the participants presenting limited HL. However, in the present study, it was expected that being Higher Education students the results would be better. This fact may be explained by the fact that most students were aged 23 years or less, had few health problems and used health services infrequently, which may justify some lack of knowledge in this area. The results of the present study also confirmed that HL is higher in students who report using both public and private health care systems compared to students who report not benefiting from any health care system. This may indicate that students with higher levels of HL may have a greater mastery in taking advantage of each of the health systems (public and private), being able to develop a more structured individual health management plan. In contrast, students with lower levels of HL may, as Berkman et al. (2011) point out, reveal some inefficiency in the use of health services. These results are in line with the findings reported by Elsborg, Krossdal and Kayser (2017), who developed a research work with 630 university students, in Denmark, and concluded that students' health-related experiences tend to influence their HL, with students with previous experience of contact with hospitals being those with higher levels of HL. The researchers add that students who use health services more often report a greater perception of support and understanding from health professionals and feel more able to critically evaluate health information.

V. CONCLUSIONS

The students' profile was mainly composed of female students aged between 18 and 23 years old and attending a Licence's Degree course. Most students in the sample use the National Health Service, a hospital service, consult a doctor and other health professionals between 1 and 2 times in the last 6 months. The Global HL of the higher education students in this sample is limited (inadequate/problematic), presenting similar values to other investigations, even if they included students from lower levels of education. It was found that there is a relationship between HL and the frequency with which the students in the sample consulted other health professionals (non-medical). These professionals could pay more attention to Health Education, promoting HL. These results constitute a situation diagnosis about the level of HL and the use of health services, so they were forwarded to the health unit, where the school health team is based, which covers the geographical area, in which this higher education establishment is located and to its management. We thus hope to have made a good contribution to the improvement of community health practices. The main limitation of this study lies in the type of sample, since it is a convenience sample and therefore not a probability sample, which may not have allowed a very faithful representation of the population, with repercussions on the generalization of the inferences of the sample for the population.

Author Contributions: Conceptualisation: CP. AC; Methodology: CP. AC.; Preparation of the manuscript: CP. AC.; Writing, proofreading and editing: CP. AC.
Both authors have read and accepted the published version of the manuscript.

REFERENCES

[1] Almeida, C. V. (2013). Literacia um caminho para a capacitação do cidadão. Comunicação apresentada na conferência Reflexão, Avaliação, Lisboa, Portugal. DOI:10.13140/2.1.4746.6569

[2] Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J., &Crotty, K. (2011). Low health literacy and health outcomes: an updated systematic review. AnnInternMed, 155(2), 97-107. doi:10.7326/0003-4819-155-2-201107190-00005

[3] Despacho n.º 3618-A/2016 de 10 de março. Gabinete do Secretário de Estado Adjunto e da Saúde, 8660 C.F.R. Diário da República: 2ª Série (2016).

[4] Direção-Geral da Saúde. (DGS, 2017). Programa nacional de educação para a saúde, literacia e autocuidados. Retrieved from https://www.dgs.pt/em-destaque/programa-nacional-de-educacao-para-a-saude-literaciae-autocuidados.aspx

[5] Direção-Geral da Saúde. (DGS, 2020). Literacia em Saúde e a COVID-19: Plano, práticas e desafios. Lisboa: DGS. Retrieved from https://www.dgs.pt/documentos-e-publicacoes/literacia-em-saude-e-a-covid-19-plano-pratica-e-desafios.aspx

[6] Dodson, S., Good, S. & Osborne, R. (2015).Health literacy toolkit for low andof middle-income countries: A series of information sheets to empower communities andstrenghten health systems. New Delhi: World Health Organization.Retrieved from https://apps.who.int/iris/handle/10665/205244

[7] Eichler, K., Wieser, S., &Bruegger, U. (2009). The costs of limited health literacy: A systematic review. International Journal of Public Health, 54(5), 313-324. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/19644651.

[8] Elsborg, L., Krossdal, F., &Kayser, L. (2017). Health literacy among Danish university students enrolled in health-related study programmes. Scand J PublicHealth, 45(8), 831-838. doi:10.1177/1403494817733356

[9] Entidade Reguladora da Saúde. (ERS, 2017). Literacia em direitos dos utentes de cuidados de saúde. Retrieved from https://www.ers.pt/pages/73?news_id=1557

[10] Espanha, R., & Ávila, P. (2016). Health Literacy Survey Portugal: A Contribution for the Knowledge on Health and Communications. Procedia Computer Science, 100, 1033-1041. doi:https://doi.org/10.1016/j.procs.2016.09.277

[11] Espanha, R., Ávila, P., & Mendes, R. (2016). Literacia em saúde em Portugal. Lisboa: Fundação Calouste Gulbenkian. Retrieved from https://gulbenkian.pt/wp-content/uploads/2016/05/PGISVersCurtaFCB_FINAL2016.pdf

[12] Marôco, J. (2021). Análise estatística com o SPSSStatistics (8a ed.). Lisboa: ReportNumber.
[13] Okan, O., Bauer, U., Levin-Zamir, D., Pinheiro, P., &Sorensen, K. (2019). Introduction. In Orkan, O., et al. (ed.). International Handbook of Health Literacy.Research, practice and policy across the lifespan. Bristol: Policy Press.
[14] PORDATA. (2018). Alunos matriculados no ensino superior: total e por sexo. Retrieved from https://www.pordata.pt/Portugal/Alunos+matriculados+no+ensino+superior+total+e+por+sexo-1048
[15] Quemelo, P.R.V., Milani, D., Bento, V.F., Vieira, E.R., & Zaia, J.E. (2017).Literacia em saúde: tradução e validação de instrumento para pesquisa em promoção da saúde no Brasil. Cad. Saúde Pública, 33(2):e00179715. DOI: 10.1590/0102-311X00179715
[16] Rodrigues, V.P., Matos, L.R., Tenani, C.F., & Batista, M.J. (2022). Literacia em saúde em adultos e idosos diabéticos usuários do serviço público de saúde em municípios de São Paulo. RevCiêncMed., 31:e215094. DOI: https://doi.org/10.24220/2318-0897v31e2022a5094
[17] Saboga-Nunes, L., &Sorensen, K. (2013). The European Health Literacy Survey (HLS-EU) and its Portuguese cultural adaptation and validation (HLS-PT). [abstract]. Atención Primaria, p. 45-46. Paper apresentado no 1st World Congress of Children and Youth Health Behaviours and 4th National Congress on Health Education, p. 23-25, May 2013, Viseu. Retrieved from https://research.unl.pt/en/publications/the-european-health-literacy-survey-hlseu-and-its-portuguese-cultural-adaptation-and-validation-hlspt(bdd59a62-2992-49e6-9059-14933114a580)/export.html
[18] Silva, P.M.D., Saboga-Nunes, L.A., &Carvalho, A.A.S.(2019). Literacia para a Saúde em alunos do Ensino Secundário: Relação com a participação na Saúde Escolar. Contexto & Educação [Internet], 34(108): 177-188. Retrievedfromhttp://dx.doi.org/10.21527/2179-1309.2019.108.177-188
[19] Silva, T.N., Moreira, K.C.C., Martins, R.A.S., &Farinelli, M.R. (2020). Literacia para a Saúde em tempos de covid-19: relato de experiência. Educ. Saude, 4(2): 37-48. Retrieved from https://www.seer.ufrgs.br/saberesplurais/article/view/107796/59998
[20] Tomás, C.C. (2014). Literacia em saúde na adolescência. (Doutoramento em Ciências de Enfermagem), Instituto de Ciências Biomédicas Abel Salazar, Universidade do Porto, Porto.
[21] Vilelas, J. (2020). Investigação – O processo de construção do conhecimento (3ª ed. Revista. e aument.). Lisboa: EdiçõesSilabo.
[22] World Health Organization. (1998). Health promotion glossary. Geneva: WHO. Retrieved from https://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf
[23] World Health Organization. (2014). Health literacy: the solid facts. 2013. URL: http://www. euro. who. int/__data/assets/pdf_file/0008/190655/e96854 [accessed 2017-10-30].

★★★