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DEVELOPMENT AND INTEGRATION OF HEALTH LITERACY EDUCATION WITH INNOVATIVE METHODS IN MEDICAL CURRICULA ACROSS EUROPE (HELEM-EU) PROJECT

HELEM-EU

O2-REPORT

CREATING A DATABASE OF THE STUDENTS' HEALTH LITERACY APPROACH LEVELS

2021

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TABLOLAR DİZİNİ

A. DEFINITION OF HEALTH LITERACY

The concept of health promotion is based on the emergence of the public health approach in the 19th century, and it was defined as a special component in the field of health policy in 1974. The concept of health promotion, which has become an important strategy to increase the level of health, constitutes an important area of public health and preventive medicine (1). In the Ottawa Declaration published at the First International Conference on Health Promotion held in Canada in October 1986, health promotion was defined as making it possible for people to increase their control over their own health and improve their health. One of the five priority action areas of the Declaration was defined as the development of life skills of individuals. Life skills mentioned in this article (for example, decision making, problem solving, critical and creative thinking, awareness, empathy, communication skills) include personal, interpersonal, cognitive, and physical skills that enable individuals to increase their ability to control their own health and their environment, and to cope with life-long health threats (2). Making individuals gain these skills is possible by increasing the level of health literacy (HL) in the society (3).

The concept of HL was first used by Simond in 1974 in an article called “Health Education as Social Policy” (4). The World Health Organization (WHO) defined health literacy in 1988 as “the cognitive and social skills that determine the motivation and ability of individuals to access, understand and use information in a way that promotes and maintains good health” (3). Health literacy covers the areas of literacy, adult education, and health promotion. Health literacy, which has become a priority for health in the 21st century, is vital to people's ability to manage health. A low level of health literacy means that the individual cannot access health services, cannot understand health information, and therefore cannot make the right health decisions. From this perspective, improving health literacy is an important tool in reducing health inequalities. According to WHO, there is growing evidence to support the negative impact of poor health literacy on the health of individuals (3,5-8).

Today, there are many different definitions highlighting the different dimensions of HL (5). Analyzing the definitions of health literacy, Sorensen et al. (2012) stated that health literacy is related to general literacy and they developed a definition as *“the desire and capacity to access relevant information sources, to perceive and understand health-related information and messages correctly, which people use health to develop opinions and make decisions about health services throughout their lives, to protect, maintain and improve their health, and to improve their quality of life.”* It is emphasized that HL is affected by the characteristics of the health service as well as the individual characteristics, and it can be changed depending on the medical problems of the person, on the health personnel and on the health system (9). In the "Shanghai Declaration on Health Promotion in line with the 2030 Sustainable Development Goals" prepared after the “9th Global Health Promotion Conference” in Shanghai in 2016, it was recommended to work to recognize and improve health literacy as a critical determinant of health for the whole world (10).

Most previous research on health literacy has considered it as a one-dimensional concept focused on reading ability or functional health literacy. However, with the development of the field of health literacy, it has emerged that the concept is a very complex and heterogeneous structure that covers many dimensions (5,11-14). According to the conceptual model defined because of the European Health Literacy Survey, HL is defined with a 12-dimensional matrix (Table 1). In this study, to measure the level of health literacy, an evaluation was made in 8 European countries (Germany, Austria, Bulgaria, Netherlands, Ireland, Spain, Poland, Greece) using a total of 47 questions prepared in 12 sub-titles. As a result of the study, countries were divided into 4 groups according to the scores they received (insufficient, problematic, sufficient, very good) (Table 1) (15,16).

Table 1.European Health Literacy Study: 12 sub-dimensions defined according to the conceptual model [1]

Health literacy	*Access/obtain information relevant to health*	*Understand information relevant to health*	*Process/appraise information relevant to health*	*Apply/use information relevant to health*
Health care	1) Ability to access information on medical or clinical issues	2) Ability to understand medical information and derive meaning	3) Ability to interpret and evaluate medical information	4) Ability to make informed decisions on medical issues
Disease prevention	5) Ability to access information on risk factors for health	6) Ability to understand information on risk factors and derive meaning	7) Ability to interpret and evaluate information on risk factors for health	8) Ability to make informed decisions on risk factors for health
Health promotion	9) Ability to update oneself on determinants of health in the social and physical environment	10) Ability to understand information on determinants of health in the social and physical environment and derive meaning	11) Ability to interpret and evaluate information on health determinants in the social and physical environment	12) Ability to make informed decisions on health determinants in the social and physical environment

Just like the definition of HL, its classification also varies (5). The classification made by Nutbeam in 2008 is based on. According to this classification, HL is handled at three levels: "basic/functional", "communicative", and "critical" health literacy. The basic/functional dimension is based on basic reading and writing skills that will enable individuals to read informational materials about health services. Communicative HL means that individuals have social skills and cognitive acquisitions that facilitate their ability to participate more effectively in daily life activities and access new information in changing conditions. Critical HL, on the other hand, requires more advanced cognitive skills, including analyzing information and using that information to control larger life events. With these skills, the individual can critically evaluate health information, understand the social determinants of health, and participate in health-related political processes (17).

Although the lack of a generally accepted definition is sometimes an obstacle to political action, especially in the field of health literacy, recent research is increasingly building common ground and focusing on unifying factors. Existing definitions refer to health literacy as a multidimensional, complex, and heterogeneous concept and generally describe different aspects of the concept (Sørensen & Pleasant, 2017) (Table 2) (5,11-14). The Australian Commission on Quality and Safety in Healthcare (2013) emphasizes the role of the health literacy environment as well as the individual's health literacy. *"Health literacy environment"* is defined as the infrastructure, policies, processes,

materials, and relationships existing within the health system that make it easier or more difficult for consumers to navigate, understand and use health information and services to make effective decisions and take appropriate health-related measures (18). Health literacy is shaped by the interaction of individuals' personal skills with health environments, health system, education system and social and cultural factors in family, work, and society (5).

Table 2.Some current definitions of health literacy

Study	*Definition*
Wu, et al (2010) (19)	"Health literate individuals are able to understand and apply health information in ways that allow them to take more control over their health through, for example, appraising the credibility, accuracy, and relevance of information and action on that information to change their health behaviors or living conditions."
Paakkari and Paakkari (2012) (20)	"Health literacy comprises a broad range of knowledge and competencies that people seek to encompass, evaluate, construct and use. Through health literacy competencies people become able to understand themselves, others and the world in a way that will enable them to make sound health decisions, and to work on and change the factors that constitute their own and others' health chances."
Massey, et al (2012) (21)	"A set of skills used to organize and apply health knowledge, attitudes and practices relevant when managing one's health environment."
Sørensen et al (2012) (9)	"Health literacy is linked to literacy and entails people's knowledge, motivation and competencies to access, understand, appraise and apply information to make judgements and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain and improve quality of life during the life course."
Dodson et al (2015) (22)	"The personal characteristics and social resources needed for individuals and communities to access, understand, appraise and use information and services to make decisions about health. Health literacy includes the capacity to communicate, assert and enact these decisions."

Evaluation of Health Literacy

To optimize the health literacy levels of individuals, it is necessary to create projects that concern all segments of the society. In line with the results of these studies, plans can be made according to the health literacy levels of individuals and appropriate policies will be produced. The use of standard, valid and reliable scales in measuring health literacy is important in terms of standardizing assessments and making comparisons at the social level. In addition, increasing the measurement tools suitable for the cultural structure of our country is important in terms of conducting current research in our country (5,23-25).

Furthermore, it is stated that health literacy deserves a central role in policy discussions and decisions, but a clear theoretical structure that can be measured and transferred across contexts has not yet been developed. Being able to explore the relationships accurately is extremely important in determining the areas to be intervened. Correctly addressing existing complexity requires a mixed approach that includes quantitative and qualitative methods. There is not yet a widely adopted method to measure all the factors included in existing models that need to be measured. It is stated that new and more valid and reliable tools are needed both to discover new information and to test the relationships between existing information to reach the aforementioned level of complex understanding. Moreover, conflicting approaches about measurement make it difficult to carry out systematic reviews and the data obtained cannot be compared. This situation exacerbates the difficulties in the field of methodological research (5,23-25). Therefore, the debate about the measurement of health literacy is currently ongoing. In the shadow of these discussions, many new

measurement tools have been developed. In the years when the concept of health literacy was first introduced, one of the first developed scales was the National Assesment of Adult Literacy (NAAL) (26). Today, new scales continue to be developed and some of them have been adapted to Turkish culture. Some of the commonly used scales in determining health literacy are given in Table-3 (27,28).

Table 3.Scales used in determining health literacy

Name of scale	***Person/team who developed and year it was developed***	***Content***
The Rapid Estimate of Adult Literacy in Medicine (REALM)	Davis et al. (1991) (29)	It was developed to evaluate the health literacy of individuals applying to primary health care centers. In the test, individuals are asked to read aloud all the words in the 66-word list of medical terms given to them and are scored according to the accuracy of their pronunciation. The test takes about 2-5 minutes.
The Test of Functional Health Literacy in Adults (TOFHLA)	Parker et al. (1995) (30)	The scale measures the patients' ability to read health-related texts and understand numbers and expressions in texts through real materials. The test consists of 50-item reading comprehension and 17-item numerical comprehension sections. The test is evaluated at three levels: insufficient (0-59 points), low level/limited (60-74 points), and adequate health literacy (75-100 points).
Health Activities Literacy (HALS)	Rudd et al. (2004) (31)	It covers health promotion, protection, disease prevention, health service-maintenance and system methods. Here are questions about prose, numeric and text items.
Newest Vital Sign (NVS)	Weiss et al. (2005) (32)	It has been developed to measure the level of reading and understanding an individual's label on a nutrient. The first 4 questions of the test, which has 6 questions, are about calculation and numerical skills, and the last two questions are about the ability to find the appropriate information on the label. 1 point is awarded for each correct answer. Answering less than four questions correctly is considered as “low health literacy”, and correct answering 5-6 questions is considered as “low probability of health literacy”.
Single Item Literacy Screen (SILS)	Morris et al. (2006) (33)	“How often do you get help reading health instructions, leaflets, or written materials from your doctor or pharmacy?” It consists of a single question. The test was developed to measure need, not skill.
The E-health Literacy Scale (e-HEALS)	Norman and Skinner (2006) (34)	The scale developed to determine media literacy and computer literacy in addition to traditional health literacy consists of 2 items about internet use and 8 items measuring internet attitude. Scale items were arranged with a 5-point Likert-type scaling method. The lowest 8 points and the highest 40 points are taken from the scale. A high score from the scale indicates a high level of e-health literacy.
Health Literacy Index	Toçi et al. (2013) (35)	It is a simplified and reduced-to-25-items version of the 47-item HLS-EU scale developed by Sorensen. It consists of four subscales: Access to Information, Understanding Information, Evaluation/Evaluation, and Application/Use subscale. The minimum score for the whole scale is 25 and the maximum score is 125. Scale items are answered in a 5-point likert structure. The internal consistency coefficients (Cronbach's alpha) determined for the subscales ranged from 0.90 to 0.94. The application time is 5-10 minutes on average.
Adult Health Literacy Scale (Yetişkin Sağlık Okuryazarlığı Ölçeği, YSOÖ)	Sezer and Kadioglu (2012) (36)	It is a 23-item scale developed for Turkish speaking individuals. The scale prepared to measure the proficiency of adult individuals on health literacy; It consists of 22 questions about health information and drug use, and 1 figure about knowing the location of organs in the body. The scores that can be obtained from the scale vary between 0-23, and the higher the score, the higher the level of health literacy.

Table 3-Cont. Scales used in determining health literacy

Instrument for Assessment of Health Literacy (HLS-EU)	Sorensen et al. (2013) (37)	It is a self-report scale developed to assess health literacy in people over the age of 15. conceptual framework: It includes three dimensions related to health (treatment, prevention, and promotion of health) and processes of obtaining information about health-related decision-making and practices (access, understanding, decision-making and implementation). The test consists of 47 items and the total score is between 0-50. Health literacy level was evaluated in four categories according to the obtained score (insufficient, problematic-limited, adequate, excellent). The Cronbach's alpha values of the sub-dimensions ranged from 0.51 to 0.91. It takes about 10 minutes.
Turkish Adaptation of the European Health Literacy Scale (Avrupa Sağlık Okuryazarlığı Ölçeği Türkçe Uyarlaması, ASOY-TR)	*Okyay and Abacigil (2016) (38)*	It is a self-report scale developed to assess health literacy in people over the age of 15. conceptual framework: It includes three dimensions related to health (treatment, prevention, and promotion of health) and processes of obtaining information about health-related decision-making and practices (access, understanding, decision-making and implementation). The test consists of 47 items and is standardized with a formula so that the total score is between 0-50. The level of health literacy was evaluated in four categories according to the score obtained.
The European Health Competence Questionnaire (HLS-EU-Q16)	*Sorensen et al.* (2013) (37)	Short version of the HLS-EU-Q47 Questionnaire. It consists of 16 statements reflecting the perceived difficulty in accessing, understanding, evaluating, and applying health information in three different areas. These areas are health, disease prevention and health promotion. Cronbach's Alpha values of these sub-dimensions were 0.982, respectively; 0.81 and 0.71. Each participant gives an opinion on a certain expression on a 5-point Likert scale. The accumulated scores obtained in the questionnaire reflect the overall assessment of health skills, which are categorized as: • 13-16 points – adequate level of health literacy, • 9-12 points – problematic health literacy level, • 0-8 points – insufficient level of health literacy ****In our project, Turkish version of this scale was used to determine the health literacy levels of medical faculty students studying in the preclinical period (39).**
Health Literacy Scale (HLS-14)	Suka et al. (2013) (40)	The scale has three sub-dimensions: Functional Health Literacy (5 items), Interactive Health Literacy (5 items), Critical Health Literacy (4 items). The Cronbach's alpha value was found to be 0.81.
Turkish Health Literacy Scale (Türkiye Sağlık Okuryazarlığı Ölçeği-32, TSOY-32)	*Okyay and Abacigil (2016) (38)*	It was developed by combining the dimensions of "protection from diseases" and "promotion of health" in ASOY-TR. It contains 32 items structured as a 2x4 matrix. Accordingly, the matrix consists of eight components: two dimensions (Treatment and service and prevention of diseases/health promotion) and four processes (accessing health-related information, understanding health-related information, evaluating health-related information, using/applying health-related information). Like ASOY-TR, 0-50 points can be obtained and evaluated in the same way.

Table 3-Cont. Scales used in determining health literacy

Health Literacy Scenario Scale (Sağlık Okuryazarlığı Senaryo Ölçeği, SOY-SEN)	*Okyay and Abacigil (2016) (38)*	It is a self-report scale developed to assess the health literacy of people over the age of fifteen who are literate. The scale was developed through four different scenarios evaluating the processes of accessing information, understanding, decision-making and application over the conceptual framework developed by the European Health Literacy Research Consortium, and questions about the scenarios were added. As a result, each scenario consisted of 4 questions. Five statements were given as answers for each question. One of these statements is correct and is rated “5”. Two statements are partially correct and scored as “+2” and “+3”. Two statements are completely wrong and score “-5”.
Hacettepe University Health Literacy Scale (Hacettepe Üniversitesi Sağlık Okuryazarlığı Ölçeği, HU-SOY)	Bahar Özvarış et al. (2018) (41)	It is aimed to develop a culture-appropriate health literacy scale, which has been shown to be valid and reliable for Turkish-speaking adults to be used as a reference scale. The validity-reliability study of the scale was carried out on 2411 people aged 18-60 in 12 randomly selected cities. The analyzes have shown that the HU-SOY Scale can be used as a unique scale in determining the general health literacy level of Turkish-speaking adult literate individuals. Cronbach's alpha was found to be 0.79 for the "Protection/Health Promotion" sub-dimension and 0.91 for the "Access to Treatment-Health Services" sub-dimension. Determining the self-efficacy levels of individuals in health-related issues with the "Self-Efficacy" section evaluated in addition to the scale. is also possible.

Factors Affecting Health Literacy

Factors affecting the level of health literacy include age, education level, income level, employment status, and health knowledge level. In addition to all these individual knowledge and skills, demographic, cultural and environmental factors together with past experiences also affect health literacy. The elderly, low-income groups, low education groups, immigrants, minority groups are among the main risk groups for insufficient health literacy (5,42-45).

Health literacy is a factor that determines the health behaviors of people. E.g.; Less than half of diabetics are aware of the symptoms of hypoglycemia, and most asthmatics cannot accurately demonstrate the use of asthma inhalers. For patients with insufficient health literacy, it is among the findings of studies that blood sugar regulation is more impaired in diabetes patients. Those with insufficient health literacy use preventive health services (such as cancer screening, immunization) less There is a relationship between insufficient health literacy and the increase in outpatient service applications and hospitalizations (3,5,42-45). Insufficient health literacy also has economic consequences. For example, the economic cost of poor health literacy for the United States is estimated at more than one hundred billion dollars annually (14).

Health Literacy Levels of Different Groups

Limited health literacy stands out as a public health problem for the whole world, including developed countries like the USA and European Union countries. According to the National Assessment of Adult Literacy (NAAL), conducted in the USA in 2003, of the more than 19,000 adults included in this study, 12% were adequate, 53% were moderate, 22% were at basic level, 14% revealed health literacy below the basic level (26). A health literacy survey (The European Health Literacy Survey, HLS-EU) was conducted using the European Health Literacy Project, which included eight different countries (Austria, Bulgaria, Germany, Greece, Ireland, Netherlands, Poland, Spain). In the study, 12.4% insufficient, 35.2% problematic, 36% sufficient and 16.5% excellent health literacy levels were determined. Those with insufficient level of health literacy vary between 2-27% in different countries. 60% of respondents in Ireland and 72% of respondents in the Netherlands were in the adequate or excellent category, while those with adequate or excellent health literacy were lowest in Bulgaria (37%) and Spain (42%) (15).

In a large-scale study conducted in 2018 investigating the level of health literacy in Turkey, the TSOY-32 scale that was developed based on the conceptual framework used in the European Health Literacy Survey was used as a measurement tool. It was observed that 30.9% of the participants had inadequate, 38% problematic-limited, 23.4% sufficient and 7.7% excellent health literacy levels. The frequency of those with insufficient health literacy was higher in women (35.3%) than in men (26.4%). It was observed that the frequency of those with insufficient health literacy was from the lowest value (14.0%) in the 18-24 age group, to 65.5% in the 65 and over age group, increasing with advancing age groups. The frequency of those with insufficient health literacy was 53.4% in the "highest primary school graduate" group, which is considered as the lowest education category in this study. While the prevalence of insufficient health literacy was 37.4% in those without health insurance, it was 30.2% in those with health insurance. While the frequency of insufficient health literacy was 56.8% for those who stated they did not use any communication tool as a source of information, it was 18.1% for those who state any communication tool as a source of information. While the frequency of those who applied to family physicians as the first health institution was 48.4% in those with insufficient health literacy, 43.6% in those with limited problems, 46.5% in those with sufficient health and 38.7% in those with excellent health services. The frequency of those who first applied to the tertiary health care institution tended to increase as the level of health literacy increased. While this frequency was 2.8% in those with poor health literacy, it 6.1% in those with excellent health literacy. As this research supports, the level of health literacy is affected by various socioeconomic variables and affects health

and health services (45). According to the results of another study conducted with 4979 people in Turkey, 24.5% of those examined had insufficient health literacy, 40.1% had problems, 27.8% had sufficient and 7.6% had excellent health literacy (46). In a study conducted on 102 participants who applied to a tertiary hospital emergency department with the green triage code in 2019 and using the TSOY-32 scale, the health literacy indexes of the participants ranged from 11.67 to 48.44, with the mean value calculated as 30.9 (weak) and it was observed that 57.9% of them had weak health literacy indices (47).

According to the study of Palumbo et al. (2016), insufficient health literacy is a serious and widespread problem in Italy, affecting more than half of the Italian population. Poverty is an important predictor of inadequate health literacy. Those with low health literacy tend to be hospitalized more and use emergency services more (48). In the study of Schiavone and Attena (2020), in which they aimed to evaluate the level of HL in outpatients in Naples and Caserta, 61.6% of 503 patients were found to have a low level of HL. HL was found to be higher in patients with higher education level and general self-efficacy scores (49). In a cross-sectional study conducted in Spain, the HLS-EU-Q16 scale was used, and it was shown that 84.6% of the 2059 participants had adequate HL, 10.3% had insufficient HL, and 5.1% had problematic HL. Education level, socioeconomic status and physical activity level were determined as the factors that most strongly affect the level of health literacy (50). In a study conducted with a face-to-face application of the HLS-EU scale in a sample of 925 Dutch adults, it was found that low education level, low perceived social status, and being male were consistently associated with relatively low health literacy scores (51).

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B. HEALTH LITERACY APPROACH LEVELS OF PHYSICIANS

B1.TURKEY PARTNERS (GAZI UNIV., HACETTEPE UNIV., HEALTH SCIENCE UNIV., LOKMAN HEKİM UNİV.)

AIM OF STUDY

In this study, it was aimed to determine the approaches of physicians about the importance of the health literacy level of the society and its relationship with health, and to determine the needs for this.

MATERIAL AND METHOD

The study was conducted on physicians who graduated from medical faculties of 3 universities in Turkey (Gazi University, Health Sciences University, Hacettepe University). 236 physicians, 100 of whom were graduated from Gazi University, 100 of them from Hacettepe University, and 36 of them graduated from, participated in the study. The questionnaire used in the study consists of 4 main parts. A total of 52 questions were asked under the headings of socio-demographic characteristics in the first part, the importance of health literacy in the second part, the ability to evaluate health literacy in the third part, and communication with the patient according to the level of health literacy in the last part. The questionnaire was applied online between June-September 2021 via Google forms. The data of 11 participants who gave incomplete answers were removed. The data obtained from the questionnaire were analyzed using the SPSS program. Marginal tables were created by frequency analysis of the answers given to the questions. Data are expressed as number and percentage distributions, mean ± standard deviation, and median (minimum-maximum).

RESULTS

225 people participated in the research. Table 4 presents some descriptive characteristics of physicians.

Table 4.Demographic Characteristics, Ankara, 2021

		Frequency	Percent(%)
Gender			
	Male	118	52,4
	Female	107	47,6
Marital Status			
	Married	140	62,2
	Single	85	37,8
Professional Status			
	General Practitioner	56	24,9
	Research Assistant	52	23,1
	Specialist Physician	101	44,9
	Lecturer	16	7,1
Direct Contact with the Applicants			
	Yes	165	73,3
	No	60	26,7
Level of Workplace			
	Primary Health Care	44	19,6
	Secondary Health Care	70	31,1
	Tertiary Health Care	111	49,3
Health Literacy Training			
	Yes	24	10,7
	No	201	89,3
Communication Skills Training			
	Yes	83	36,9
	No	142	63,1
Conducting a Public Training Program			
	Yes	83	36,9
	No	142	63,1

52.4% of the participants are male and 62.2% are married. 44.9% of them are specialist physicians and 73.3% of them primarily care for patients. 49.3% of the participants work in a tertiary health-care institution. 89.3% of the participants did not receive health literacy training. 63.1% did not receive communication skills training. 63.1% did not give public education.

Table 5.Views About Health Literacy, Ankara, 2021

	Strongly disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Some-what agree (%)
Inadequate health literacy is an important public health problem.	0,4	3,1	4,0	92,4
I understand the relationship between health literacy level and health.	0,4	2,7	6,2	90,7
I know the health literacy level of community.	4,0	15,1	29,3	51,6
I know whose health literacy level may be low in the community.	1,8	4,9	18,7	74,7
I feel responsible for the problems that may arise from the health literacy levels of my patients.	12,0	17,8	26,2	44,0
The quality of health services is positively affected by efforts to improve health literacy in community.	0,4	4,4	8,0	87,1
Professional satisfaction of healthcare workers is affected by efforts to improve health literacy.	1,3	2,7	12,9	83,1
Appropriate communication, according to the level of health literacy of the applicant, ensures individuals to understand their illnesses and treatments better.	0,4	1,8	5,3	92,4
Using appropriate communication skills for the level of health literacy of the applicant ensures that individuals are healthier.	0,4	2,2	9,8	87,6
Curriculum of undergraduate medical education should include the courses and activities how to understand and improve health literacy in the community.	0,4	1,8	6,7	91,1

Table 5 presents their responses to some of the propositions regarding their approaches to the importance of health literacy.
92.4% of the participants think that insufficient health literacy is an important public health problem, 90.7% think that they understand the relationship between health literacy level and health, 74.7% think that they know who may be insufficient in terms of health literacy in the society.
83.1% think that the occupational satisfaction of health workers will be positively affected by the studies aimed at improving health literacy in the society. According to 91.1% of the participants, undergraduate medical education programs should include courses and practices aimed at improving health literacy.

Approaches to assessing physicians' health literacy during an interview with a healthy individual or patient who applied or came for consultation are presented in Table 6.

Table 6.Assessment of Applicants' Health Literacy, Ankara, 2021

	Never (%)	Rarely (%)	Some-times (%)	Usually (%)
I assess the applicant's health literacy level.	9,8	17,8	18,2	54,2
I assess the difficulties that the applicant may have confronted in accessing health services.	2,2	14,7	15,1	68,0
I assess the difficulties that the applicants has / may experience while accessing information about the disease and its treatment.	1,8	15,6	14,2	68,4
I assess the applicant's comprehension of information about risk factors affecting her/his health, disease and treatment.	1,3	15,1	8,0	75,6
I ask the applicant about her/his health information sources.	12,4	36,4	16,9	34,2
I assess the media usage of the applicant to gain the health promotion and preventive measures.	15,1	24,4	24,4	36,0
I use the available scales/instrument to determine applicants' health literacy levels.	44,9	16,9	19,6	18,7

54.2% of the participants stated that they usually/always evaluate the applicant's health literacy level, 75.6% stated that they usually/always evaluate their understanding of the information about risk factors, illness and treatment that affect the applicant's health. 36.4% of the participants rarely answered the statement "I ask the applicant about health-related information sources". 36% stated that they usually/always evaluate the use of media in the applicant's health protection behaviour. 44.9% of the participants never use the existing scales to determine the health literacy level of the applicants.

According to the health literacy level of the questionnaire, the communication part with the patient consisted of 3 sub-titles. These; in the information gathering process, in the information delivery process, and in the joint decision-making process. Table 7 shows the answers given by doctors to communication skills.

Table 7.Communication Skill With the Applicant/Patient According to Their Health Literacy Level, Ankara,2021

	Never (%)	Rarely (%)	Some-times (%)	Usually (%)
During to gathering information				
I take care that the applicant sits comfortably during the consultation / interview	1,3	3,6	6,2	88,9
During the encounter I provide an environment that protects the privacy of the applicants.	0,9	1,3	4,4	93,3
I use the name of the applicant during the interview.	2,7	2,7	18,7	76,0
I use open-ended questions to applicant.	1,3	5,8	24,4	68,4
I listen carefully to the applicant.	0,9	0,0	4,4	94,7
By observing the applicant during the interview, I try to catch clues about her/him.	0,9	1,3	8,9	88,9
During to giving information				
I speak slowly.	1,3	7,6	32,9	58,2
I am careful not to use medical words.	0,9	2,7	25,3	71,1
I inform the applicant as much as he/she needs.	0,4	4,4	24,0	71,1
I emphasize a certain number of important points (1 to 3 at most) during the interview/consultation.	0,4	5,8	29,8	64,0
While giving information to the applicant, I show with pictures or text or draw when necessary.	4,0	20,4	30,2	45,3
I repeat the information that I have given.	0,4	7,6	34,2	57,8
I create written training material specific to the applicant.	20,9	32,9	29,3	16,9
I use developed training and information materials (such as brochures, booklets, etc.).	13,8	31,6	31,6	23,1
I emphasize important points in the information materials I use.	13,8	19,1	31,1	36,0
I request the applicant to repeat (teach-back technique) or show how to implement what I said or my suggestions.	8,4	25,8	40,4	25,3

	Never (%)	Rarely (%)	Some-times (%)	Usually (%)
I evaluate the applicant's understanding of the correct use of drugs.	2,2	10,2	36,4	51,1
I forward the applicant to appropriate health information resources.	5,8	20,9	31,6	41,8
During to shared decision-making				
I inform the applicants in detail about the health service or treatment options.	0,0	4,4	17,3	78,2
After giving information, I support the applicant in choosing the most appropriate treatment options/care for him/her.	0,0	5,3	19,1	75,6
I declare that the last decision on the care or treatment preference is their own responsibility.	0,4	4,0	11,6	84,0
I encourage the applicant to participate in the decision-making process.	0,4	3,6	16,4	79,6

While communicating with the patient during the information collection process, 93.3% of the participants stated that the individual created an environment that respects privacy, 68.4% asked open-ended questions to the applicant, and 94.7% listened carefully to the applicant.

While communicating with the patient during the information process, 71.1% of the participants paid attention not to use medical terms, 64% emphasized a certain number of important points during the interview, 45.3% gave information by showing or drawing pictures/writing when necessary, and 57.8% of them stated that they repeated the information they gave. 20.9% of the participants never, 32.9% rarely, 29.3% sometimes and 16.9% often and always answered the statement “I create written training material for the applicant” in the questionnaire. “I would like the applicant to repeat or show me how to implement what I have said or my suggestions.” 8.4% answered never, 25.8% rarely, 40.4% sometimes, 25.3% usually and always.

While communicating with the patient during the joint decision-making process, 78.2% of the participants informed the applicant in detail about health care or treatment options, 75.6% expected the applicant to choose the most appropriate treatment options/health care for him after giving information, % 84 of them stated to the applicant that the final decision in their health care or treatment preferences is up to the patients, and 79.6% of them stated that they encouraged the patients to participate in the decision-making processes.

As a conclusion, the majority of physicians are aware of the importance of health literacy in health service delivery. However, they declare that they are insufficient in the effective implementation of health literacy. In order to develop appropriate interventions, it would be useful to develop scales to measure health literacy knowledge, attitudes and behaviors of physicians. In order to protect and improve the health of the whole society, health literacy training should be added to the medical school curriculum of physicians, who play a key role in the provision of health services, and measurement tools should be developed and applied for determining the level of health literacy and appropriate interventions.

B2.NETHERLAND (MAASTRICHT UNIV.)

AIM OF STUDY

We aimed to determine physicians approaches regarding the importance of societal importance of health literacy (HL) level, determine societal needs and its relationship with health.

MATERIAL AND METHOD

The study was conducted on physicians who graduated from medical faculties in the Netherlands. So far 50 doctors have participated in the study. The questionnaire used in the study consists of 9 main questions (*appendix 1*). Only age and gender were asked according the questionnaire. Main part of the questionnaire was focused on the importance of health literacy; the ability to evaluate health literacy; and communication with the patient according to the level of health literacy. The questionnaire is ONGOING, and it was first applied online in October 2021 via Google forms. Table 8 presents some descriptive characteristics of physicians.

RESULTS

Table 8.Demographic Characteristics, The Netherlands, 2021

Doctors		
N=50		**Percent (%)**
Gender		
Female		100
Male		-
Age		
Mean		42,6 years
Working in		
Primary Healthcare Institution		60
Secondary Level Healthcare Institution (State hospital)		20
Preventive care		20
Direct contact with patients		
Yes		100
No		-
Training in HL		
Yes		60
No		40
Working years		
Mean		17 years
Training in Communication skils		
Yes		100
No		-

Table 9.Please indicate your level of agreement with the statements given below on health literacy.

	Totally Disagree (%)	Disagree (%)	Neither Disagree nor Agree (%)	Agree (%)	Totally Agree (%)
1. Insufficient health literacy is an important public health problem	0	0	0	80	20
2. I understand the relationship between health literacy level and health	0	0	0	40	60
3. I know the level of community health literacy	0	0	40	60	0
4. I can assess the patient's health literacy level	0	0	20	80	0
5. I know how to act towards patient's with insufficient level of health literacy	0	20	40	40	0
6. I know which groups in the community are at high risk of being low health literate	0	0	20	40	40
7. As a healthcare professional, I feel responsible for the problems that may arise from the health literacy levels of my patients	0	0	20	60	20
8. Programs in undergraduate medical education must be developed to improve health literacy	0	0	0	80	20
9. Efforts to improve health literacy in society would affect the quality of health services	0	0	0	80	20
10. Efforts to improve health literacy would affect the professional satisfaction of healthcare professionals	20	0	0	40	40
11. I create an environment that respects the privacy of the individual during the examination.	0	0	0	40	60
12. I take care that the individual is seated in a suitable place during the examination.	0	0	0	40	60
13. I address the individual by name during the examination	0	0	0	40	60
14. I know very well which of the information I tell my patients can be understood by the patients.	0	0	40	40	20
15. I talk slowly	20	0	20	60	0
16. I pay attention not to use medical terms.	0	0	0	100	0
17. I repeat the information I provided	0	0	0	100	0

	Totally Disagree (%)	Disagree (%)	Neither Disagree nor Agree (%)	Agree (%)	Totally Agree (%)
18. I want my patients to repeat or show me how to do what i said or suggest	0	0	40	60	0
19. During the interview I highlight a certain number of key points (1 to 3) the most	0	0	60	40	0
20. While giving information to my patients, I show / draw with pictures / writing when necessary	0	0	20	40	40
21. I create written training material specific to the patient	20	40	20	0	20
22. I use improved training and information materials (such as brochures, booklets, etc.)	20	0	0	60	20
23. I highlight key points in the information materials I use	20	20	20	40	0
24. I refer patients to health information resources I deem appropriate	0	0	20	40	40

Table 10.Information on potential barriers to healthy communication with patients with insufficient health literacy are outlined below.

	Not at all efficient (%)	Slightly efficient (%)	Neutral (%)	Efficient (%)	Very efficient (%)
1. Limited time per patient	0	0	0	60	40
2. Complicated health information (difficult, complex)	0	20	20	40	20
3. Large amount of information to be transferred	0	0	20	40	40
4. Low education level of the patients	0	0	20	40	40
5. Insufficient training materials prepared	0	20	0	80	0
6. Insufficient studies to improve health literacy	0	0	60	40	0
7. Insufficient publicly available health information sources	0	60	20	20	0
8. Health information in the media misleading patients	0	0	20	40	40

Training in health literacy

40 % of the doctors haven't received the training in communication skills. 60 % who have received the training state the following: "Once about 2-3 hours, about Health literacy, in the context of training to become a medical specialist. Also, a webinar about 30 min"; "It did come up in the side during medical training. However, certainly not enough in my opinion".
Table 9 and 10 shows the results on HL in general and its potential barriers.

Training in communication skills

100% of respondents have received the training: "via Pharos and also some other webinars"; "twice 1 day first time in the context of training to become a medical specialist, also once at Vvaa"; "Rotterdam MDGO VP/Nursing training Gouda"; "during medical training"; "during general practitioner training. a number of hours. Radboud UMC".

What topics would you expect to include in the context of "health literacy education" in undergraduate medical education?

- "HL, integrated into training so that it is taken into account at different stages in skills training and examinations with examples of how to deal with it and scope for reflection";
- "How to deal with different levels of understanding. You don't learn this in a course. Some people understand things faster than others. Importance of getting to the right level and then seeing if the person has understood";
- "Being able to identify risk factors in patients. If there is an impression of limited health literacy, focus on learning the skills to deal with this properly in a consultation";
- "Learn how to assess each individual patient to determine what is needed to convey the information properly and make it stick";
- "Learn how to involve the patient's environment, without compromising the patient's autonomy or privacy";
- "How do you recognise low-HL. What alternatives are there to offer in order to understand the information you are providing?";
- "What does someone show who is not motivated to follow your healthy lifestyle advice? How can you increase this motivation?".

What do you think are the factors affecting the health literacy of individuals and society?

- "Knowledge gap";
- "Difference in socio-economic status (if you are struggling to keep your head above water, you don't care about health skills or prevention), tendency to patronise and prejudice (*tokkie vs burgundian*)";
- "Health is much broader than the medical model";
- "Level of education, environment in which you grew up and now live, your own interests, character (risk seeking or risk avoidance)";
- "Age, education, environment, origin, level of thinking";
- "Limited time during a consultation";
- "Overkill of information to be provided in short time";
- "Limited access to information sources such as the Internet, especially for patients who have not learned to do this and do not have people around them who can help them";
- "Shame or insecurity on the part of the patient, as a result of which they do not dare to ask for e.g. a repetition of what has been discussed";
- "Inappropriate use of staff, e.g. doctors who have limited time and have to explain a lot when this could be done separately by another care provider";

- “Level of education, socio-economic class, school, government campaigns, influencers/social media”;

Can you evaluate the health literacy level of your patient?

- “Can't answer”;
- “I always try to find a communication that keeps the feeling of contact and doesn't see the light go out on the other side”;
- “Yes, but this is seen in a limited way because it is not always checked. e.g. on the basis of understanding/insight into illness and health when taking the anamnesis, use of language by the patient, sources consulted, conclusions drawn after consulting sources, enquiries made (the latter rarely happens, particularly if there is a suspicion of not being able to read or write)”;
- “We do not use standard lists for this”;
- “I do not use measuring instruments, but I would like to learn how to do this because I think it would definitely add value”;
- “Yes, partly, by being alert to signals in the conversation”;

B3.SPAIN (MURCIA UNIV.)

AIM OF STUDY

To determine the approaches of physicians about the importance of the health literacy level of the society and its relationship with health, and to determine the needs for this.

MATERIAL AND METHOD

The study was conducted on 50 physicians who graduated from Medical University of Murcia (Spain). The questionnaire used in the study consists of 4 main parts. A total of 52 questions were asked under the headings of socio-demographic characteristics in the first part, the importance of health literacy in the second part, the ability to evaluate health literacy in the third part, and communication with the patient according to the level of health literacy in the last part. The questionnaire was applied online in June 2021 via Google forms.

RESULTS

50 people participated in the research.

Table 11 presents some descriptive characteristics of physicians. 72% are male and 54% are married. 70% are specialist physicians, 62% working in a general hospital and 22% in primary centers. 60% of them received training in communication skills.

Regarding the views about Health Literacy, the data are shown in table 12. 64% of the participants think that insufficient health literacy is an important public health problem, 84% think that they understand the relationship between health literacy level and health, 54% think that they do not know the level of health literacy of the community. 74% think that the occupational satisfaction of health workers will be positively affected by the studies aimed at improving health literacy in the society. According to 98% of the participants, undergraduate medical education programs should not be included in the medical school curriculum.

In table 13, we present tha data obtained when the doctors were asked about the approaches to assess physicians health literacy.A 28% of the participants stated that they usually/always evaluate the applicant's health literacy level, 74% stated that they usually/always evaluate their understanding of the information about risk factors, illness and treatment that affect the applicant's health. 28% of the participants rarely answered the statement "I ask the applicant about health-related information

sources". 30% stated that they usually/always evaluate the use of media in the applicant's health protection behaviour. 34% of the participants never use the existing scales to determine the health literacy level of the applicants.

Table 14 shows the answers given by doctors to communication skills. While communicating with the patient during the information collection process, 94% of the participants stated that the individual created an environment that respects privacy, 88% asked open-ended questions to the applicant, and 94% listened carefully to the applicant. While communicating with the patient during the information process, 92% of the participants paid attention not to use medical terms, 72% emphasized a certain number of important points during the interview, 62% gave information by showing or drawing pictures/writing when necessary, and 80% of them stated that they repeated the information they gave. 38% of the doctors create written training material for the patients and 46% ask their patients to repeat what they said or their suggestions. While communicating with the patient during the joint decision-making process, 82% of the participants informed the applicant in detail about health care or treatment options, 72% expected the applicant to choose the most appropriate treatment options/health care for him after giving information, 74% of them stated to the applicant that the final decision in their health care or treatment preferences is up to the patients, and 86% of them stated that they encouraged the patients to participate in the decision-making processes.

Conclusions

The majority of physicians are aware of the importance of health literacy in health service delivery, but they do not think that this topic should be added to the medical school curriculum. In order to develop appropriate interventions, it would be useful to develop scales to measure health literacy knowledge, attitudes and behaviors of physicians, and measurement tools should be developed and applied for determining the level of health literacy and appropriate interventions.

Table 11.Demographic Characteristics, Murcia, 2021

	Doctors
N=50	**Percent(%)**
Gender	
Female	28
Male	72
Civil status	
Married	54
Single	28
Other	18
Profesional Status	
Specialist Physician	70
Resident	18
University Professor	4
Other	8
Direct contact with patients	
Yes	88
No	12
Working in	
Murcia	66
Workplace	

General Hospìtal	62
Primary Care	22
Private Health	8
University	8
Training in HL	
No	94
Working years	
Mean	21 years
Training in Communication skils	
No	40
Yes	60

Table 12.Views About Health Literacy, Murcia, 2021

Views About Health Literacy, Murcia, 2021	Strongly disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Somewhat agree (%)	Strongly agree (%)
Inadequate health literacy is an important public health problem.	6	4	6	20	44
I understand the relationship between health literacy level and health.	4	4	8	48	36
I know the health literacy level of community.	6	38	26	24	6
I know whose health literacy level may be low in the community.	2	22	40	26	10
I feel responsible for the problems that may arise from the health literacy levels of my patients.	2	30	30	26	12
The quality of health services is positively affected by efforts to improve health literacy in community.	0	10	14	42	34
Professional satisfaction of healthcare workers is affected by efforts to improve health literacy.	0	10	26	46	18
Appropriate communication, according to the level of health literacy of the applicant, ensures individuals to understand their illnesses and treatments better.	0	2	4	40	47
Using appropriate communication skills for the level of health literacy of the applicant ensures that individuals are healthier.	0	0	10	48	32
Curriculum of undergraduate medical education should include the courses and activities how to understand and improve health literacy in the community.	62	36	2	0	0

Table 13.Assessment of Applicants' Health Literacy, Murcia, 2021

	Never (%)	Rarely (%)	Sometimes (%)	Usually (%)	Every time (%)
I assess the applicant's health literacy level.	12	18	42	20	8
I assess the difficulties that the applicant may have confronted in accessing health services.	6	16	18	40	20
I assess the difficulties that the applicants has / may experience while accessing information about the disease and its treatment.	0	6	16	58	20
I assess the applicant's comprehension of information about risk factors affecting her/his health, disease and treatment.	2	8	16	44	30
I ask the applicant about her/his health information sources.	6	28	36	20	10
I assess the media usage of the applicant to gain the health promotion and preventive measures.	8	14	34	24	10
I use the available scales/instrument to determine applicants' health literacy levels.	34	26	10	20	10

Table 14.Communication Skills with the Applicant/Patient According to Their Health Literacy Level, Murcia 2021 (%)

	Never (%)	Rarely (%)	Sometimes (%)	Usually (%)	Every time (%)
During gathering information					
I take care that the applicant sits comfortably during the consultation / interview	4	0	2	34	60
During the encounter I provide an environment that protects the privacy of the applicants.	2	2	2	38	56
I use the name of the applicant during the interview.	2	0	10	30	58
I use open-ended questions to applicant.	2	0	10	46	42
I listen carefully to the applicant.	0	2	4	42	52
By observing the applicant during the interview, I try to catch clues about her/him.	2	0	2	48	48

	Never (%)	Rarely (%)	Sometimes (%)	Usually (%)	Every time (%)
During giving information					
I speak slowly.	2	0	16	66	16
I am careful not to use medical words.	0	4	8	62	26
I inform the applicant as much as he/she needs.	2	0	8	32	58
I emphasize a certain number of important points (1 to 3 at most) during the interview/consultation.	2	6	20	30	42
While giving information to the applicant, I show with pictures or text or draw when necessary.	2	14	22	44	18
I repeat the information that I have given.	4	4	12	52	28
I create written training material specific to the applicant.	12	20	30	30	8
I use developed training and information materials (such as brochures, booklets, etc.).	2	18	34	28	18
I emphasize important points in the information materials I use.	2	16	18	48	2
I request the applicant to repeat (teach-back technique) or show how to implement what I said or my suggestions.	8	18	28	22	24
I evaluate the applicant's understanding of the correct use of drugs.	4	8	24	8	4
I forward the applicant to appropriate health information resources.	8	26	38	26	8
During shared decision-making					
I inform the applicants in detail about the health service or treatment options.	4	2	12	44	38
After giving information, I support the applicant in choosing the most appropriate treatment options/care for him/her.	2	4	22	40	32
I declare that the last decision on the care or treatment preference is their own responsibility.	2	4	20	28	46
I encourage the applicant to participate in the decision-making process.	2	2	10	34	52

C. HEALTH LITERACY AND APPROACH TO HEALTH LITERACY LEVEL OF THE MEDICAL STUDENTS-Health literacy level of preclinical students (year 1 to 3)

C1. TURKEY PARTNERS (GAZI UNIV., HACETTEPE UNIV., HEALTH SCIENCE UNIV., LOKMAN HEKIM UNIV.)

AIM OF THE STUDY

The aim of our project is to determine the awareness level of health literacy among medical school students and their needs in this field, and to develop behavioral strategies according to the health literacy of the society in the light of the results. In this context, we examined the health literacy levels of 1st, 2nd and 3rd year medical school students and the factors affecting the health literacy level.

METHODOLOGY

The questionnaire consisting of 39 questions created by the researchers as a result of the literature review was used. The questionnaire consists of two parts; In the first part, socio-demographic characteristics and questions affecting HL (health literacy) level were asked. In the second part, the 16-item version of the European Health Literacy Scale (HLS-EU-Q16), was used to determine the level of HL of the participants. The survey was done online via Google forms.
The scale consists of 16 questions. There are three sub-domains as follows: “Health Care (HC)”, “Disease Prevention (DP)”, “Health Promotion (HP)”. The standardized index score is used to calculate the total score (Index = (averagea-1) * (50/3)). The index score ranges from 0 to 50. After calculating the health literacy index scores of the participants, they were divided into 4 categories according to their health literacy levels. Scores were categorized as “inadequate HL” between $0 \leq p \leq 25$, “problematic HL” between $25 < p \leq 33$, “sufficient HL” between $33 < p \leq 42$, and “excellent HL” between $42 < p \leq 50$. Then we have arranged the HL levels in two categories. Two categories were "limited HL" and "sufficient HL" (The categories "inadequate HL" and "problematic HL" combined to become "limited HL", " sufficient HL" and "excellent HL" combined to become " sufficient HL").

RESULTS

We reached 323 students in total: 92 students from Gazi University, 120 students from Hacettepe University and 111 students from University of Health Sciences (Table 15).

Table 15.Participation status of students according to universities, Ankara, 2021

	n	%
Gazi University	92	28.5
Hacettepe University	120	37.2
University of Health Sciences	111	34.4
Total	323	100

51.4% of the participants were women, 99.4% were single and 3rd grade at most with 48%. No one rated the economic status as "very bad" or "very good" and a significant portion of them expressed their economic status as "average". The education level of the mothers has a high school or higher education (65.4%). Most of the participants in the study do not smoke or use alcohol. Most of them rated their health status as "very good" or "good". 82% of the participants stated that they

did not have any chronic disease. Those with a family history of chronic diseases were 53.6%. 70% of the participants did not have a health worker in their family, 71.6% did not receive health literacy training during their medical education. 55.1% of the participants took part in a project, 59.4% received communication skills training (Table 16).

Table 16.Demographic Characteristics, Ankara, 2021

Descriptive Characteristics	Frequency	Percent(%)
Sex		
Male	157	48.6
Female	166	51.4
Marital Status		
Married	2	0.6
Single	321	99.4
Other		
Medical Education		
1th year	77	23.8
2th year	91	28.2
3th year	155	48.0
Place of residence		
Urban area	161	49,8
City center	117	36,2
Rural area (town, village	45	13.9
Economical Status		
Very bad	0	0.0
Bad	35	10.8
Average	212	65.6
Good	76	23.5
Very good	0	0.0
Mother's Education Level		
Illiterate	9	2.8
Just be able to read and write	3	0.9
Primary school	73	22.6
Secondary school	27	8.4
High school	69	21.4
University and more	142	44.0
Father's Education Level		
Illiterate	0	0.0
Just be able to read and write	4	1.2
Primary school	34	10.5
Secondary school	26	8.0
High school	68	21.1
University and more	191	59.1
Smoking		
I have never smoked	267	82.7
I have been smoking I quit	21	6.5
I am currently smoking	35	10.8
Alcohol Usage		
I have never drunk	218	67.5
I was drinking, I quit	23	7.1
I drink 1-3 times a month	74	22.9
I drink 1-5 times a week	7	2.2
I drink nearly everyday	1	0.3

Descriptive Characteristics	Frequency	Percent(%)
Weekly physical activity		
I never do	91	28.2
Less than 150 mınutes	130	40.2
More than 150 mınutes	102	31.6
Health Status		
Very good	44	13.6
Good	183	56.7
Fair	87	26.9
Bad	9	2.8
Very bad	0	0.0
Chronic Illness		
Yes	58	18.0
No	265	82.0
Chronic Illness in Family		
Yes	173	53.6
No	150	46.4
Healthcare Professional in Family		
Yes	97	30.0
No	226	70.0
Health Literacy Training During Undergraduate Medical Education		
Yes	92	28.5
No	231	71.6
Taking Part in A Project		
Yes	178	55.1
No	145	44.9
Communication Skills Training		
Yes	192	59.4
No	131	40.6

The means of the general health literacy index scores and its sub-domains and categories have been shown in Table 17 and Table 18.

Table 17.Health Literacy Level Index, Ankara, 2021

	Mean±ss	Median (min-max)
General HL Index	37,00±7,72	35,90 (13,64-50,00)
Sub-domains		
Heatlh Care (HC) HL Index	36,75±7,76	35,71 (13,33-50,00)
Disease Prevention (DP) HL Index	37,05±9,03	36,67 (12,50-50,00)
Health Promotion (HP) HL Index	36,81±10,20	33,33 (0,00-50,00)

Table 18.Health Literacy Level Index Categories, Ankara, 2021

	n	%
Inadequate health literacy	17	5,3
Problematic health literacy	79	24,5
Sufficient health literacy	130	40,4
Excellent health literacy	96	29,8

When we look at the comparison of the HL levels of the participants according to some socio-demographic characteristics, we see that women's health literacy levels are significantly higher than men with 76.9%. There was no significant relation between grade of the students and their health literacy levels. Likewise, it had no significant relation with the place of residence. There is a significant result between good and bad economic status. There is no significant relation between mother's education level, father's education level, alcohol-cigarette use status with HL level. However, there was a significant relation between those who did more than 150 minutes of exercise and the others in both HL level. There was a significant relationship between those who evaluated their health as "good" and "bad" (Table 19).

Table 19.Health Literacy Level Index Categories according to some socio-demographic characteristics of the participants

	Limited HL n=96 (29.8%)	**Sufficient HL n=226 (70.2%)**	**p-value**
Sex			
Male	60 (36.1)	106 (63.9)	**0.010[1]**
Female	36 (23.1)	120 (76.9)	
Medical Education			
1th year	25 (32.5)	52 (67.5)	0.814[1]
2nd year	27 (30.0)	63 (70.0)	
3rd year	44 (28.4)	111 (71.6)	
Place of residence			
Urban area	42 (26.3)	118 (73.8)	0.381[1]
City Center	39 (33.3)	78 (66.7)	
Rural area (town, village)	15 (33.3)	30 (66.7)	
Economical Status			
Good	14 (18.4)	62 (81.6)	**0.001[3]**
Average	65 (30.8)	146 (69.2)	
Bad	17 (48.6)	18 (51.4)	
Mother's Education Level			
No education(Illiterate and just be able to read and write)	5 (41.7)	7 (58.3)	0.712[1]
Primary school and Secondary school	31 (31.3)	68 (68.7)	
High school	18 (26.1)	51 (73.9)	
University and more	42 (29.6)	100 (70.4)	
Father's Education Level			
Primary school and Secondary school	25 (42.4)	34 (57.6)	0.071[1]
High school	20 (29.4)	48 (70.6)	
University and more	51 (26.7)	140 (73.3)	
Smoking			
No	89 (31.0)	198 (69.0)	0.251[1]
Yes	7 (20.0)	28 (80.0)	
Alcohol Usage			
No	75 (31.3)	165 (68.8)	0.410[1]
Yes	21 (25,6)	61 (74.4)	
Weekly physical activity			
I never do	34 (37.4)	57 (62.6)	**0.004[3]**
Less than 150 mınutes		86 (66.7)	
More than 150 mınutes	19 (18.6)	83 (81.4)	

	Limited HL n=96 (29.8%)	Sufficient HL n=226 (70.2%)	p-value
Health Status			
Good	51 (22.6)	175 (77.4)	**<0.001[1]**
Bad	45 (46.9)	51 (53.1)	
Chronic Illness			
Yes	15 (25.9)	43 (74.1)	0.570[1]
No	81 (30.7)	183 (69.3)	
Chronic Illness in Family			
Yes	46 (26.6)	127 (73.4)	0.173[1]
No	50 (33.6)	99 (66.4)	
Healthcare Professional in Family			
Yes	32 (33.0)	65 (67.0)	0.413[1]
No	64 (28.4)	161 (71.6)	

Data are expressed as n (%). Row percentages are given.
[1]Pearson chi-square test [2]Fisher Exact Test [3]P for trend

There is no significant relationship also between HL level and "receiving health literacy education during medical education", "participating in projects during university education" and "getting education on communication skills" (Table 20).

Table 20.Health Literacy Level Index Categories according to Process of Undergraduate Medical Education of the participants

	Limited HL n=96 (29.8%)	Sufficient HL n=226 (70.2%)	P-value [1]
Health Literacy Training			
Yes	22 (24.2)	69 (75.8)	0.165
No	74 (32.0)	157 (68.0)	
Taking Part in A Project			
Yes	48 (27.0)	130 (73.0)	0.214
No	48 (33.3)	96 (66.7)	
Communication Skills Training			
Yes	54 (28.3)	137 (71.7)	0.465
No	42 (32.1)	89 (67.9)	

Data are expressed as n (%). Row percentages are given.
[1]Pearson chi-square test [2]Fisher Exact Test [3]P for trend

The results of the logistic regression model made with the enter method are as in the table (Table 21).

Table 21.Logistic Regression Analysis Results of Factors Affecting HL

Variables	p	OR	95% CI
Age	0.221	1.111	0.938-1.316
Sex(ref: female)			
Male	0.019	1.939	1.115-3.369
Economical Status (ref: bad)			
Average	0.059	2.333	0.967-5.629
Good	0.006	4.755	1.554-14.554
Father's Education Level(ref: Primary school and Secondary school)			
High school	0.152	1.808	0.804-4.065
University and more	0.278	1.485	0.727-3.032
Weekly physical activity(ref: never do)			
<150 min.	0.615	1.172	0.631-2.177
≥150 min.	0.012	2.545	1.227-5.282
Health Status(ref: Bad)			
Good	0.004	2.334	1.319-4.130
Chronic Illness in Family (ref: No)			
Yes	0.077	1.616	0.949-2.751
Health Literacy Training (ref: No)			
Yes	0.157	1.560	0.843-2.886
Taking Part in A Project(ref: No)			
Yes	0.365	1.277	0.752-2.166

There are 5 variables remain a statistically significant in the last step of the logistic regression model with backward method (Table 22).

Table 22.Logistic Regression Analysis Results of Factors Affecting HL

Variables	p	OR	%95 CI
Sex (ref: female)			
Male	0.017	1.935	1.126-3.326
Economical Status (ref: bad)			
Average	0.042	2.367	1.031-5.435
Good	0.003	4.402	1.639-11.825
Weekly physical activity (ref: never do)			
<150 min	0.604	1.175	0.638-2.164
≥150 min	0.019	2.345	1.151-4.779
Health Status (ref: Bad)			
Good	0.01	2.534	1.453-4.419
Chronic Illness in Family (ref: No)			
Yes	0.049	1.692	1.002-2.858

C2.NETHERLAND (MAASTRICHT UNIV.)

OBJECTIVE

The aim of the project is to determine the health literacy awareness levels of medical school students and their needs in this area, and to develop behavioral strategies according to the health literacy of the society in the light of the results. In this context, we examined the health literacy levels of the 1st, 2nd and 3rd year medical faculty students and the factors affecting the health literacy level.

METHODS

A questionnaire consisting of 39 questions created by the researchers as a result of the literature review was used. The questionnaire consists of two parts; In the first part, questions affecting sociodemographic characteristics and HL (health literacy) level were asked. In the second part, the 16-item version of the European Health Literacy Scale (HLS-EU-Q16) was used to determine the HL levels of the participants. The survey was conducted online via Google forms. The scale consists of 16 questions. There are three sub-areas: "Health Care", "Prevention of Disease", and "Health Promotion". The standardized index score is used to calculate the total score (Index = (mean-1) *(50/3)). The index score ranges from 0 to 50. After the health literacy index scores of the participants were calculated, they were divided into 4 categories according to their health literacy levels. Scores were categorized as “unsatisfactory HL” between $0 \leq p \leq 25$, “problematic HL” between $25 < p \leq 33$, “sufficient HL” between $33 < p \leq 42$, and “excellent HL” between $42 < p \leq 50$. Then we organized the SOY levels in two categories. The two categories were "limited HL" and "adequate HL" (the categories "unsatisfactory HL" and "problematic HL" were combined to become "limited HL", "adequate HL" and "excellent HL" combined into "adequate HL").

RESULTS

50 students, all studying at Maastricht University, were reached. Table 23 shows the demographic characteristics of the participants..

Table 23.Demographic Characteristics, Netherland, 2021

	Frequency	Percent (%)
Gender		
Male	16	32.0
Female	34	68.0
Marital Status		
Married	1	2.0
Single	49	98.0
Medical Education		
1st year	18	36.0
2nd year	19	38.0
3th year	13	26.0
Economical Status		
Very bad	0	0.0
Bad	2	4.0
Average	11	22.0
Good	29	58.0
Very good	8	16.0
Mother’s Education Level		
Primary school	2	4.0
High school	4	8.0
University and more	44	88.0

	Frequency	Percent (%)
Smoking		
I have never smoked	35	70.0
I have been smoking I quit	7	14.0
I am currently smoking	8	16.0
Alcohol Usage		
I have never drunk	3	6.0
I was drinking, I quit	2	4.0
I drink 1-3 times a month	34	68.0
I drink 1-5 times a week	8	16.0
I drink nearly everyday	3	9.0
Health Status		
Very good	17	34.0
Good	28	56.0
Fair	4	8.0
Bad	1	2.0
Chronic Illness		
Yes	7	14.0
No	43	86.0
Chronic Illness in Family		
Yes	28	56.0
No	22	44.0
Healthcare Professional in Family		
Yes	21	42.0
No	29	58.0
Health Literacy Training During Undergraduate Medical Education		
Yes	4	8.0
No	46	92.0
Taking Part in a Project		
Yes	8	16.0
No	42	84.0
Communication Skills Training		
Yes	14	28.0
No	36	72.0

Genel sağlık okuryazarlığı ve alt boyutlarının indeks puan ortalamaları ve kategorileri Tablo 24 ve 25'te görülebilir. Katılımcıların %82'si mükemmel veya yeterli sağlık okuryazarlığı düzeyine sahiptir.

Table 24.Health Literacy Level Index, Netherland, 2021

	Mean±ss	Median (min-max)
General HL Index	38.11 ± 5.51	36.49 (29.86-50.00)
Sub-domains		
Heatlh Care (HC) HL Index	38.14± 5.73	36.72 (23.81-50.00)
Disease Prevention (DP) HL Index	37.26 ± 7.45	35.33 (20,00-50,00)
Health Promotion (HP) HL Index	38.31 ± 7.21	37.42 (22.22-50.00)

Table 25.Health Literacy Level Index Categories, Netherland , 1st To 3rd Year Medical Students, 2021

	N	%
Inadequate health literacy	0	0,0
Problematic health literacy	9	18.0
Sufficient health literacy	32	64.0
Excellent health literacy	9	18.0

C3.SPAIN (MURCIA UNIV.)
OBJECTİVE

The aim of our project is to determine the awareness level of health literacy among medical school students and their needs in this field, and to develop behavioral strategies according to the health literacy of the society in the light of the results. In this context, we examined the **health literacy levels of 1st, 2nd and 3rd year medical school students** and the factors affecting the health literacy level.

METHODS

The questionnaire consisting of 39 questions created by the researchers as a result of the literature review was used. The questionnaire consists of two parts; In the first part, socio-demographic characteristics and questions affecting HL (health literacy) level were asked. In the second part, the 16-item version of the European Health Literacy Scale (HLS-EU-Q16), was used to determine the level of HL of the participants. The survey was done online via Google forms. The scale consists of 16 questions. There are three sub-domains as follows: “Health Care (HC)”, “Disease Prevention (DP)”, “Health Promotion (HP)”. The standardized index score is used to calculate the total score (Index = (averagea-1)*(50/3)). The index score ranges from 0 to 50. After calculating the health literacy index scores of the participants, they were divided into 4 categories according to their health literacy levels. Scores were categorized as “inadequate HL” between $0 \leq p \leq 25$, “problematic HL” between $25 < p \leq 33$, “sufficient HL” between $33 < p \leq 42$, and “excellent HL” between $42 < p \leq 50$. Then we have arranged the HL levels in two categories. Two categories were "limited HL" and "sufficient HL" (The categories "inadequate HL" and "problematic HL" combined to become "limited HL", " sufficient HL" and "excellent HL" combined to become " sufficient HL").

RESULTS

We reached 51 students, all of them studying in the University of Murcia.

In table 1, demographic data are shown. 71% of them were women, 85% of them single, with good or very good economic status in 68% of the students. The education level of the mothers have a high school or higher education (61.5%). Most of the participants in the study do not smoke whereas only 20% have never used alcohol. Most of them rated their health status as "very good" or "good". 77% of the participants stated that they did not have any chronic disease. Those with a family history of chronic diseases were 56%. 54% of the participants did not have a health worker in their family, 86% have not received health literacy training during their medical education and did not receive communication skills training (Table 26).

The means of the general health literacy index scores and its sub-domains and categories can be observed in Table 27 and 28. About a 70% of these young students have excellent or adequate health literacy levels.

Table 26.Demographic Characteristics, Murcia, 2021

		Frequency	Percent (%)
Gender			
	Male	15	28,8
	Female	37	71,2
Marital Status			
	Married	2	3,8
	Single	44	84,6
	Other	6	11,5
Medical Education			
	1st year	30	57,7
	2nd year	12	23,1
	3th year	10	19,2
Economical Status			
	Very bad	0	0
	Bad	2	3,8
	Average	14	26,9
	Good	30	57,7
	Very good	6	11,5
Mother's Education Level			
	Just be able to read and write	1	1,9
	Primary school	9	17,3
	High school	4	7,7
	Profesional Formation	6	11,5
	University and more	32	61,5
Smoking			
	I have never smoked	44	84,6
	I have been smoking I quit	6	11,5
	I am currently smoking	2	3,8
Alcohol Usage			
	I have never drunk	11	21,2
	I was drinking, I quit	11	21,2
	I drink 1-3 times a month	26	50,0
	I drink 1-5 times a week	4	7,7
	I drink nearly everyday	0	0
Health Status			
	Very good	17	32,7
	Good	31	59,6
	Fair	4	7,7
	Bad	0	0
Chronic Illness			
	Yes	12	23,1
	No	40	76,9
Chronic Illness in Family			
	Yes	29	55,8
	No	23	44,2
Healthcare Professional in Family			
	Yes	24	46,2
	No	28	53,8

		Frequency	Percent (%)
Health Literacy Training During Undergraduate Medical Education			
	No	45	86,5
	Yes	7	13,5
Taking Part in a Project			
	Yes	6	11,5
	No	46	88,5
Communication Skills Training			
	No	42	80,8
	Yes	10	19,2

Table 27.Health Literacy Level Index, Murcia, 2021

	Mean±ss	Median (min-max)
General HL Index	36,10 ± 5,98	34,57 (27,78-50,00)
Sub-domains		
Heatlh Care (HC) HL Index	36,01± 5,96	34,72 (23,81-50,00)
Disease Prevention (DP) HL Index	35,48 ± 8,85	33,33 (20,00-50,00)
Health Promotion (HP) HL Index	37,47 ± 7,58	35,42 (22,22-50,00)

Table 28.Health Literacy Level Index Categories, Murcia, 1st to 3rd year medical students, 2021

	N	%
Inadequate health literacy	0	0,0
Problematic health literacy	16	30,8
Sufficient health literacy	28	53,8
Excellent health literacy	8	15,4

D. HEALTH LITERACY AND APPROACH TO HEALTH LITERACY LEVEL OF THE MEDICAL STUDENTS-Health literacy approach levels of clinical students (year 4 to 6)

D1.TURKEY PARTNERS (GAZI UNIV., HACETTEPE UNIV., HEALTH SCIENCE UNIV., LOKMAN HEKIM UNIV.) DETERMINING THE APPROACHES OF MEDICAL STUDENTS (GRADE 4-6) ABOUT THE IMPORTANCE OF SOCIETY'S HEALTH LITERACY AND ITS RELATIONSHIP WITH HEALTH

Health literacy is a key element to better health outcomes for community. Morbidity and mortality indicators are low for communities that has high health literacy. Accessing the health service just at needed time and taking care of health situation for their own is better than the other communities[1]. For health system perspective, the communities that has high health literacy level, clinical care engagement is high and patients are more involved in decision making processes[2]. Assessing the health literacy level makes the physician-patient communication more clear and raises the treatment success[3]. Health literacy training for healthcare professionals improves the physician-patient communication and makes the usage of the health literacy principles more frequently[4].

The aim of this project developing, implanting and evaluating a health literacy education program for the medical education. It is important to gain “knowledge, attitude and skills” regarding the evaluation and development of the health literacy level.
It is thought that the acquisition of this approach will contribute significantly to the development of the health literacy level of the applicant and society in the professional life of the physician candidate.

The project is designed as a descriptive research. The participants are from Gazi, Hacettepe and Health Sciences Universities Faculties of Medicine 4^{th}, 5^{th} and 6^{th} grade students. Sample size was determined as 100 students from each university. At the end of the research, we reached 310 participants. Data was obtained using an online questionnaire via Google Form. The forms are sent to the students via their registered e-mails in student affairs. For analyses, IBM SPSS-23 is used.

Table 29.Demographic Characteristics of the Medical School Students at 4-6 Grades in Three Universities, Ankara, 2021

		Frequency	Percent
Sex			
	Male	174	56.1
	Female	136	43.9
Marital Status			
	Married	8	2.6
	Single	302	97.4
Grade			
	4th grade	58	18.7
	5th grade	59	19.0
	6th grade	193	62.3
Economic Status			
	Very bad	-	-
	Bad	29	9.4
	Average	165	53.2
	Good	103	33.2
	Very good	-	-
Mother's Education Level			
	Illiterate	9	2.9
	Literate	3	1.0
	Primary school	78	25.2
	Secondary school	20	6.5
	High school	75	24.2
	University and more	125	40.3

Male participants frequency is 56.1% in research project. The percentage of female participants is lower than the male participants (43.9% and 56.1%). Most of them the participants are single (97.4%). More than 60.0% of the participants are at 6th year of the medical education. Participants' frequency that economic status is average is 53.2%. (Table 29)

Table 30.Smoking, Alcohol Usage, Health Status, Chronic Illnesses Characteristics of the Medical School Students at 4-6 Grades in Three Universities, Ankara, 2021

		Frequency	Percent
Smoking			
	I have never smoked	220	70.9
	I have been smoking I quit	30	9.6
	I am currently smoking	60	19.5
Alcohol Usage			
	I have never drunk	171	55.2
	I was drinking, I quit	35	11.3
	I drink 1-3 times a month	90	29.0
	I drink 1-5 times a week	14	4.5
	I drink nearly everyday	-	-
Health Status			
	Fair	13	4.2
	Good	74	23.9
	Very good	188	60.6
	Excellent	35	11.3
Chronic Illness			
	Yes	66	21.3
	No	244	78.7

Most of the participants has never smoked (70.9%). A small number of the participants express the health status as fair (4.2%). Nearly one in five participants has a chronic illness (21.3%). (Table 30)

Table 31.Chronic Illness in Family and Healthcare Professional in Family situation for Participants from Three Medical School Students at 4-6 Grades from Three Universities, Ankara, 2021

		Frequency	Percent
Chronic Illness in Family			
	Yes	164	52.9
	No	146	47.1
Healthcare Professional in Family			
	Yes	93	30.0
	No	217	70.0

The participants' frequency that have chronic illness in family is 52.9%. Almost three in ten of the participants has a healthcare professional in their family. (Table 31)

Table 32.Health Literacy Training, Taking Part in Project and Communication Skills Training and Communication Skills Training Characteristics of Medical School Students at 4-6 Grades in Three Universities, Ankara, 2021

		Frequency	Percent
Health Literacy Training **During Undergraduate Medical Education**			
	No	225	72.6
	Yes	85	27.4
Taking Part in a Project			
	Yes	144	46.5
	No	166	53.5
Communication Skills Training			
	No	90	29.0
	Yes	220	71.0

Most of them take health literacy training (72.6%) and communication skills training (71.0%) during medical education. (Table 32)

Table 33.Views About Health Literacy of Medical School Students at 4-6 Grades in Three Universities, Ankara, 2021

	Strongly disagree(%)	Disagree(%)	Neither agree nor disagree(%)	Some-what agree(%)	Strongly agree(%)
Inadequate health literacy is an important public health problem.	1.0	1.3	1.9	23.5	72.3
I understand the relationship between health literacy level and health.	1.6	1.9	5.5	31.3	59.7
I know the health literacy level of community.	7.1	18.1	30.0	31.0	13.9
I know whose health literacy level may be low in the community.	2.9	6.5	18.4	51.0	21.3
I feel responsible for the problems that may arise from the health literacy levels of my patients.	10.0	17.1	18.7	35.5	18.7
The quality of health services is positively affected by efforts to improve health literacy in community.	1.3	1.9	7.1	28.4	61.3
Professional satisfaction of healthcare workers is affected by efforts to improve health literacy.	1.0	1.6	9.7	28.7	59.0
Appropriate communication according to the level of health literacy of the applicant ensures individuals to understand their illnesses and treatments better.	1.3	0.6	3.5	25.5	69.0
Using appropriate communication skills for the level of health literacy of the applicant ensures that individuals are healthier.	0.6	2.3	8.1	28.7	60.3
Curriculum of undergraduate medical education should include the courses and activities how to understand and improve health literacy in the community.	2.3	2.6	8.1	28.1	59.0

Most of the participants evaluate health literacy as an important public health problem (72.3%). Only 13.9% of the participants express that they know the health literacy level of community. More than half of the participants think that the quality of health services is positively affected by efforts to improve health literacy in community (89,7%). Most of them strongly agree that appropriate communication according to the level of health literacy of the applicant ensures individuals to understand their illnesses and treatments better (69.0%). The frequency of participants that agree strongly curriculum of undergraduate medical education should include the courses and activities how to understand and improve health literacy in the community (59.0%). (Table 33)

Table 34.Assessment of Applicants' Health Literacy of Medical School Students at 4-6 Grades in Three Universities, Ankara, 2021

	Never(%)	Rarely(%)	Some-times(%)	Usually(%)	Every time(%)
I assess the applicant's health literacy level.	5.8	12.3	23.9	41.6	16.5
I assess the difficulties that the applicant may have confronted in accessing health services.	1.9	7.1	19.7	50.6	20.6
I assess the difficulties that the applicants has / may experience while accessing information about the disease and its treatment.	2.6	6.1	17.1	47.1	27.1
I assess the applicant's comprehension of information about risk factors affecting her/his health. disease and treatment.	1.3	3.2	11.9	44.8	38.7
I ask the applicant about her/his health information sources.	8.1	25.2	29.4	20.6	16.8
I assess the media usage of the applicant to gain the health promotion and preventive measures.	8.1	16.5	30.0	28.7	16.8
I use the available scales/instrument to determine applicants' health literacy levels.	26.8	20.3	23.5	19.0	10.3

Out of the participants, 16.5% of them express that they assess the applicant's health literacy level ever time. Approximately half of the participants usually agree that they assess the difficulties that the applicant may have confronted in accessing health services (50.6%). Only 16.8% of them always ask the applicant about her/his health information sources. The frequency of the participants who always use the available scales/instrument to determine applicants' health literacy levels every time is 10.3%. (Table 34)

Table 35.Communication Skill with the Applicant/Patient According to Their Health Literacy Level. Ankara.2021

	Never(%)	Rarely(%)	Some-times(%)	Usually(%)	Every time(%)
During to gathering information					
I take care that the applicant sits comfortably during the consultation / interview	1.0	1.3	5.5	36.5	55.8
During the encounter I provide an environment that protects the privacy of the applicants.	0.3	1.0	4.8	21.0	72.9
I use the name of the applicant during the interview.	1.0	2.3	12.3	37.4	47.1
I use open-ended questions to applicant.	1.6	4.5	15.8	41.9	36.1
I listen carefully to the applicant.	0.6	0.3	3.9	30.6	64.5
By observing the applicant during the interview. I try to catch clues about her/him.	0.3	0.6	6.5	31.9	60.6
During to giving information					
I speak slowly.	1.6	6.1	20.3	51.6	20.3
I am careful not to use medical words.	0.6	2.3	13.5	63.2	20.3
I inform the applicant as much as he/she needs.	0.3	1.6	10.6	61.6	25.8
I emphasize a certain number of important points (1 to 3 at most) during the interview/consultation.	0.6	2.9	16.1	50.6	29.7
While giving information to the applicant. I show with pictures or text or draw when necessary.	2.3	10.3	27.4	35.2	24.8
I repeat the information that I have given.	0.3	3.9	15.8	47.7	32.3
I create written training material specific to the applicant.	14.8	18.7	35.8	21.3	9.4
I use developed training and information materials (such as brochures. booklets. etc.).	7.7	17.1	30.0	32.9	12.3
I emphasize important points in the information materials I use.	5.5	9.7	19.4	45.8	19.7
I request the applicant to repeat (teach-back technique) or show how to implement what I said or my suggestions.	4.2	12.6	22.9	41.9	18.4
I evaluate the applicant's understanding of the correct use of drugs.	0.3	4.5	11.0	45.8	38.4
I forward the applicant to appropriate health information resources.	2.6	7.1	20.0	44.5	25.8

	Never(%)	Rarely(%)	Some-times(%)	Usually(%)	Every time(%)
During to shared decision-making					
I inform the applicants in detail about the health service or treatment options.	1.0	1.3	11.6	50.0	36.1
After giving information. I support the applicant in choosing the most appropriate treatment options/care for him/her.	0.6	2.6	12.6	47.4	36.8
I declare that the last decision on the care or treatment preference is their own responsibility.	0.3	2.6	9.7	39.7	47.7
I encourage the applicant to participate in the decision-making process.	1.3	4.2	15.2	41.0	38.4

The most of the participants during the encounter always provide an environment that protects the privacy of the applicants (72,9%). Nearly 60% of the participants said that they always listen carefully the applicant and observe the applicant for catching clues every time. Only 20.3% of the participants said that they are always careful to do not use medical words during the giving information ever time. The frequency of the of the participants that always evaluate correct use of the medicine is 38,4%. The participants' frequency that always encourage the applicant to participate in the decision-making process is 38,4%. (Table 35)

CONCLUSION

The results showed that the health literacy of the patient/applicant was considered important by the students, but they had deficiencies and problems in their daily practices. In medical education, it is important to provide the physician candidate with knowledge, attitude and skills regarding the evaluation and development of the patient/applicant/society level of health literacy. Implementing health literacy training in the medical education program will strengthen physician-patient communication.

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D2.NETHERLAND (MAASTRICHT UNIV.)

4th-6th graders, all of whom are studying at Maastricht University, questionnaires were applied to 50 students.

RESULTS

Table 36 shows the demographic characteristics of the participants. Most of the participants are women (62%). 18% of the participants in the study were in the 4th grade, 38% were in the 5th grade, and 44% were in the 6th grade. Most of the participants are smokers (60%). Before graduation, 68% of the participants received HL training and 80% received communication skills training.

Table 37 shows the participants' views on health literacy. 96% of the participants see insufficient health literacy as an important public health problem.

Data on the assessment of patients' health literacy level are shown in Table 38. 16% of the participants stated that they always evaluate the health literacy level of the patients.

And in Table 39, data on communication skills related to health literacy are presented. 78% of the participants stated that they created an environment that protects the privacy of the patients. Those who are careful not to use medical terms and who inform the applicant as much as they need make up 68% of the participants.

Table 36.Demographic Characteristics, Netherland, 4th to 6th medical students, 2021

	Frequency	Percent (%)
Gender		
Female	31	62.0
Male	19	38.0
Medical Education		
4th year	9	18.0
5th year	19	38.0
6th year	22	44.0
Ekonomical Status		
Bad	7	14.0
Average	11	22.0
Good	27	54.0
Very good	5	10.0
Mother's Educaiton Level		
Just be able to read and write	1	2.0
Primary school	4	8.0
High school	8	16.0
University and more	37	74.0
Smoking		
I have never smoked	12	24.0
I have been smoking I quit	8	16.0
I am currently smoking	30	60.0
Alcohol Usage		
I have never drunk	2	4.0
I was drinking, I quit	3	6.0
I drink 1-3 times a month	28	56.0
I drink 1-5 times a week	14	28.0
I drink nearly everyday	3	6.0

		Frequency	Percent (%)
Health Status			
	Fair	4	8.0
	Good	26	52.0
	Very good	20	40.0
Chronic Illness			
	Yes	14	28.0
	No	36	78.0
Chronic Illness in Family			
	Yes	16	32.0
	No	34	68.0
Healthcare Professional in Family			
	Yes	21	42.0
	No	29	58.0
Health Literacy Training During Undergraduate Medical Education			
	Yes	16	32.0
	No	34	68.0
Taking Part in A Project			
	Yes	19	38.0
	No	31	62.0
Communication Skills Training			
	Yes	40	80.0
	No	10	20.0

Table 37.Views About Health Literacy, Netherland, 2021

	Strongly disagree(%)	Disagree(%)	Neither agree nor disagree(%)	Some-what agree(%)	Strongly agree(%)
Inadequate health literacy is an important public health problem.	-	-	4.0	36.0	60.0
I understand the relationship between health literacy level and health.		4.0	6.0	38.0	52.0
I know the health literacy level of community.	6.0	24.0	32.0	28.0	10.0
I know whose health literacy level may be low in the community.	6.0	32.0	30.0	28.0	4.0
I feel responsible for the problems that may arise from the health literacy levels of my patients.	-	2.0	10.0	66.0	22.0
The quality of health services is positively affected by efforts to improve health literacy in community.	-	-	2.0	36.0	62.0
Professional satisfaction of healthcare workers is affected by efforts to improve health literacy.	-	4.0	8.0	46.0	42.0

	Strongly disagree(%)	Disagree(%)	Neither agree nor disagree(%)	Some-what agree(%)	Strongly agree(%)
Appropriate communication according to the level of health literacy of the applicant ensures individuals to understand their illnesses and treatments better.	-	-	4.0	24.0	72.0
Using appropriate communication skills for the level of health literacy of the applicant ensures that individuals are healthier.	-	6.0	8.0	34.0	52.0
Curriculum of undergraduate medical education should include the courses and activities how to understand and improve health literacy in the community.	4.0	4.0	8.0	34.0	50.0

Table 38.Assessment of Applicants' Health Literacy, Netherland, 2021

	Never(%)	Rarely(%)	Some-times(%)	Usually(%)	Every time(%)
I assess the applicant's health literacy level.	-	14.0	32.0	38.0	16.0
I assess the difficulties that the applicant may have confronted in accessing health services.	-	12.0	22.0	48.0	8.0
I assess the difficulties that the applicants has / may experience while accessing information about the disease and its treatment.	-	6.0	24.0	52.0	18.0
I assess the applicant's comprehension of information about risk factors affecting her/his health. disease and treatment.	-	6.0	8.0	54.0	32.0
I ask the applicant about her/his health information sources.	4.0	30.0	26.0	28.0	22.0
I assess the media usage of the applicant to gain the health promotion and preventive measures.	12.0	34.0	28.0	22.0	4.0
I use the available scales/instrument to determine applicants' health literacy levels.	58.0	26.0	14.0	2.0	-

Table 39.Communication Skill With the Applicant/Patient According to Their Health Literacy Level, Netherlands, 2021

	Never(%)	Rarely(%)	Some-times(%)	Usually(%)	Every time(%)
During to gathering information					
I take care that the applicant sits comfortably during the consultation / interview	-	-	-	26.0	74.0
During the encounter I provide an environment that protects the privacy of the applicants.	-	-	-	22.0	78.0
I use the name of the applicant during the interview.	-	2.0	2.0	24.0	72.0
I use open-ended questions to applicant.	-	-	4.0	38.0	58.0
I listen carefully to the applicant.	-	-	-	42.0	58.0
By observing the applicant during the interview. I try to catch clues about her/him.	-	-	6.0	36.0	58.0
During to giving information					
I speak slowly.	-	6.0	24.0	54.0	16.0
I am careful not to use medical words.	-	-	8.0	24.0	68.0
I inform the applicant as much as he/she needs.	-	-	6.0	26.0	68.0
I emphasize a certain number of important points (1 to 3 at most) during the interview/consultation.	4.0	4.0	20.0	24.0	48.0
While giving information to the applicant. I show with pictures or text or draw when necessary.	14.0	22.0	30.0	30.0	4.0
I repeat the information that I have given.	-	14.0	8.0	24.0	54.0
I create written training material specific to the applicant.	10.0	36.0	18.0	20.0	16.0
I use developed training and information materials (such as brochures. booklets. etc.).	4.0	26.0	32.0	28.0	10.0
I emphasize important points in the information materials I use.	-	20.0	20.0	42.0	18.0
I request the applicant to repeat (teach-back technique) or show how to implement what I said or my suggestions.	12.0	10.0	34.0	42.0	2.0
I evaluate the applicant's understanding of the correct use of drugs.	-	4.0	8.0	62.0	26.0
I forward the applicant to appropriate health information resources.	6.0	14.0	40.0	26.0	14.0

	Never(%)	Rarely(%)	Some-times(%)	Usually(%)	Every time(%)
During to shared decision-making					
I inform the applicants in detail about the health service or treatment options.	1,9	-	7,4	53,7	37,0
After giving information. I support the applicant in choosing the most appropriate treatment options/care for him/her.	1,9	-	7,4	46,3	44,4
I declare that the last decision on the care or treatment preference is their own responsibility.	-	5,6	3,7	37,0	53,7
I encourage the applicant to participate in the decision-making process.	-	-	3,7	37,0	59,3

D3.SPAIN (MURCIA UNIV.)

Similar to C3, the surveys were passed to 54 medical students from the University of Murcia in the courses 4th to 6th year.

RESULTS

Table 40 describes demographic characteristics of the students. Female students are 63%, most of them in the 6th year, thus about to be graduated. The economic status is good in 60% of them, 80% of them are smoking now and only 14% never drank alcohol. Most of them have not received health literacy training but they did receive communication skills training.

Regarding their views about health literacy, table 41 shows the results. All of the participants evaluate health literacy as an important public health problem. Only 23% of the participants express that they know the health literacy level of community. Almost all of the participants think that the quality of health services is positively affected by efforts to improve health literacy in community (98%). Most of them strongly agree that appropriate communication according to the level of health literacy of the applicant ensures individuals to understand their illnesses and treatments better (97%). The frequency of participants that agree strongly curriculum of undergraduate medical education should include the courses and activities how to understand and improve health literacy in the community (96%).

Regarding the asssessment of patients' health literacy, the data on table 42 show that 4% of them express that they assess the applicant's health literacy level ever time. More than half of the participants usually agree that they assess the difficulties that the applicant may have confronted in accessing health services (61%). Only 28% of them always ask the applicant about her/his health information sources. The frequency of the participants who always use the available scales/instrument to determine applicants' health literacy levels every time is 7.4%.

And, in table 43, we show data on communication skills in relation to health literacy. Most of the participants during the encounter always provide an environment that protects the privacy of the applicants (78%). A 76% of the participants said that they always listen carefully the applicant and observe the applicant for catching clues every time. A 63% of the participants said that they are always

careful to not use medical words during the information to the patient every time. The frequency of the of the participants that always evaluate correct use of the medicine is 30%. The participants' frequency that always encourage the applicant to participate in the decision-making process is 60%.

CONCLUSİONS

The results showed that the health literacy of the patients is considered important by the students, but they had deficiencies and problems in their daily practices. In medical education, it is important to provide the physician candidate with knowledge, attitude and skills regarding the evaluation and development of the patient/applicant/society level of health literacy. Implementing health literacy training in the medical education program will strengthen physician-patient.

Table 40.Demographic Characteristics, Murcia Results, 4th to 6th medical students, 2021

	Frequency	Percent (%)
Gender		
Female	34	63,0
Male	20	37,0
Medical Education		
4th year	2	3,7
5th year	4	7,4
6th year	48	88,9
Economical Status		
Bad	18	33,3
Average	3	5,6
Good	27	50,0
Very good	6	11,0
Mother's Education Level		
Just be able to read and write	2	3,7
Primary school	7	13,0
High school	8	14,8
University	27	50,0
Professional Formation	10	18,5
Smoking		
I have never smoked	3	5,6
I have been smoking I quit	6	11,1
I am currently smoking	45	83,3
Alcohol Usage		
I have never drunk	8	14,8
I was drinking, I quit	8	14,8
I drink 1-3 times a month	30	55,6
I drink 1-5 times a week	8	14,8
I drink nearly everyday	-	-
Health Status		
Fair	4	7,4
Good	30	37,0
Very good	20	55,6
Chronic Illness		
Yes	10	18,5
No	44	81,5
Chronic Illness in Family		
Yes	13	24,1

		Frequency	Percent (%)
	No	41	75,9
Healthcare Professional in Family			
	Yes	22	40,7
	No	32	59,3
Health Literacy Training During Undergraduate Medical Education			
	Yes	16	29,6
	No	38	70,4
Taking Part in A Project			
	Yes	12	22,2
	No	42	77,8
Communication Skills Training			
	Yes	40	74,1
	No	14	25,9

Table 41.Views About Health Literacy, Murcia Results 2021 (%)

	Strong disagree	Disagree	Neither	Agree	Strongly agree
Inadequate health literacy is an important public health problem.	-	-	-	35,2	64,8
I understand the relationship between health literacy level and health.		1,9	3,7	40,7	53,7
I know the health literacy level of community.	3,7	35,2	37,0	20,4	3,7
I know whose health literacy level may be low in the community.	1,9	31,5	31,5	33,2	1,9
I feel responsible for the problems that may arise from the health literacy levels of my patients.	-	1,9	9,3	64,8	24,0
The quality of health services is positively affected by efforts to improve health literacy in community.	1,9	-	-	48,1	50,0
Professional satisfaction of healthcare workers is affected by efforts to improve health literacy.	1,9	1,9	5,6	44,4	46,2
Appropriate communication, according to the level of health literacy of the applicant, ensures individuals to understand their illnesses and treatments better.	-	-	1,9	22,1	75,9
Using appropriate communication skills for the level of health literacy of the applicant ensures that individuals are healthier.	-	1,9	7,4	33,3	57,4
Curriculum of undergraduate medical education should include the courses and activities how to understand and improve health literacy in the community.	-	-	3,7	33,3	63,0

Table 42.Assessment of Applicants' Health Literacy, Murcia Results 2021

	Never (%)	Rarely (%)	Some-times (%)	Usually (%)	Every time (%)
I assess the applicant's health literacy level.	1,9	27,8	37,0	29,6	3,7
I assess the difficulties that the applicant may have confronted in accessing health services.	-	14,8	24,1	48,1	13,0
I assess the difficulties that the applicants has / may experience while accessing information about the disease and its treatment.	-	5,6	27,8	48,1	18,5
I assess the applicant's comprehension of information about risk factors affecting her/his health, disease and treatment.	-	1,9	5,6	53,6	38,9
I ask the applicant about her/his health information sources.	13,0	29,6	27,8	25,9	3,7
I assess the media usage of the applicant to gain the health promotion and preventive measures.	5,6	33,3	27,8	25,9	7,4
I use the available scales/instrument to determine applicants' health literacy levels.	40,7	24,1	27,8	7,4	-

Table 43.Communication Skill With the Applicant/Patient According to Their Health Literacy Level, Murcia Results 2021

N: 54	Never (%)	Rarely (%)	Some-times (%)	Usually (%)	Every time (%)
During gathering information					
I take care that the applicant sits comfortably during the consultation / interview	-	-	-	25,9	74,1
During the encounter I provide an environment that protects the privacy of the applicants.	-	-	-	22,2	77,8
I use the name of the applicant during the interview.	-	1,9	1,9	25,9	70,3
I use open-ended questions to applicant.	-	-	9,3	35,2	55,6
I listen carefully to the applicant.	-	-	-	24,1	75,9
By observing the applicant during the interview, I try to catch clues about her/him.	-	1,9	1,9	33,2	63,0
Duringgiving information					
I speak slowly.	-	1,9	16,7	61,0	20,4
I am careful not to use medical words.	-	-	1,9	35,1	63,0
I inform the applicant as much as he/she needs.	-	-	1,9	35,1	63,0
I emphasize a certain number of important points (1 to 3 at most) during the interview/consultation.	3,7	7,4	33,3	40,8	14,8
While giving information to the applicant, I show with pictures or text or draw when necessary.	5,6	18,5	29,6	29,6	16,7
I repeat the information that I have given.	-	3,7	14,8	48,2	33,3
I create written training material specific to the applicant.	11,1	37,0	18,5	20,4	13,0
I use developed training and information materials (such as brochures, booklets, etc.).	3,7	25,9	33,3	27,8	9,3
I emphasize important points in the information materials I use.	-	20,4	18,5	42,6	18,5
I request the applicant to repeat (teach-back technique) or show how to implement what I said or my suggestions.	1,9	9,3	33,3	44,4	11,1
I evaluate the applicant's understanding of the correct use of drugs.	-	5,6	11,1	53,7	29,6
I forward the applicant to appropriate health information resources.	7,4	16,7	42,6	25,9	7,4
During shared decision-making					
I inform the applicants in detail about the health service or treatment options.	1,9	-	7,4	53,7	37,0
After giving information, I support the applicant in choosing the most appropriate treatment options/care for him/her.	1,9	-	7,4	46,3	44,4
I declare that the last decision on the care or treatment preference is their own responsibility.	-	5,6	3,7	37,0	53,7
I encourage the applicant to participate in the decision-making process.	-	-	3,7	37,0	59,3

E. VIEWS OF MEDICAL EDUCATORS ON DEVELOPMENT AND IMPLEMENTATION OF HEALTH LITERACY PROGRAM -In dept interview

E1.TURKEY PARTNERS (GAZI UNIV., HACETTEPE UNIV., HEALTH SCIENCE UNIV., LOKMAN HEKIM UNIV.)

PURPOSE OF THE RESEARCH

In this study, it is aimed to examine the experiences of medical educators on health literacy and their suggestions for education programs. The study sought answers to the following research questions:

1. What are their experiences in communicating with individuals with different levels of health literacy?
2. What are their views on the factors affecting the level of health literacy?
3. What kind of communication approach does it suggest at different levels of health literacy?
4. What are their views on the importance of health literacy?
5. What competencies do they recommend developing for health literacy?
6. What are their recommendations for the health literacy program?
    1. Method
    2. Contents
    3. Assesment and evaluation

Method of the Research

The phenomenological design was used in this study, which was carried out with the qualitative research method. The study was carried out at Hacettepe University, Gazi University and Health Sciences University Gulhane Faculty of Medicine. Data were collected online between May 4 and November 20, 2021 using a semi-structured in-depth interview technique. Interviews were conducted with 20 faculty members from each medical faculty. Using the maximum diversity sampling method, faculty members from three medical faculties from different branches and academic levels were interviewed (Table 44).

Table 44.Descriptive Characteristics of Research Participants

	Hacettepe	Gazi	Health Science
Gender			
Female	12	9	8
Male	8	11	13
Age (Min-Max)	32- 62	47 (41-54)	54 (34-64)
Undergraduate graduation year	1980-2005	1991-2005	1975-2006
Graduated faculty			
Hacettepe University	12	1	1
Gazi University	3	14	1
Ankara University	2	3	3
Cerrahpaşa University	1	-	1
İstanbul University	1	-	
Süleyman Demirel University	1	-	
19 Mayıs University	-	1	
9 Eylül University	-	1	
Erciyes University			1
Gulhane Military Medical Faculty			13
Branch			
Internal Sciences	8		8
Surgical Sciences	8		6
Basic Sciences	4		6
Degree			
Professor	6	5	10
Associate professor	5	5	5
Lecturer	9	10	5
Profession			
Internal Sciences	8	6	
Emergency Medicine	1		
Forensic Medicine	1		
Family Medicine	1		
Neurology	1		1
Mental Health and Diseases	1		
Child Health and Diseases	1	1	1
Internal diseases	1	1	2
Infectious Diseases and Clinical Microbiology	1		
Child Mental Health		1	1
Skin and Venereal Diseases		1	
Chest Diseases		1	
Public health		1	1
Cardiology			2
Surgical Sciences	8	9	

Urology	1		1
Plastic, Reconstructive and Aesthetic Surgery	1		
Orthopedics and Traumatology	1		1
Gynecology and Obstetrics	1	1	1
Anesthesiology and Reanimation	1	1	
Neurosurgery	1	1	
Pediatric Surgery	1		
Eye diseases	1		
Anesthesia		1	1
General Surgery		2	1
Thoracic Surgery		1	
Ear Nose Throat Diseases		1	1
Medical Pathology		1	
Basic Sciences	4	5	
Medical Education and Informatics (Family Physician Specialist)	1		
Medical Biochemistry	1		
Physiology	1		1
Medical Microbiology	1	1	1
Medical Pharmacology		1	1
Anatomy		1	1
Immunology		1	
Histology and Embryology		1	1
Military Health Services			1

The research team jointly prepared the interview form. In order to minimize the difference between the interviewers in the conduct of the interview process, meetings were held, and standards were

developed for directing questions, directing additional questions (probes) and conducting in-depth interviews.
Interviews were conducted online by researchers experienced in qualitative interviews among the researchers in the research team. The interviews lasted for the shortest 30 minutes and the longest 77 minutes, all interviews were recorded. The audio recordings of the interviews were transcribed and transcribed. The answers of the participants to the open-ended interview questions were described using descriptive analysis.
Permission was obtained from Gazi University Ethics Committee for the research. (Date: 23.3.2021 Sayı: E-77082166-604.01.02-59610)

RESULTS

The working experiences of the faculty members of the faculty of medicine who participated in the interview made very important contributions to the achievement of the purpose of the research. As can be seen from the distribution of the years of graduation from the medical faculty of the interviewed academics, the experience of the sample exhibits a wide spectrum. During the interviews, different perspectives on the research were tried to be reflected by the interviews with different age groups. Participants with different academic titles from basic sciences, internal sciences and surgical sciences took part in the study. Most of the participants participated in studies and researches in different institutions in the country and abroad, apart from the institution where the interview was held.
First, the participants were asked whether they had a previous experience (positive or negative) related to health literacy with any of their patients. If they did, they were asked to describe this event. The participants stated that the socioeconomic level of the patients was an important variable in "adjustment during the interview". Participants stated that patients with a high socioeconomic level and a good educational profile generally adapt. However, they stated that in patients with low socioeconomic level, insufficient education profile and low health literacy level, problems occur in points such as examination, treatment plan and health communication, and negative situations arise. In some cases, they stated that people with high socioeconomic status also have insufficient health literacy, which causes problems because they refer to false information sources.
Most of the participants stated that there is difficulty in effective health communication due to the insufficient health literacy level of the patients. For this reason, the participants emphasized the importance of the physician's approach to his patient; emphasized that the patient can be included more in the health communication on a ground that is compatible with the sociocultural level of the patient. They stated that with this approach, the obstacles that arise during communication with the patient can be overcome more easily.

> ***DG.1:*** Our experiences change when people's age and access to and use of the internet are different. For example, it is more effective if the patient has previous knowledge about the treatment and has read the treatment procedures before.
> ***DG5:*** If the intellectual level is high, it becomes more conscious. Some physicians like patients more if you have low intellectual level. However, I think that if the level is high, it may be easier for him to understand a complication that may occur, for example, during surgery. So it can be more rational.
> ***DG.19:*** Generally, we try to explain according to the sociocultural level of the patient when the patient comes. We even want someone to be there to talk to you. Those with a high sociocultural level adapt easily.
> ***DG.4:*** Since the institution I work for is located in the Çankaya-Emek district and the number of patients is reasonable, I generally encountered a good patient profile. Socioculturally average or even above-average patients are coming. I did not have any problems except when it was very crowded in outpatient clinic conditions. When there is a problem with the socio-cultural level, compliance with the treatment ımay be delayed.

DG.55: It varies according to the patient profile. It also varies according to hospital location and socioeconomic level. It was necessary to explain certain things to the patient several times in the meat. From the patient's face it seems that he does not understand. However, due to the intensity, sometimes we could not analyze and retell it. The profile coming here is different, the patient goes to other places before coming here, and this is a more comfortable place in terms of time.

DG.16: …To summarize, I think the socio-cultural level of the patient enables the physician to shape the communication accordingly. For example, I saw the patient's relative who seemed to understand relatively natural information, and I thought that I was really a healthcare worker, so according to him, we had such a patient recently. I don't know any examples for this interview yet...

DG56: As I said, I can tell after thousands or even tens of thousands of patient interviews, because I remember the patient-physician relationship from these communication skills classes at that time, and then we try to conduct it at a professional level, which can be very formal. But of course, we can motivate that communication according to the sociocultural level of the patient. As I said, one of the most difficult cases for me is the patients who are so demanding that they feel like they know or want more than you do. The second is patients who have visited too many doctors or who have done a lot of google research and done internet research. I think these are the main problems because then there is this, there is this, do you do this or that, it is a common complaint of all our physician friends.

The question “What do you think are the factors affecting the level of health literacy in individuals in the community?” was asked to the participants and their opinions were received on this subject. Among the factors that interact with the level of HL by the participants, 'behavior of accessing information, education level, cultural pattern, experience, curiosity/inquiry behavior, occupation, disease history, personality traits, ability to analyze information, economic status, reading habits, gender, social environment. ', age, reading comprehension capacity, being a parent, place of residence, general ability, social skills, occupation, disease history' were expressed. While these factors positively affect the level of health literacy, positive behaviors of people with high health literacy are observed. For example, a person with high health literacy has access to the right source and information.

Participants emphasized that internet use and the behavior of obtaining information from the social environment are the most important ways of obtaining information. In addition to the benefits of using the internet and media, experiences about situations where there is misinformation are given. All of the participants are social media, internet, television programs, etc. They stated that communication channels can cause false information and false beliefs in individuals in the society. They described this information pollution caused by these sources as one of the most damaging situations in health communication. They also stated that the patient with wrong information accepted the treatment more difficult than the patient with no information and adapted to the treatment much more difficult.

The majority of the participants stated that the level of health literacy was related to the sociocultural and economic level and there was a direct proportion between them. At this point, the participants stated that almost all of the patients with low sociocultural and socioeconomic levels had low health literacy levels, while they also mentioned that some of the patients with high sociocultural and socioeconomic levels had low health literacy levels. For this reason, most of the participants emphasized that the physician should have an informative and instructive function in the society about health literacy. In addition, the general participants stated that the health literacy level of women is higher than that of men.

DG.3: Gender is an important factor. I find the health literacy level of women to be higher. However, it should be taken into account that women are more likely to apply to psychiatry. Education level can sometimes be a handicap for treatment-related conditions. E.g; Things like breakfast treats came out. People with a high level of education can sometimes look to these kinds of jobs.

DG.5: Education level affects. I can't say for sure about age. For example, the level of SOY may be higher in those who have 3 or 4 children. The HL level of women is better than that of men.

DG.20: The level of health literacy is low in people with low educational status, elderly people, shy patients and people who have difficulty in reaching a physician during treatment. Cultural differences also affect.

DG.46: …The more educated the person is, the easier it is for him to receive the information we convey to him, or he can of course comprehend the processes, both his legal process, his judicial process, and the process about us."

Some interviewees, on the other hand, emphasized that this is not a linear relationship, and stated that individuals with higher education levels may be skeptical in accessing and interpreting information.

DG:53: …let alone surfing the internet or reading the information note sent by the doctor, at the level of downloading and reading the articles…excessive anxiety, distrust of the doctor, and perhaps discontinuing the treatment due to this distrust…

DG.17: Actually, nothing is clear. It's all about self-awareness. It's all about the quality of life, not about the level of literacy, for example. There may also be a university graduate and a wrong user. For example, we have metered dose inhalers and dry powder inhalers. These drugs are difficult to use because they require hand-mouth coordination. But older people use it more easily. On the contrary, the elderly cannot use dry powder inhalers. It's actually more comfortable to use. I mean it's not about education.

The participants were then asked the question 'What kind of a relationship do you think there is between health communication (society, patient/applicant) and health literacy?' and their views on this point were taken. All of the participants stated that an effective health communication could be established with patients with a high level of health literacy and the processes were easier. It has been mentioned that there is a relationship between communication and health literacy in compliance with the diagnosis and treatment processes, in the correct understanding of the process by the patient, and in creating an environment of trust.

They also stated that it is almost a necessity for patients with high health literacy to have a high level of health literacy for the physician to make the job easier and for the physician to fully fulfill her/ his function. At this point, all of the participants emphasized that the way to have a regular and effective patient-physician relationship is through effective health communication. The majority of the participants especially emphasized that there is a language problem in front of an effective health communication. Participants also mentioned the importance of having a high level of health literacy for effective health communication. The negative effects of situations such as misinformation and information pollution were also emphasized by the participants.

DG.33: Health communication and the language used are very important. For example, 80% spoke Kurdish in Bitlis. There were many Syrians in Antep, Arabic was spoken. We actually try to treat people we don't speak the same language with. The real problem arises here. This is a situation that directly disrupts communication. It is difficult to discuss them if the level of health literacy is low. Actually, there are two things; either giving less information and then calling more, especially if I am saying something acute, if the initial diagnosis is bad, like leukemia, it stays in mind and the rest is gone. In such cases, I call little information-frequently. Or it is necessary to communicate through a relative.

DG.45: We find it difficult to maintain healthy communication with people who receive information from untrusted sources.

DG.11: Since it is easy to reach information, or rather wrong information, there is a lot of confusion and confusion. Or here I am, I sent my results on WhatsApp to another doctor, there are things like the doctor there said to me, these things are very tiring.

DG.29: Patients with low socioeconomic status and patients who have heard many things from the right and left but could not put them in their minds put up resistance to what is being told. What his neighbor mother-in-law said is not true. Those with higher education levels also think that they know a lot. They think they have the necessary information from the Internet. Breaking their resistance is the hardest. It may be necessary to explain them with scientific examples.

DG.13: After all, the most basic health communication is to understand the most basic thing in my opinion. If he understands, he does. If he doesn't understand, he leaves you. He knows, so he says it's like this. There is nothing to know, sir. You can't go to anything without them. Therefore, the emphasis of health communication is to ensure that the other party understands the event. If you get him to understand this then he will become a person who goes along with you. Now, there is a wrong understanding on this subject, let me tell you, here is a patient we come across, the thought that he does not understand anything is something that has been taught. For example, I think it is very wrong in this concept, so I see this wrong in most people. Inform everything, he does not understand anyway, he does not give any information. Now I see how bad it is. As soon as you can't give that information, that person suddenly falls into uncertainty, my teacher. Let's stop understanding and then uncertainty enters. It gets worse and crashes. In my opinion, this is the most important thing not to do in health communication.

DG.42: Persons with higher literacy and assimilation of information in a more useful way facilitate their adaptation to treatment. Of course, having good health literacy, that is, why we need to use this drug, what the side effects are when we talk about it, you know better to understand and give accurate and timely notifications about it, you know, to reach the doctor without waiting too long, in this sense, it actually makes things easier for some patients. Especially as such a striking experience, I can't think of much, we continue to have very similar, in fact very same repetitive positive and negative experiences. It is possible for them to understand differently when they come to us, but it can change with communication.

DG.37: Understanding is different. If I say it in English, understand is to understand something. I'm basically very focused on this. You have to speak in one's own language to understand it. You have to speak in your own language, not Turkish. He can understand and comprehend in his own language and make the value of it accordingly.

The question "How should health communication be carried out at different levels of health literacy?" was asked to the participants and their views on this subject were collected. All of the participants emphasized that the physician should establish health communication according to the patient in front of her/him. The participants stated that the physician should approach the patient according to the level of health literacy and emphasized the importance of communicating with the physician to be aware of the sociocultural characteristics of the patient. At this point, all of the participants mentioned the importance of the physician's use of a language that is plain and does not contain medical terms that can be understood by the patient. All of the participants stated that understanding the patient's concerns and thoughts and communicating in a helpful and facilitating language at this point removes most of the obstacles to health communication, and they emphasized that this is an indispensable part of health communication. It was also evaluated by the participants that it is important to direct the patients with low health literacy level by the physician and to improve their health literacy level. Opinions came to the fore on determining the way of communication, establishing trust and giving information.

DG.59: As internal medicine, we deal with multiple problems at the same time. Hypertension, hyperlipidemia etc. I need to edit at the same time. I start with whatever disease is of primary importance first. I check to see if the patient understands these treatments. For example, if Diabetes is the first priority, I explain it first and if it is

understood, I move on to the other disease. If he doesn't understand, I say let's apply this treatment now, if you want, let's meet for the other one in 10 days.

DG.26: I explain as much as possible in a way that the other party can understand according to their situation. Sometimes if I think you don't understand, I start over. I try not to use too many medical terms.

DG.38: Local terms are very important when taking anamnesis from patients. If we do not master these, health communication is incomplete. It also depends on the time worked there.

DG.10: I definitely show them how the drugs should be used anyway and I want them to bring it with them to every appointment and show how they are used.

DG.36: Let me give an example of communication with the patient's health literacy level. For example, in the last regulation of the Ministry of Health, an article was published about not taking a teacher difference from oncological patients. Patients sometimes wonder if the teacher will not be able to undergo surgery if he will not receive a difference. We show this regulation to patients in order to have a strong health communication with patients with low intellectual level. He can also read and understand it. However, if the patient cannot be operated due to the lack of health communication between the patient and us, and this situation is very necessary for his treatment, it is necessary to force the communication to the end.

DG.23: In communication, we also make eye contact with the child in private, we show that we are begging him actively, we try not to put a barrier like a table in between, we try to sit across from each other, for example, we try to do the same with elderly patients, so mostly I try to create a relationship of trust. . (Female, Professor)

DG.28: I think sometimes the way you communicate needs to change according to the patient. In other words, even the way you speak to an uneducated patient needs to differ from an educated patient. Because someone really prefers to be more performative, the uneducated one becomes more performative and says you decide everything, and sometimes you have to address him that way, sometimes I think it should be like that. However, in educated ones, you need to involve the patient more in that diagnosis and treatment process, and your address should be different. In other words, when our assistants talk to a trained patient, the patient gets uncomfortable. But this is not the case with the uneducated because those uneducated people can sometimes say a lot, even a doctor, even a woman doctor. That's why there is really a lot of difference and because of this, some of the patients can be offensive if they don't like the way of addressing the doctor. I mean, I'm experiencing the same thing in my own practice, I went as a patient, sometimes I don't like when you talk to me in some places and sometimes I think it is necessary to warn the assistants about this. That's why I think communication is something that needs to be customized to the patient sometimes. Sometimes it has to. That's how it is in Turkey conditions. (Female, Associate Professor)

DG.49: First of all, the content of the language you use will change, that is, it may even change from your way of addressing. You need to move to a platform where you can communicate with your aunt/uncle, a place where you will listen. You move it there first, you know, there is the part of setting your intention part. Sir, you need to adjust your level of motivating intimacy with an engineer or someone who wants to be at a different distance. Then you need to take the level of intelligibility, so look, now you will take this drug, you will drive it deeply. This may be a sufficient level for an elderly individual. More sentences than that can be confusing. You need to follow that person's level of understanding in one-to-one practice. I said one sentence. It started to look blank, you know, mimic feedback. Maybe you need to change your language level and content level after the intimacy platform. What else can you set? So it seems to me that the patient directs him.

The participants were asked the question, "What do you think the effect of an effective health communication can be on a patient with a low SHL level?" and the participants' views on this subject were collected. The majority of the participants stated that approaching the patients in an appropriate language and understanding the concerns of the patients is the key to effective health communication. According to the participants, with this approach, even if the health literacy level of the patients is low, the health processes can be carried out more easily. Because patients with high health literacy already follow their health processes well. At this point, the common view of the participants is that effective health communication is more effective in patients with low health literacy than in patients with high health literacy. It is the common view of the participants that the communication network created with the patients in an appropriate language, using body language and not using medical terms, prevents problems caused by low health literacy level at some point.

> ***DG.2:*** I am explaining together with the patient's relative. If necessary, I explain the surgeries with drawings. The most important thing in patient communication is patience and time. Thus, patient participation increases.
>
> ***DG.43:*** : People with phobia or dementia need to be approached differently. In some cases where we cannot meet with the patient, we meet with his/her relatives. It is very important to approach the patient in cases such as incorrect drug use. It is absolutely necessary to approach him in a way that is comforting and reinforcing his sense of confidence. In general, the presence of someone who is objective and listens without judgment makes the patient feel good.
>
> ***DG.27:*** If the patient really came to be treated, he already does it somehow. But a patient who has no intention, for example, does not act like quitting smoking. It varies according to the disease and the person. Creating behavior change is very difficult. We cannot change his behavior no matter what we do if he does not want it. For example, even the reaction given when the patient dies is very related to the personality. A person's level of belief and previous experiences are very relevant. If a person did not take good care of his mother's father's health, he reacts much more when he dies. That's how he eases his own conscience.
>
> ***DG.14:*** Those with higher education even understand some of our medical terms. In the group whose education level is not high, they cannot understand no matter how much we go down to the public level, and they stop asking after a few times. I'm trying to talk to these patients in purely colloquial language and with examples. You can't say that the results of the 2 screening test are normal, the results come as low/high risk. When the patient sees this, he says whether I will have a miscarriage, I need to explain this with examples. For example, I give an example over the lottery.
>
> ***DG.54:***Actually, in our next course, I can say that in this context, we overcome the disease very well with people with good health literacy. There are already such things in publications about this, you know, we know that patients with good health literacy have good health outcomes. But if we go down to the lower layer, if I realize that the patient is not very good at this, I try to spend the maximum time I can really spare for the patient on this subject. First of all, I inform myself, together with the patient, on how to proceed with the disease, its related complaints, and the treatment process, and of course, first of all, I verbally explain to the patient how to follow the right path in a way, by taking the patient's opinions as well.

Finally, the participants were asked the question "Should there be content in the medical school education program to improve the ability to understand the level of HL of patients and to establish effective health communication towards it?" and their opinions on this subject were received. All of the participants stated that there should be health communication courses and courses on understanding, evaluating and improving the level of health literacy in medical school education, and these courses would enable better equipped physicians to graduate. It was seen as vital by the participants that the physicians establish effective health communication, understand the health literacy level of the patient and intervene in this regard. In this context, the topics suggested to be

included in the program in terms of content were often "communication in difficult situations", "effective communication", "importance of health literacy" and "evaluation of the level of health literacy".

> ***DG.41:*** I am on the Communication Skills and Problem Based Learning (PBL) board. Small group lessons are very important. It is very easy to access information in medicine now. In the past, the teachers tried to convey all the information to the students in the lessons. Vertical integration is a bad thing. I think there should be courses to increase the interest of medical students. Communication skills, the importance of the job, and what to do if the other party does not understand the doctor should be taught. In fact, it is necessary to add lessons to increase the patient communication by increasing the health literacy level of the students.
> ***DG.24:*** It is necessary to raise awareness about the concept of health literacy in medical education. Especially the end of the 3rd year, where the clinical internships will start and continue, and the 4th and 5th years are suitable for this program.
> ***DG.56:*** It would be great to have such a content in medical education and to gain experience in this regard.
> ***DG.39:*** In medical education, we should definitely increase the practical education about health even more.
> ***DG.60:*** It will contribute. Because health literacy is a multifactorial thing, it strengthens at least one arm. It's a collaborative action, after all, but it is very important to be taught by the doctor how to approach the patient about raising awareness about health literacy. Of course, this should also be made aware of the wing of society. Providing such training to doctors may not be a definitive solution, but it will contribute. I think it should be added.
> ***DG.58:*** First of all, it is important to increase our skills on determining the health literacy level of patients. What do we understand from health literacy, which is how we need to understand how to increase our own health literacy, what is our level of knowledge? In fact, a basic course is required regarding this .
> ***DG.41:*** The curriculum is as follows; In fact, the main subject of this is communication, of course we know this, but there are also trainings on communication in most faculties. But this can be updated again, you know, an update can be brought in this sense, you know what can be done as a sub-title.
> ***DG.27:*** Practical training is an important thing, communication skills training. I remember that he must have been in it, don't give bad news, he is a difficult patient, so it can be in the form of a difficult case, such difficult patients. Difficult patient, but where does he cause difficulties? Now, this may be the patient who does not want to wait in line in the outpatient clinic, or the patient who comes and says to you, I demand this, you will take care of my patient, or it may be the patient who does not understand what you are saying. What you ask is yes, that is, there may be a patient who gives irrelevant answers to the questions you ask, that is, by diversifying such scenarios, but while the curriculum is being created, we want to talk to the clinicians and learn about difficult patients, for example. Of course, they should learn the standards, but maybe I can't remember exactly in the next year. It's been a long time, more than fifteen years have passed, but these difficult patient scenarios can be diversified.

What methods would you recommend to the participants in this content? question was posed. All of the participants stated that theoretical, practical and applied courses on these issues should be included in the medical school education as a way to train qualified physicians. Participants shared a common opinion that applied and practical courses would be more effective. Small group activities and integrating them into clinical practices came to the fore in method recommendations.

> ***DG.56:*** Even if not in the first three years, I think that it should be a part of it in the fourth and fifth grade, that is, in some of the internships.

DG.6: In my personal opinion, students should see the clinic from 1st or 2nd grade. They should see the clinic for patient care and attitude development. It is necessary to see how hard the student is trying to do something. In other words, evaluation should be made by observing instead of testing.

DG.28: The student should receive one-on-one training with the patient. If this does not happen, it should be simulated. Again, for the exam and evaluation, a simulated and practical situation can be created and points can be given.

DG.10: Actually, it is a training based on communication skills to some extent. It can be through scripts. What they may encounter may be such that they come alive in their eyes. Actually, I am against the exam. It could be like a certificate. But we are a society that does not take the subject seriously when there is no exam. I think this issue is very important. Therefore, it may be a test to take seriously.

DG.25: In other words, those patient communication skills that we acquired, later on during the bedside trainings and internships, making these patient interviews by ourselves and preparing the patients, these were all things that taught us these. I benefited a lot from all of them, and I was happy for myself. I think we need to add a little more real life experience, that is, real life experiences, it is very motivating. For example, I mean: In our communication skills class, we were watching a patient interview, I remember correctly, and then we were trying to do it ourselves.

DG.50: But on the other hand, the target has to be; It is a bit difficult to predict the number of students/faculty members before graduation. guiding text, video on good practice examples or how to fix the problems.. because the new generation is more prone to being involved in the process.. With games, for example.. I discovered this in the last year, with the logic of computer games.. how about patient safety. If this can be done, I think it can be done in health literacy as well. Conclusion; I think that the student, in the sense of individual, should be highlighted and compared with real situations. By giving fact-based but necessarily qualified feedback, offering non-inhibiting options but not uniformizing everyone like that.. Isn't it, we encounter such a reaction here as well; It is a language that does not dress everyone in one dress, but also gives the opportunity to riches.

How do you think the students should be evaluated?' was asked additionally and the opinions of the participants were taken. The participants shared a common view that monitoring the students during the process, and the practical and practical participation of the courses will encourage the students more. It was stated that assessment and evaluation should be focused on process (formative) evaluation and performance evaluation in these programs, and it was stated that evaluation could be made in simulated environments.

DG.50: I think that in all these processes, qualified feedback and evaluations with students and their peers are much more valuable. I actually attach great importance to this in specialization training. E.g; Suppose that a communication-related request of a patient in residency training is not understood and inhibits the process. That this process can trigger a case-based discussion, for this -it doesn't have to be up-to-date-, we discussed the situations experienced in our clinic in the last year, and then the people who were involved in this process first conveyed their experiences without a sense of defense, then peer assessment was given the opportunity, and then experienced in the subject - I don't mean it as a guide, but guidance - critical points are emphasized. What went wrong in this process, how did the process progress, what can be done, what can be done to prevent an undesired result when faced with a similar situation? I think that there are definitely some homework to be done for us. Some of it may be related to the other party, demands, style, method, language, many other things. But I wonder if we were able to manage this process adequately, were we able to exhibit appropriate attitudes in these processes?

DG.49: In such a situation, I think the faculty member should watch the student from the side while communicating with the patient, that is, at the point of evaluation. First of all, of course, he should let him experience it a few times during the internship, and one of the opinions will be how the patient-physician communication is. As a sub-part, it is possible to determine whether the skill has been acquired by evaluating patient literacy and taking appropriate action. I think it may be appropriate to do this by sitting next to a normal patient, just like an inspector listens to a trainee teacher from behind, listening to this patient-physician communication and grading it.

DG.35: So again, something like this comes to my mind; maybe by observing how he manages the situation by confronting the student with an example scenario with the scenarios that are challenging for us in daily life. It's like we do in OSCE exams, but how about standardizing or scoring these answers? Frankly, it's difficult because there isn't a single correct answer to it, so I need to think a little bit about it.

DG.12: Ability to communicate correctly with the patient and correct speaking techniques can be trained. There should be no point evaluation or attendance obligation, this is a subject that will eventually improve one's own behavior, and it is in a different position from other courses. There should be an education that develops only behavior and attitude.

As a result, in the in-depth interviews conducted at the medical faculties of Gazi, Hacettepe and Health Sciences Universities;

The participants observed the effects of the health literacy level of the patients who applied to them, their communication, and the patients' adherence to treatment. It has been emphasized that the most important factor affecting health literacy is the "sociocultural and economic structure". Although it is emphasized that people with high socioeconomic status have high health literacy in general, it has been stated that sometimes accessing false information sources has a negative effect.

The participants emphasized that internet use and the behavior of obtaining information from the social environment are the most important ways of obtaining information; stated that these sources may also cause false information and beliefs. Experiences related to the fact that the patient with incorrect information had difficulty in complying with the treatment were conveyed.

It has been emphasized that the most important issue in communication with the patient is the "health literacy level of the patient". Being able to communicate with the patient positively affects adherence to treatment. In addition to low health literacy, “language problem” was also stated as an important communication barrier.

It has been stated that the physician's communication in accordance with the patient's health literacy level ensures "adherence to advice and treatment"; It was emphasized that the most important intervention could be achieved with effective health communication. It was stated that in this way, both the patient's anxieties can be eliminated and a significant contribution to the process of being healthy can be made.

Participants reported that medical education should include health communication courses and courses on understanding, evaluating and developing health literacy levels, and that these courses would enable better equipped physicians to graduate. It was seen as vital by the participants that the physicians establish effective health communication, understand the health literacy level of the patient and intervene in this regard. In this context, the topics suggested to be included in the program in terms of content were often "communication in difficult situations", "effective communication", "importance of health literacy" and "evaluation of the level of health literacy".

All of the participants stated that as a way to train qualified physicians, theoretical, practical and applied courses should be included in these issues in medical school education. The participants shared a common view that monitoring the students during the process, and the practical and practical participation of the courses will encourage the students more.

E2.NETHERLAND (MAASTRICHT UNIV.)

GENERAL

7 Educators have been interviewed, all were female, ages ranged from 31 to 62, all of them had various careers and 2 of them had an International component (Sweden, Brazil). International aspects (Brazil and Sweden).

PREVIOUS EXPERIENCE

- Two respondents with both national and international aspects (Brazil and Sweden)
- Country specificity (the Netherlands) does really matter. Here there is attention to HL and communication in healthcare.
- One respondent referred to her experience with folder (written information) relation to Low literacy. Additionally, information on age-differences was discussed. How can a folder be given to a child? What kind of information do we suppose to communicate?
- All respondents presented example from practice. One of such examples – a man with DM (insulin injections). A person was negotiating with caregivers regarding the amount of insulin he was getting every time. He was receiving insulin injections twice a day.
- Communication with people with brain damage – revalidation doctor has a major role in it. He/she should be communicating to relatives and friends explaining why a patient is not the way he/she used to be. Presenting the examples of communication helps a lot.
- All respondents felt "guilty" of using difficult language (jargon). "We ask do you understand and if they say yes, we are happy".
- Due to high workload healthcare professionals have less time to adequately communicate with their patients.
- The respondents admit to "give up quickly" when it comes to a possibility when informal care giver takes over. Care for grandparents, when the family takes over, we think it is fine!

HL LEVEL AND HEALTH COMMUNICATION

- Several questions were asked:
- What do you think are the factors affecting the health literacy level of individuals in the society?
- What is the relationship between health communication (community, patient / applicant) and health literacy for you?
- How should health communication be conducted at different health literacy levels?
- What do you think can be the impact of an effective health communication on a patient with a low HL level?

The information obtained from the participants was showing that the communication must be fully adapted to the levels of health literacy not on the societal level, but also on an individual level. When healthcare professionals communicate they do it "according to your experience "which doesn't represent a general level of HL of literacy. The task is to explore questioning, to learn to listen actively. The question "who takes responsibility for preparing materials?" is crucial.
In the Netherlands there are a variety of preforms and up-to-date information provided for population with ether migrant background in most frequently common languages for migrants (languages e.g. Arabic, Papiamento, Polish, Somali, Turkish). For example, there is a free to download "Conversation card for patients with limited health skills" where the actions are displayed with simple pictograms. Also conditions such as COVID-19, diabetes, COPD, cardiovascular diseases, anxiety disorders and depression are presented and downloadable for free use. It is available, so we should learn how to use it regularly.

EDUCATION PROGRAM RECOMMENDATIONS

- Asking critical questions “do you really understand?".
- Can the students acquire theoretical knowledge on prevention and practice?
- Some students have a natural feeling.
- What should they do - a lot of trainings with communication and health promotion (simulation contact)
- Integration between communication and field of work.
- Working together with ICT students. Animations and videos.
- We know too little of other educations and therefore we cannot reinforce each other.
- Combination of checking and observing!
- Explore and involve informal carers
- Motivational speaking
- Steps to changing behaviour (open, understand, want, can, do, keep on doing = change of behaviour)
- Giving health information
- Experience is not there yet, but we have to make a start – awareness!
- Basic communication (listen!)
- Complaint conversations with simulation patients.
- Conversation analyses
- Detail level and basis, reflecting and patient stories
- More link to practice, link to legislation
- HL visible during the whole training.
- Link to 6 diminutions of “Positive Health”
- How do they see the common thread in this short time?
- The students say they are doing it (person-centred care) do they know the “trick”?
- Weekly meetings to motivate students (during internships)
- Healthy behaviour instead of focus on disability

E3.SPAIN (MURCIA UNIV.)

PART A

- 7 Medical Educators have been interviewed, 4 were female and 3 male, ages ranged from 45 to 65, all of them were doctors in university hospital or primary care, all of them specialist in primary care (family medicine) and associate professors of Medical Schools in Murcia (Spain).

PART B, PREVIOUS EXPERIENCE.

- Small number of patients really interested in learning more from his/her disease.
- Doctors do not have enough time during consultations to provide information
- It looks that patients in a private setting are more prone to look for information related to illness and doctors then are more likely to offer all kind of explanations. In public medicine, massification and lack of time to devote to patients makes it nearly impossible.
- One educator, a family medicine doctor, has fotocopies ready for their diabetic patients: what to eat and how much. But the time devoted to explain it in enough detail is insufficient. Also, patients may not always understand completely simple diagrams and the content may be difficult.
- Most agree with the idea that they are receiving more patients that come with the lesson learned about a supposed disease they have. Even, with the diagnostic tests that the doctor has to order.

PART C, HL LEVEL AND HEALTH COMMUNICATION

- What do you think are the factors affecting the health literacy level of individuals in the society?
  - Education level of the patients, need to know, desire to know
  - Language proficiency
  - Ability to understand medical terms
  - Ability to look for and use written information in books, leaflets, internet webs, patients associations
  - Understand the patient's right to know about the disease and being informed about it. Not all patients want to know.
  - Confidence in the doctors and in the health system
  - Communications media (newspapers, radio, tv, social media) may misinterpret (consciously or not) information and produce social damage
  - Health status of individuals
  - Advanced age reduces desire to know
  - Socio-economic status
- What is the relationship between health communication (community, patient / applicant) and health literacy for you?
  - Look for health information from several sources
  - Being able to analyze information
  - Credibility of information
  - Being able to understand the information and being able to communicate it to the patients
  - Being able to extract relevant information

    - Being able to take informed decisions on medical issues
- How should health communication be conducted at different health literacy levels?
    - It should be patient-centered, every patient need a different approach, some may need more information than others
    - Repetition of information, slow down and ask to repeat
    - Look for help from younger family members
    - Improve educational materials, clearer forms.
    - Staff should be trained in communication techniques, teach back methods and reinforcement
    - Seek help from patients associations
    - Campaigns in Educative Centers (pre-university)
    - Instructional Videos, Games, APPs,
    - Blogs
    - Internet Groups on HL
- What do you think can be the impact of an effective health communication on a patient with a low HL level? (It may be preferred not to use a referrer)
    - The HL level of patients should increase dramatically when they receive the information needed.
    - Health care organizations have to address this problem promoting effective health communication campaigns to improve health outcomes in patients with low HL

PART D, MEDICAL EDUCATION PROGRAM RECOMMENDATIONS

- Should content be included in the medical faculty education program to improve the ability of patients to understand their HL level and to establish effective health communication towards it?
    - Definitely yes, however, it may be difficult to establish HL as a mandatory matter.
    - An important step may be to include it in the clinical communication courses
    - HL matters should also be included as a transversal issue in Medical Residents, that is graduated doctors in specialziation
- What topics and methods would you suggest in this content?
    - It is important to sensitize students, they do not see it as a problem, not to say most professors, the important thing is to learn medicine.
    - We have to show the prevalence of the problem and its consequences to patient outcomes
    - Do not establish formal lessons or matters in the curriculum. Instead, prepare small courses where students learn about the problem and to develop methods to a better communication strategy.
    - Role-playing the teach method to enhance patient communication

F. VIEWS OF THE HEALTHCARE AUTHORITIES AND MANAGERS WHO WORK WITH AND EMPLOY PHYSCIANS ON DEVELOPMENT AND IMPLEMENTATION OF HEALTH LITERACY PROGRAM

F1.TURKEY PARTNERS (GAZI UNIV., HACETTEPE UNIV., HEALTH SCIENCE UNIV., LOKMAN HEKIM UNIV.)

EVALUATION OF INTEGRATION OF HEALTH LITERACY SUBJECT TO THE MEDICAL EDUCATION PROGRAM-DELPHI TECHNIQUE

AIM OF STUDY

In this study, it is aimed to structure and discuss the processes of integrating the subject of health literacy into undergraduate medical education, and to obtain recommendations in a systematic way, by reconciling the different perspectives of experts and experts in the field.

MATERIAL AND METHOD

This study was carried out in two rounds with the Delphi technique. In the first round, the questionnaire consisted of 5 open-ended questions. The questionnaire was sent to 62 participants via e-mail. Confidentiality / Anonymity principle has been complied with. Panel members have been selected from people who have important views on the subject, who can provide a deep view on this subject as a result of their experience and qualifications, in order to reflect their expert opinions. Working in different fields related to the subject; It consists of administrators, academic administrators, members of non-governmental organizations, academics working in the field of public health, medical education academic staff, family physicians, retirees and students. 42 out of 62 people answered the questionnaire. In line with the answers given, the data were analyzed as a qualitative data set. The opinions expressed by the panel members were listed as items and sub-headings were created. The questionnaire used in the second round was created. In the second round of the questionnaire, there are 43 statements under 4 headings. Participants were asked to rate these statements between 1 and 10 according to their level of relevance, importance and necessity. The questionnaire was sent to 42 participants via Google Forms. 37 people out of 42 responded. As consensus was seen in the answers given, the study was interrupted in the 2nd round. The data obtained from the questionnaire were analyzed using the SPSS program. Marginal tables were created by frequency analysis of the answers given to the questions. Data are expressed as arithmetic mean ± standard deviation (AO±SD) and median (min-max).

RESULTS

In the first part of the questionnaire, opinions about the factors affecting the health literacy of the society were scored between 1 and 10. The answer “I think it has no effect” corresponds to 1 point, and the answer “I definitely think it has an effect” corresponds to 10 points. As a result of data analysis, the value of the scores for each statement was found.
In the first part of the questionnaire, the participants scored the effect of the main factors affecting the health literacy of the society between 1 and 10 (Table 45).

Table 45.Scores of the panel members evaluating the impact of the main factors affecting the health literacy of the community

Basic Factors Affecting The Health Literacy Of The Society	Mean ± SD	Median (min-max)
The general education level of the society and basic literacy	8,35±1,75	8,0(2,0-10,0)
The average income level and economic situation of the society	7,71±2,14	8,0(3,0-10,0)
Information pollution in the media about health issues	8,06±2,02	8,0(1,0-10,0)
Access to correct information	8,18±2,02	8,0(2,0-10,0)
Level of ability to evaluate the accuracy of information	8,24±2,23	8,0(2,0-10,0)
Accepting some information brought by customs and traditions without questioning	7,56±2,01	8,0(1,0-10,0)
Environmental factors affecting an individual's health	6,97±2,45	8,0(1,0-10,0)
Having a chronic illness in himself or in his family	7,12±2,14	8,0(1,0-10,0)
Regular health care reception/use status	6,88±2,21	7,0(1,0-10,0)
Access to healthcare	6,94±2,38	7,0(1,0-10,0)
Health policies	7,74±2,30	8,0(1,0-10,0)
Health system	7,88±2,17	8,0(1,0-10,0)
Health literacy level of community leaders	7,76±2,31	8,0(1,0-10,0)
Competence of health personnel in communication and information transfer	8,26±2,26	9,0(1,0-10,0)
Conflicting interpretations of different physicians about diseases and treatment	7,97±2,28	8,0(3,0-10,0)
Service delivery motivation of health workers	7,38±2,59	8,0(1,0-10,0)
The ability of health workers to develop or teach health literacy practices	7,74±2,51	8,0(1,0-10,0)

In the second part of the questionnaire, the participants scored the necessity of the contents given in the medical education program between 1 and 10 (Table 46).

Table 46.Scores of panel members evaluating the necessity of the content given in the medical education program

Health Literacy Contents In The Medical Education Program	Mean ± SD	Median (min-max)
Effective delivery training to increase health literacy	7,88 ± 2,40	9,0(2,0-10,0)
Effective communication in difficult situations (angry, anxious patient)	7,59 ± 2,43	8,0(2,0-10,0)
Training to deliver bad news (death, cancer, etc.)	7,79 ± 2,32	8,0(2,0-10,0)
Trainings on how to approach patients' beliefs and myths and society's habits	7,97 ± 2,24	8,0(2,0-10,0)
Communication with patients and their relatives with different levels of health literacy	8,18 ± 2,13	8,50(2,0-10,0)
Training to inform patients and their relatives about diseases and preventive health practices	8,03 ± 2,26	8,50(2,0-10,0)
Physician / health worker / patient cooperation	8,03 ± 2,18	8,0(2,0-10,0)
Gaining skills for the situations encountered in terms of health literacy for each department	7,71 ± 2,52	8,50(2,0-10,0)
The importance of the contribution of adequate health literacy to the general health level of the society, the development of health and the cost of health.	7,53 ± 2,36	8,0(2,0-10,0)
Time management training in healthcare delivery	7,09 ± 2,63	8,0(1,0-10,0)

In the third part of the questionnaire, the participants scored the importance of health literacy in medical education programs in Turkey according to the periods (Table 47).

Table 47.Evaluation Scores of the panel members regarding the importance of health literacy in medical education programs in Turkey according to periods

The Importance Of Health Literacy In Medical Education Programs In Turkey For Which Period	Mean ± SD	Median (min-max)
In 1st grade	5,59 ± 2,86	5,0(1,0-10,0)
In 2nd grade	5,65 ± 2,69	5,0(1,0-10,0)
In 3rd grade	6,50 ± 2,45	7,0(2,0-10,0)
In 4th grade	7,97 ± 2,12	8,5(3,0-10,0)
In 5th grade	8,44 ± 2,00	9,0(2,0-10,0)
In 6th grade	9,00 ± 1,75	10,0(4,0-10,0)

In the last part of the questionnaire, the participants scored between 1 and 10 the relevance of the methods and activities that can be used in medical education programs in Turkey on health literacy (Table 48).

Table 48.Evaluation Scores of the panel members for the appropriateness of methods and activities that can be used in medical education programs in Turkey on health literacy

Methods and Activities That Can Be Used On Health Literacy In Medical Education Programs In Turkey	**Mean ± SD**	**Median (min-max)**
It should be theoretical training.	7,35 ± 2,34	8,0(1,0-10,0)
It should be practical training.	8,97 ± 1,40	9,0(5,0-10,0)
Field trainings should be held where students will meet with real patients one-on-one.	8,79 ± 1,96	10,0(2,0-10,0)
In the lessons, environments for in-depth learning and discussion should be created through the prepared facts.	8,76 ± 1,74	9,5(3,0-10,0)
Education of faculty members on health literacy	8,65 ± 1,99	10,0(4,0-10,0)
A gradual approach should be linked to medical knowledge and health literacy.	8,50 ± 1,74	9,0(5,0-10,0)
Since it is a concept that can be grasped through observation and experience, communication skills with real patients, simulated patients and discussion groups should be gained.	8,71 ± 1,67	9,0(4,0-10,0)
In clinical branches, questions that will question the level of health literacy of the patient or patient's relative should be asked while taking anamnesis from patients.	8,50 ± 1,74	9,0(4,0-10,0)
Students studying should be evaluated with a theoretical exam.	6,79 ± 2,89	8,0(1,0-10,0)
Students studying should be evaluated with a practical exam.	8,82 ±1,60	9,5(5,0-10,0)

When the second round answers were evaluated in general, the arithmetic mean ± standard deviation and median (minimum-maximum) values of the scores given for the basic factors affecting the health literacy of the population were found as 7,69±1,81 and 8,23(2,47-10,00), 7,77±2,14 and 8,35(2,00-10,00) for the health literacy content that will be included in the medical education program, 7,19±1,76 and 7,41(3,00-10,00) for the part of the importance of health literacy for every period of medical education in Turkey, 8,38±1,53 ve 8,95(4,70-10,00) for the part of methods and applications that can be used for health literacy in medical education.

G. SUMMARY OF LITERATURE ON HEALTH LITERACY IN THE COUNTRY

a) HEALTH LITERACY IN ITALIAN

A keyword search was conducted on the website of the medical department of Italian universities, the complete list of which was found on the Italian Ministry of Education website.

The keywords searched were "health literacy" and " alfabetizzazione sanitaria", by means of the search function present within each site. Moreover, in order to be sure of the results obtained, it was conducted also a research in each faculty program.

The following universities did not provide some results:

University of Firenze, Pisa, Siena, Bari (university Aldo Modo and of Taranto), Forlì, Ravenna, Brescia, Cagliari, Caserta, Napoli, Catania, Catanzaro, Roma (Unicatt, Sapienza, Tor Vergata, statal university, Unicamillus), Chieti, Ferrara and Cotignola, Foggia, Genova, L'Aquila, Milano statal university, Novara, Modena, Molise, Campobasso, Napoli, Padova, Palermo, Parma, Pavia, Enna, Torino, Sassari, Perugia.

The research results that emerged, by faculty, are reported below.

In the search on the website of the Faculty of Medicine of **Bologna** at the site:

https://www.unibo.it/uniboweb/unibosearch/results.aspx?query=health+literacy

Several results emerge: degree theses in the field of health literacy, publications and articles. Health literacy is also included in the study plan of the faculties of Chemistry, Analysis and management of the environment, Sciences and techniques of science motor and preventive activity, Engineering, Biology, Environmental sciences, Psychology of well-being, Cinema, television, multimedia production, and also in the study plan of medicine and surgery.

The study plan of medicine and surgery is shown below:

Knowledge and skills to be achieved: The learning objectives are:

- To understand how the "health problem" is multidisciplinary, multidimensional and involves a variety of different agents who interact with each other in a complex way
- To develop complex thinking skills regarding HL and reading simple computational simulations in the health sector
- Develop knowledge and skills for a correct risk assessment and informed decisions in the health sector
- Develop knowledge in the preventive field, with a particular focus on the prevention of infectious diseases through vaccinations
- Develop knowledge regarding the current and possible applications in the health sector of Artificial Intelligence and big data.

Topics covered: "Health and statistical literacy": what we need to know and know how to do to be responsible citizens and to protect our health and that of those who live close to us.

Choosing intuitively is not always the best choice: with particular reference to health protection, numbers can deceive us. The uncertainties of the real world and research: how can we live with them?

Module 1: "The science of forecasting and its impact in medicine" (12 hours)

- Lecturers Eleonora Barelli and Riccardo Rovatti.

The power of predictions: a success story in human history.

Complexity science and network theory to create the mathematical basis for an understanding of social phenomena. Data, algorithms and predictions The construction of forecasting models and the spread of infectious diseases Big data, forecasts and artificial intelligence

Artificial intelligence in medicine: state of knowledge, recent developments, opportunities and risks. Group work for the exploration of applications in the medical and health sectors.

Module 2: "The importance of understanding risk, vaccines and tests: analysis of case studies in medicine" (10 hours)

- Lecturers Davide Gori and Jacopo Lenzi

Risk Assessment: How talking about absolute frequencies can be more understandable and useful for health-related decisions than referring to probabilities. How do health professionals and the media communicate? The case study of the birth control pill.

"How to use numbers to understand the importance of so-called group immunity" to avoid the spread of infectious diseases. The measles case study

Tests for clinical diagnosis, screening and health surveillance: the problem of false positives and false negatives. The SARS-CoV-2 / COVID-19 test case study
Vaccine Hesitancy as a phenomenon linked to Health / Statistical Illiteracy.
Presentation and discussion of mandatory and recommended vaccinations for the age group of young adults. Collective discussion and advice also on an individual basis, if desired, of the vaccination status of the students participating in the course. Professionals from the AUSL of Bologna and the AUSL of Romagna will also be involved in this lesson.
The course is structured in a total of 24 hours (by virtue of the COVID-19 emergency, differently from what was previously stated, they will be carried out in their entirety in blended mode and with the part of the exercises in the presence). The 24 hours will be divided into 2 modules of 12 and 10 hours each with a general introduction lasting 2 hours.

In the research on the website of the medical faculty of **Pieve Emanuele** in:
https://www.hunimed.eu/news/how-to-prepare-the-future-generation-of-physicians/
Emerge one article.
In the research on the website of the medical faculty of **Varese Insubria** in:
https://www.uninsubria.it/search/google/health%20literacy
Health literacy is included in the exam program of the three-year nursing science course.
In the research on the website of the medical faculty of **Messina** in:
https://www.unime.it/it/search/google/health%20literacy
Health literacy is not included in the medical curriculum but in other faculty programs.
In the research on the website of the medical faculty of **Milano San Raffaele** in:
https://www.unisr.it/search-result?term=health+literacy
It emerges that this issue was addressed in a conference on 27 October 2016 entitled: "Clear communication for better health: UniSR graduates at the" Health Literacy "conference.
Text of the article posted on the website:
“The 2016 Conference of the National Association of Nurse Associations entitled “Health Literacy - clear communication for better health ,,”will be held in Rome next November 4th and 5th; on the occasion of the Conference, two studies will be presented to which some of our graduates in Nursing have contributed in an important way.
Health promoters have the task not only of transferring the necessary information to the user, but above all they must ensure that they are easily understood. This is "Health literacy": an important self-awareness strategy that can improve individuals' ability to access information and use it effectively, thus helping to promote and preserve their health.
The 2016 Conference is dedicated to this increasingly important theme nowadays: it will represent a moment of cultural and scientific confrontation between citizens, nursing professionals, health professionals and health and social organizations, on the state of the art and on the prospects of development of Health Literacy. Starting from this, the conference intends to range from health promotion, self-care and empowerment activities, offering an innovative look at the possibilities offered by social media and healthcare digitalization.
Among the contributions selected for the oral presentation there are two studies, conducted by a research group which still includes Stefano Gini, Alessandro Girotto, Sebastiano Lena, Margherita Speroni and Chiara Marta Stenco, graduates in the last two years from the Degree Course in Nursing at the Vita-Salute San Raffaele University, confirming the increasing attention paid to research in the nursing field by professors and students of the course of study of our University. These studies concern the education of the surgical patient (one concerning the creation of tools for patient information and education, the other concerning the evaluation of the efficacy, with a Randomized Controlled Experimental study, of the tools themselves on some outcomes such as anxiety, pain control and resumption of daily living activities).
The research work, which began in 2013, developed thanks to the coordination of Dr. Emanuele Galli and Prof. Duilio F. Manara of the Direction of the Degree Course in Nursing, with the

contribution of Dr. Paola M.V. Rancoita, researcher at the Faculty of Medicine and Surgery, and with the support of Dr. Anna Maria Rossetti and Dr. Rosanna Mantecca Mazzocchi, of the Nursing Direction of the San Raffaele Hospital, and of the nursing coordinators Gledis Chaulan, Chiara Ritella and Vito Schirò.
As part of the conference, Alessandro Girotto and Chiara Marta Stenco will be the speakers in a session dedicated to the care aspects of patient education. "
In the research on the website of the medical faculty of **Milano-bicocca** in:
https://www.unimib.it/search/google/health%20literacy
It appears that health literacy is not included in the medical program but in other faculty programs.
In the research on the website of the medical faculty of **Ancona** in:
https://www.medicina.univpm.it/?q=search/node/health%20literacy
It emerges that for the LM in medicine and surgery there is a monographic course in: *Pain therapy and palliative care in diseases of the nervous system - Relevance of Health Literacy* by Prof. M.G. Ceravolo.
In the research on the website of the medical faculty of **Salerno** in:
https://corsi.unisa.it/#gsc.tab=0&gsc.q=health%20literacy&gsc.page=1
There are no study courses but only some results such as publications, theses, calls for proposals, articles.
In the research on the website of the medical faculty of **Trento** in:
https://webapps.unitn.it/Search/it/Web?q=health%20literacy&refsite=offertaformativa.unitn.it&site=offertaformativa.unitn.it&ateneo=1
Articles published on the site emerge, but not a course aimed at acquiring skills.
In the research on the website of the medical faculty of **Trieste** in:
https://www.units.it/search/index.php?scope=health%20literacy
Health literacy is included in some curricula (for example, medical informatics) but not in the medical program.
In the research on the website of the medical faculty of **Udine** in:
https://www.uniud.it/it/@@search?SearchableText=health+literacy&search=
It is clear that health literacy results in articles, Erasmus plans.
It is also included in the primary education science program and in particular:
Teaching: general and applied hygiene.
Teaching objectives: among others to understand the purposes of health literacy and all processes aimed at involving the population in decisions concerning their own health.
In the research on the website of the medical faculty of **Verona** in:
https://www.corsi.univr.it/?ent=cs&id=395&menu=search&q=health+literacy&tutto=on
It appears that health literacy is a course of the nursing and midwifery science

b) **HEALTH LITERACY, LITERATURE SUMMARY IN SPANISH**

Books

- Basagoiti I. Alfabetización en salud. De la información a la acción [Health Literacy. From information to action, pdf]. Valencia: ITACA/TSB; 2012. ISBN: 978-84-695-5267-4 Disponible en http://www.salupedia.org/alfabetizacion/

Medıcal Educatıon

- Cubero-Juanez et al. Cooperative learning for university education in health literacy. FEM 2018; 21 (2): 97-100. http://doi.org/10.33588/fem.212.938
  - A descriptive, quasi-experimental study was carried out to verify the effectiveness of an educational strategy around health literacy. The sample under study comes from an official postgraduate course for the training of future professors. Students worked on content using cooperative tutoring learning techniques. The instrument of measurement has been

the evaluation of the acquired scientific knowledge and the emotions experienced by the students. The statistical analysis performed shows that the methodology used facilitates health literacy. It discusses its projection from the university to society, emphasizing the parallels between the health literacy and the empowerment of patients.

- Gavidia et al. Health literacy through competences. ENSEÑANZA DE LAS CIENCIAS, 37-2 (2019), 107-126. https://doi.org/10.5565/rev/ensciencias.2628
  - This paper presents a proposal for health literacy through the specification and definition of the competences that students must acquire during Compulsory Education. Eight areas of health were determined through a Delphi study, identifying the problems or health situations that students must know how to solve, as well as the competences to be developed and the learning contents necessary to face each of these problems. These learning contents constitute the instrument of analysis to verify to what extent those health situations are present in the official Compulsory Education curriculum. The studies carried out regarding mental and emotional health show that the prescriptive curriculum has some deficiencies that hinder the development of competences, which negatively affects health literacy.
- Málaga et al. Strategies to promote health literacy from primary care: a perspective that considers the realities of low and middle-income countries. An. Fac. Med. 2019; 80 (3), 372-378. http://dx.doi.org/10.15381/anales.803.16864
  - Health literacy is associated with better health outcomes. Primary care professionals generally provide most of the care to patients and are also often the first point of contact for patients within a health system. This article discusses four strategies to promote health literacy in the primary care setting: 1) Improve the clinician's communication skills, 2) Use e-Health tools, 3) Promote patient self-care, and 4) Develop support systems and care environments. These strategies are discussed in the context of the realities of low and middle income countries, as in the case of Peru.
- Montero-Delgado et al. Key digital skills for healthcare professionals. Educación Médica 2020; 21(5) 338-344. http://doi.org/10.1016/j.edumed.2019.02.010
  - Despite technological advances and growth of social demand to incorporate them into daily clinical practice, the level of implementation of digital innovation in the health care sector is still limited and slow, partly due to the digital divide.This is why it is essential that accurate knowledge and skills related to the digital environment are acquired by all health workers, as well as patients.

PATIENTS, CHRONIC DISEASES

- Navarro-Rubio, et al. Health literacy: Implications for the health system. Medicina Clínica, 2016; 147(4), 171–175. http://doi.org/10.1016/j.medcli.2016.02.010
  - The diversity of instruments developed for the study and evaluation of HL and patient materials denotes lack of consensus currently exists regarding the definition and the measure of the level of HL in the population. Although it still exists evolution in the development of new instruments, there is a concern regarding the measurement of HL in the clinical setting.
  - While there is an agreement that such measures are necessary to its use in research, there does not appear to be sufficient justification for use in daily clinical practice. It is essential to consider the training of professionals who interact with patients. New required studies to test the efficacy of health communication innovations and explore how unique characteristics health centers and their professionals could inhibit or enhance communication objectives.
  - In this context, it is necessary to study how health organizations and institutions, hospitals and health centers adapt to the needs of the patient and create an environment less

complex and more easily navigable. These organizations can become centers that integrate HL among their priorities, such as part of his action for the patient and with the patient. To obtain this, both patients and professionals have to change their attitude and expectations to what is the traditional model of relationship to establish a more deliberative exchange, adapted to the current world, between patient and healthcare professional

- Santesmases-Masana et al. Health Literacy in patients with heart failure in primary care. Atención Primaria, 2017; 49(1), 28–34. https://doi.org/10.1016/J.APRIM.2016.03.003
  - The index of health literacy of 79.6% (n = 253) of the participants indicated problems in understanding healthcare information. Health literacy level was explained by academic level, the extent of heart failure, self-care, and age.The academic level explained 61.6% of the health of literacy. In patients with stable heart failure, it is important to consider all factors that help patients to understand the healthcare information. Health literacy explains patient self-care attitude in heart failure.
- Costa-Requena et al. Health literacy and chronic kidney disease. Nefrologia 2017;37(2):115–117. http://dx.doi.org/10.1016/j.nefro.2016.10.001
  - In patients with chronic kidney disease, interventions aimed at increasing health literacy should consider the design of psychoeducation programs that provide feedback on what they have learned. Among these programs, materials to educate patients must be developed and disseminated relative to cardiovascular and diabetes risk factors, appropriate to the stage of kidney failure. Likewise, it should be clear to nephrologists and health professionals to detect in patient signs of low health literacy rate. Increase knowledge of the chronic kidney disease in relation to health literacy can improve the patient's capacity for self-care, facilitate the effective use of the health system and improve the quality of relationship between doctor and patient. It should also be understood that health literacy not only depends on individual capabilities but is also a consequence of the interaction with the health context. It requires an interdisciplinary and multisectoral approach, with interventions on patients and the general population to increase their competences in health, simplifying accessibility to the health system in a way that is appropriate to cultural and social context, improving the quality of the information transmitted and surpassing traditional education schemes for health.
- Leon-Gonzalez et al. Health Literacy and Health Outcomes in Very Old Patients With Heart Failure. Rev Esp Cardiol. 2018;71(3):178–184. http://dx.doi.org/10.1016/j.recesp.2017.05.029
  - In geriatric patients with very low health literacy (HL), no association was found between HL and 12-month mortality. This could be partly due to the lack of a link between HL and self-care
- Cabellos-García et al. Influence of health literacy on oral anticoagulation therapy: A factor yet to be known. Aten Primaria. 2018 Apr;50(4):256-257. Spanish. doi: 10.1016/j.aprim.2017.03.012.
  - Considering the level of health literacy in patients with oral anticoagulant (OAC) treatment, would be essential and would allow the population to be stratified according to thatlevel, as well as to develop individualized interventions and educational strategies in relation to treatment that improve empowerment and self-care. In addition, exploring the relationship between the level of HL and efficacy in self-care and adherence to OAC treatment together with the appearance of adverse effects is a novel and little-studied aspect and could offer an initial approach to take into account in the elaboration of future health interventions, given the expected repercussions on patient safety, better self-control and the economic benefits resulting from the reduction of adverse events and less frequent use of health services.

- Fernandez-Silva et al. Health literacy in patients with type 2 diabetes: A cross-sectional study using the HLS-EU-Q47 questionnaire. Semergen. 2019;45(1):30-36. https://doi.org/10.1016/j.semerg.2018.08.003
  - In diabetic patients, a clear association was seen between a higher level of health literacy and higher levels of education. Moreover, the level of health literacy was seen to be inversely related to the level of control of the patients' diabetes measured on the basis of their HbA1c concentration.
- Navarro-Rubio et al. Patients' competences and health literacy assessment questionnaire. Journal of Healthcare Quality Research 2019; 34(4):193-200. https://doi.org/10.1016/j.jhqr.2019.04.005
  - A 12-item questionnaire was designed. The median scores obtained in the Health Consensus ranged between 6.08 (1.43) and 7.22 (1.52), with an agreement level of between 73.87% to 84.19%. Finally, a 5-item instrument was obtained to assess the patients' health competencies. The questionnaire is a useful tool to detect those at risk of having difficulties in obtaining, understanding and using health information. This would allow professionals to focus their attention on the type of information patients need and better adapt it to their needs.
- Figueroa-Saavedra et al. Association between health literacy and adherence to medications among older adults. Rev Med Chile 2020; 148: 653-656. http://dx.doi.org/10.4067/S0034-98872020000500653
  - The Health Literacy survey for Spanish-speaking Adults test was used to assess compliance with medication prescription and applied to 119 older adults aged 60 to 88 years. All participants had an adequate global cognitive performance; 24% had inadequate literacy, and 42% did not comply with medication prescription. There was a significant correlation between health literacy and medication adherence.

Programs Of Health Lıteracy

- Casañas et al. Literacy programs for the promotion of mental health in the school setting. SESPAS Report 2020. Gac Sanit. 2020;34(S1):39–47. https://doi.org/10.1016/j.gaceta.2020.06.010

Revıews

- Juvinya-Canal et al. Health literacy, more than information. Gac Sanit. 2018;32(1):8–10. https://doi.org/10.1016/j.gaceta.2017.07.005
  - Having health knowledge becomes a primary challenge to ensure that people have greater control over their own health, and with it a better state of health and well-being. Evidence that poor health literacy impacts on people and also on the community should allow that empowerment in health is also a priority, along with to the great health and sustainable development challenges of the agendas worldwide.

Surveys

- Project HLS-EU 09-12, Results from Government of Aragon, Spain. September 2015 (http://aragonhoy.aragon.es/index.php/mod.documentos/mem.descargar/fichero.documentos_Alfabetizacion_salud_informe_b28e636c%232E%23pdf):
  - The issues valued by Aragonese citizens with less difficulty are:
    - Follow the instructions of your doctor or pharmacist (2.5%).
    - Understand the doctor's or pharmacist's instructions on how to take the prescription drugs (3.0%).

        - Understand the health warnings related to habits such as smoking, doing little physical exercise or drinking alcohol excessively (5.8%).
    - On the contrary, the scores recorded with the greatest difficulty are:
        - Find out what changes at the political level could affect your health (59.8%)
        - Judge whether the information that appears in the media abouta disease is reliable (55.1%).
        - Find information on how to address health problems mental health such as stress or depression (44.0%).
    - 35% of the population over 65 years of age report having difficulties to find information on the treatments associated to the diseases that are of interest to them compared to 12.1% of the population young (up to 45 years).
    - On the contrary, the population under 45 years of age finds greater difficulty in judging whether the information that appears in the media about a disease is reliable as well as deciding whether to get the flu shot, with a difference with those over 65 years of age of more than 10 percentage points.
    - A noteworthy aspect is the question that refers to the daily habits that affect health. 14.3% of chronic patients that come from rural areas consider this activity as "difficult" or "very difficult". On the contrary, only 7.3% of chronic patients in urban areas do so.
- Project HLS-EU 09-12, Results from Spain. Health literacy in Europe: comparative results of the European health literacy survey (HLS-EU), Sorensen K. European Journal of Public Health, 2015; 25(6): 1053–1058. http://doi.org/10.1093/eurpub/ckv043
    - Limited health literacy represents an important challenge for health policies and practices across Europe, but to a different degree for different countries. The social gradient in health literacy must be taken into account when developing public health strategies to improve health equity in Europe.
- Nolasco et al. Health literacy: psychometric behaviour of the HLS-EU-Q16 questionnaire. Gac Sanit. 2020;34(4):399–402. https://doi.org/10.1016/j.gaceta.2018.08.006
    - The HLS-EU-Q16 in Spanish is a short, adequate and valid instrument to measure the level of health literacy in the population.
- Monsalves et al. Validation of the short assessment of health literacy for spanish-speaking adults test in Chile. Rev Med Chile 2016; 144: 604-610. http://dx.doi.org/10.4067/S0034-98872016000500008.
    - We propose this test as a useful tool to assess health literacy in the adult population in Chile. Its use and incorporation into local research can be especially recommended in the areas of education and health promotion.

c) THE SITUATION REGARDING HL IN THE NETHERLANDS AND SOME FACTS

In the Netherlands, 2.5 million people have difficulties in reading and writing. 9.5% of the Dutch population aged 18 and over have insufficient health literacy, and 29% of the adult Dutch have limited health skills. Just over half of the people who have difficulties in reading and writing are native Dutch (60%) (Heijmans et al., n.d.). People with only primary school education live on average 6 years shorter and 15 years less in perceived health than people with a higher education or university education. This means that 3 to 4 in 10 Dutch adults have too few skills to be able to adequately inform themselves about health and healthcare sufficiently to be able to understand information about health and healthcare and use it to make decisions about their own health and well-being.(*de Alliantie Gezondheidsvaardigheden*, n.d.).

Sources: *De Alliantie Gezondheidsvaardigheden*. (n.d.). de Alliantie Gezondheidsvaardigheden. Retrieved 17 January 2022, from https://www.gezondheidsvaardigheden.nl/
Heijmans, M., Brabers, A. E. M., & Rademakers, J. (n.d.). *Health literacy in Nederland.* 4.