Older Patients' Views of Health Care Interactions in Ireland

Sarah Gibney, PhD; and Tara Moore, MSc

ABSTRACT

Background: Chronic and sensitive health conditions such as pain, urinary incontinence, and hearing loss are common but often untreated among older adults in Ireland, and many patients do not disclose these and other sensitive health issues to their health care provider. **Objective:** This study investigates the link between provider communication and older patients' perceived encouragement to talk about physical, social, sensitive, and emotional problems with their usual source of care (USC), be it a doctor or nurse. **Methods:** Data were from the Irish sample of the Survey of Health, Ageing and Retirement in Europe (SHARE; *N* = 720). Logistic regression models were used to estimate the association among (1) patient characteristics, (2) health care use, and (3) USC communication characteristics and the likelihood of feeling encouraged to talk about each health problem. Results are reported as odds ratios (OR) with confidence intervals at the 95% level. **Key Results:** More patients felt discouraged to talk about social (39%) and sensitive (42%) health problems with their USC compared with physical (18%) and emotional (29%) health problems. Many participants reported that their USC rarely or never explained the results of medical examinations (23.6%), explained different treatment options (26.2%), or listened to their opinions or preferences when making treatment decisions (29.1%). A USC "explaining test results" was associated with increased odds of feeling encouraged to discuss physical (OR = 2.82, 95% confidence interval [CI; 1.15, 6.91]) and social (OR = 2.02, 95% CI [1.01, 4.04]) problems. "Listening to patient preferences" was associated with increased odds of feeling encouraged to discuss physical (OR = 4.49; 95% CI [2.24-9.01]), emotional (OR = 2.31, 95% CI [1.27, 4.21]), and social (OR = 2.88, 95% CI [1.60, 5.18]) problems. Controlling for USC communication characteristics attenuated the association between lower educational attainment and perceived encouragement. **Conclusions:** An open and patient-centered communication style was associated with a greater sense of encouragement to discuss physical, emotional, and social health problems, particularly among older patients with lower levels of education. **[*HLRP: Health Literacy Research and Practice*. 2018;2(4):e180-e191.]**

Plain Language Summary: This is the first study in Ireland to investigate the link between the communication styles used by health care providers and to what extent older patients felt encouraged to talk about physical, emotional, social, or sensitive health problems. When providers took a more patient-centered approach, these patients felt more encouraged to disclose physical, social, and emotional health problems.

The demographics of Ireland are changing rapidly, and between 2016 and 2030 the population share of people age 65 years and older will increase from 13% to between 17% and 19%, and the number of people age 65 years and older is projected to increase between 58% and 63% during this time (Wren et al., 2017). Several health characteristics of the older Irish population pose particular challenges to healthy aging and health care services. Results from the Irish Longitudinal Study of Ageing show that conditions such as chronic pain, urinary incontinence, hearing loss, and depression are common but often untreated among patients older than age 50 years, and that many older adults do not disclose sensi-

tive health issues to their health care provider (McGarrigle, Donoghue, Scarlett, & Kenny, 2017). Almost one-third of patients age 50 years and older have inadequate interactive health literacy (HL) levels, meaning they have difficulty accessing, understanding, evaluating, and applying health information in relation to health care, disease prevention, and health promotion (Gibney & Doyle, 2017).

It is for these reasons that the current study examines health care interactions between older adults and their usual source of care (USC) using data from the Survey of Health, Ageing and Retirement in Europe (SHARE) (Börsch-Supan, 2017). We describe to what extent older people feel encouraged to talk about physical, emotional, sensitive, or social health problems. Furthermore, we investigate the patient characteristics and USC communication characteristics that are associated with encouraging patients to discuss these problems.

BACKGROUND

Several interrelated health care policy and strategy objectives in Ireland provide the context for this study: promotion of patient-centered care and shared-decision making, developing the role of the "expert patient," and improving HL of the population and health system. Patient-centered care involves providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide clinical decisions (Committee on Quality of Healthcare in America, 2001). This philosophy deviates from the traditional communication style in which doctors exercise control and patients remain a passive recipient of care (Epstein & Street, 2011). In 2008, the Irish Health Service Executive (HSE) committed to developing the role of the "expert patient," whereby patients take part in developing their own care plan and looking after their own health (Health Service Executive, Department of Health and Children, 2008). The most recent HSE Healthy Ireland Implementation Plan (2015-2017) aims to raise standards of HL among patients, service users, and caregivers by promoting and providing national tools for training, resource development, and HL audits in health and social care services (Health Service Executive, 2015).

The National Positive Ageing Strategy (NPAS) also aims to improve the provision of accessible information about health and social care information about entitlements, services, and supports that can enable older people to live independently and age well in their communities (Department of Health, Healthy Ireland, 2013a). Furthermore, the NPAS has an explicit emphasis on the need to promote lifelong health and well-being to increase life expectancy and healthy life expectancy. This approach is substantively different from previous policies in Ireland and elsewhere that have, historically, tended to focus on biomedical responses to population aging

Sarah Gibney, PhD, is a Programme Analyst. Tara Moore, MSc, is a Research Assistant. Both authors are affiliated with the Healthy and Positive Ageing Initiative, Department of Health.

Address correspondence to Sarah Gibney, PhD, Healthy and Positive Ageing Initiative, Department of Health, Hawkins House, Dublin, Ireland D02 VW90; email: sarah_gibney@health.gov.ie.

Grants: The SHARE data collection has been primarily funded by the European Commission through the Framework Programme (FP) 5 (QLK6-CT-2001-00360), FP6 (SHARE-I3: RII-CT-2006-062193, COMPARE: CIT5-CT-2005-028857, SHARELIFE: CIT4-CT-2006-028812), and FP7 (SHARE-PREP: N°211909, SHARE-LEAP: N°227822, SHARE M4: N°261982). Additional funding from the German Ministry of Education and Research, the Max Planck Society for the Advancement of Science, the U.S. National Institute on Aging (U01_AG09740-13S2, P01_AG005842, P01_AG08291, P30_AG12815, R21_AG025169, Y1-AG-4553-01, IAG_BSR06-11, OGHA_04-064, HHSN271201300071C), and from various national funding sources is gratefully acknowledged (see www.share-project.org). The Healthy and Positive Ageing Initiative is funded by the Department of Health (Ireland), Health Service Executive, and the Atlantic Philanthropies.

Disclaimer: This article uses data from the SHARE (Survey of Health, Ageing and Retirement in Europe) Waves 2.

Disclosure: The authors have no relevant financial relationships to disclose.

Acknowledgment: The authors thank Cathal Brennan, MSc (Healthy and Positive Ageing Initiative, Department of Health) for his contribution to the preparation of the manuscript.

Received: March 9, 2018; Accepted: June 12, 2018

doi:10.3928/24748307-20180831-01

and on addressing acute health care needs (Department of Health, 2013b). Objectives in the NPAS surrounding healthy aging and improving information provision echo the HL objective in the National Health Strategy for Ireland, which seeks to "address and prioritise health literacy in developing future policy, educational and information interventions" (Department of Health, Healthy Ireland, 2013b).

FACTORS INFLUENCING PATIENT-CENTERED COMMUNICATION AND CARE

Patient-centered communication is mutually influenced by patient and provider. The communication styles of doctors can vary from a narrow, biomedical style to an open, consumerist style (Roter, Stewart, Putnam, Lipkin, & Stiles, 1997), and doctors vary in the degree to which they provide information, advice, emotional support, and engage in partnership-building (Street, 1992). Patients who express more concern, ask more questions, and are assertive achieve greater information-sharing from doctors than passive patients (Street, 1991, 1992). Furthermore, patients can become more expressive and assertive when doctors use partnership-building approaches (Street, 1991). The communication style of the doctor is also influenced by the demographics and socio-economic position (SEP) of the patient. A systematic review showed that doctors vary their communication style by patient SEP, and higher SEP patients tend to be more assertive and request more explanations whereas low SEP patients tend to have lower HL levels and an external health locus of control, leading to more paternalistic interactions (Verlinde, de Laender, de Maesschalck, Deveugele, & Willems, 2012). Furthermore, older age has been linked to a greater preference for a more paternalistic approach from doctors coupled with a more passive patient role (Williams, Haskard, & DiMatteo, 2007).

OUTCOMES OF PATIENT-CENTERED COMMUNICATION, CARE, AND SHARED-DECISION MAKING

Shared decision-making has been defined as "an approach where clinicians and patients share the best available evidence when faced with the task of making decisions, and where patients are supported to consider options, to achieve informed preferences" (Elwyn et al., 2010), and therefore can be considered to be both a process and outcome of patient-centered care. Shared decision-making in health care leads to higher patient-reported quality of care (Weingart et al., 2011), increased patient satisfaction (Altin & Stock, 2016; Shay & Lafata, 2015), better quality-of-life (Arora, Weaver, Clayman, Oakley-Girvan, & Potosky, 2009), and less illness-related anxiety (Shay & Lafata, 2015). Shared decision-making is also associated with improved treatment adherence (Wilson et al., 2010) and greater perceived treatment choice (Mandelblatt, Kreling, Figeuriedo, & Feng, 2006). Patients who receive more patient-centered visits in primary care settings have been found to incur fewer medical charges and fewer charges for specialty care clinic visits (Bertakis & Azari, 2011), less frequent hospitalizations, and a reduction in diagnostic/laboratory testing (Bertakis & Azari, 2011), regardless of demographic and socio-economic characteristics.

HEALTH LITERACY AND PATIENT-CENTERED COMMUNICATION AND CARE

Improving the HL of patients and increasing the ability of health care providers to recognize the signs of low HL and adjust their communication accordingly is essential to patient-centered care (Byrd & Thompson, 2008). HL is a major public health issue (Nutbeam, 2000), and it is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Ratzan & Parker, 2000). As such, improving health care interactions is highly relevant to the HL agenda. Lower levels of HL have been associated with poorer patient outcomes, poorer health status, improper use of health services, and increased health care costs (MacLeod et al., 2017; Zarcadoolas, Pleasant, & Greer, 2009).

Although HL and shared decision-making are distinct concepts, the impacts of both are linked in a bi-directional way (Schulz & Nakamoto, 2013). Critical HL is highly correlated with greater patient involvement in medical decision-making (Brabers, Rademakers, Groenewegen, van Dijk, & de Jong, 2017), and patient involvement in medical decision-making is associated with increased HL, increased patient knowledge, a greater sense of responsibility, and greater patient empowerment (Epstein & Street, 2011).

Older adults are more likely to have lower HL levels (MacLeod et al., 2017), but this is a particular challenge for healthy aging that can be faced through a system-level approach—improving people's access to health information and their capacity to use it through health education and improved health care communication (Nutbeam, 2000). Almost one-half of the Irish population believe that a more health-literate health care system, with accessible and high-quality health information, would improve general health, and older adults are more likely to agree their health would improve if they had "better information about where to go for healthcare," "easier to read information," and "better information about how to stay healthy" (Coughlan, Turner, & Trujillo, 2013).

METHODS

Sample

This study uses Irish data collected as part of SHARE (Börsch-Supan, 2017). SHARE is a longitudinal, cross-national study of health, socio-economic status, and social and family networks of adults age 50 years and older in Europe, and their spouse or partner. Demographic, health, and socio-economic data for this study were collected using computer-assisted personal interviews, and information on USC interactions was collected with drop-off questionnaires (N = 720). Full information on survey methodology is reported elsewhere (Börsch-Supan et al., 2008).

Measures

The primary dependent variable was "perceived encouragement" in health care interactions. Encouragement was measured directly with a single question for four separate issues: "how much do you feel encouraged to talk with your USC (doctor or nurse) about (1) physical health problems, such as pain, reduced mobility, (2) emotional, nervous or psychic problems, such as stress, sadness, anxiety, (3) sensitive health problems, such as sexual life, incontinence problems, and (4) social problems that influence your health, such as family, work problems." Response categories included *strongly encouraged*, *rather encouraged*, *rather discouraged*, and, *strongly discouraged*. For analysis, encouragement was dichotomized as encouragement (*strongly/rather encouraged*) versus discouragement (*strongly/rather discouraged*) on each measure.

Covariates

Age was measured in years. Gender was reported as male or female. Marital status was categorized as married/partnership, never married, or divorced/widowed. Irish citizenship was dichotomized as yes or no. Education was categorized as no education/primary, lower secondary, upper secondary, or third level. Occupation was categorized as retired, employed/self-employed, out of work, or homemaker.

Self-rated health status was dichotomized as excellent/very good less than good. Chronic disease was categorized as none, one, or two or more. Cognition was dichotomized as good or less than good based on the results of memory, recall, verbal fluency, and numeracy tests. Depression was measured using a scale of common depression symptoms called the EURO-D scale (Prince et al., 1999) (0, no symptoms to 12, all symptoms) and using a cut-point of 3 or more symptoms to derive a binary variable in which 0 equals fewer than 3 symptoms/no depression and 3 or more equals depressive "caseness." Caseness refers to the likely presence of

TABLE 1

Demographic Data of Participants (N = 720)

Variable	Weighted Percentage [95% CI]
Gender	
Female	52 [49.1, 54.9]
Male	48 [45.1, 50.9]
Age (years)	63.6 [62.9, 64.3]
Marital status	
Married/partnership	62 [58.4, 65.5]
Divorced/widowed	23.2 [20.3, 26.4]
Never married	14.8 [12.3, 17.7]
Education	
No education/primary	33.2 [30, 36.5]
Lower secondary	19.8 [17.3, 22.5]
Upper secondary	22.5 [19.8, 25.4]
Third level	24.6 [21.7, 27.8]
Citizenship	
Yes	95.5 [93.8, 96.8]
No	4.5 [3.2, 6.2]
Occupation	
Employed/self-employed	39.0 [35.5, 42.5]
Homemaker	16.9 [14.7, 19.3]
Retired	33.8 [30.7, 37.1]
Out of work	10.4 [8.3, 12.8]
Self-perceived health	
Excellent/very good	50 [46.6, 53.4]
Less than good	50 [46.6, 53.4]
Chronic disease	
None	28.4 [25.5, 31.6]
One	31.3 [28.2, 34.5]
Two or more	40.3 [37, 43.6]
Cognition	
Good	83.3 [80.6, 85.7]
Less than good	16.7 [14.3, 19.4]
Depressive mood (0-10 symptoms)	2 [1.9, 2.2]
MD visits, past 12 months	4.7 [4.2, 5.2]
GP visits, past 12 months	4.9 [4.4, 5.4]

Note. Totals may not equal 100 due to rounding. CI = confidence interval; MD = medical doctor; GP = general practitioner.

TABLE 2

Patient-Reported USC Communication Characteristics

How often does your USC	Always	Most of the Time	Rarely	Never	Responses *(n)*
	Weighted Percentage [95% CI]				
Explain to you the results of medical examinations?	48.1 [44, 52.3]	28.3 [24.7, 32.2]	12 [9.6, 14.9]	11.6 [9.2, 14.5]	694
Explain to you the different treatment options?	43 [38.9, 47.2]	30.8 [27.1, 34.8]	12.9 [10.4, 15.9]	13.3 [10.7, 16.4]	680
Listen to your opinions and take your preferences into account to choose treatments?	40 [36, 44.1]	31 [27.3, 34.9]	16 [13.2, 19.2]	13.1 [10.5, 16.1]	685

Note. USC = usual source of care.

clinically significant depression (Prince et al., 1999), either mild or moderate. The number of medical doctor (MD) and general practitioner (GP) visits in the past 12 months were also reported (range, 0-98).

Participants were asked "in general, how often does your USC (1) explain to you the results of medical exams (such as laboratory, radiology), (2) explain to you different treatment options and 3) listen to your opinion and take your preferences into account to choose treatments?" Responses ranged from 1 to 4 (1 = *always*, 2 = *mostly*, 3 = *rarely*, 4 = *never*).

ANALYSIS

Chi-squared tests followed by binary logistic regressions were used to examine the associations between participant characteristics, health care use, USC communication characteristics, and perceived encouragement. Model one included patient characteristics and model two included frequency of MD and GP visits and USC communication characteristics. Results were reported in odds ratios (ORs) with confidence intervals at the 95% level (95% CI). Missing values on each measure ranged from 0% to 10%. Analysis was completed using weighted data, with Stata Version 14. Using sample weights did not affect the results or interpretations of the results; therefore, weighted results are presented. All models were replicated using ordered logistic regression. The interpretation remained similar; therefore, only the binary logistic regression results are presented.

RESULTS

Table 1 presents the demographic data of participants. The majority of the sample was female (52%), married (62%), had attained primary (or lower) education (33.2%), were Irish citizens (95.5%), were employed (39.0%), rated their health as very good or excellent (50.0%), had two or more chronic diseases (40.3%), and had good cognition (83.3%) at the time of the survey. Patients' perspectives on interactions with their USC are summarized in **Table 2**.

Overall, 23.6% reported that their USC *rarely* or *never* explains the results of medical examinations, 26.2% reported that their USC *rarely* or *never* explains different treatment options, and 29.1% reported that their USC *rarely* or *never* listens to their opinions or preferences when making treatment decisions. Perceived encouragement for each issue is summarized in **Table 3** with reference to patient characteristics, frequency of health care visits, and USC communication characteristics.

Patients felt more encouraged to discuss physical and emotional problems compared with sensitive or social problems. Bivariate analyses revealed significant associations between a number of patient characteristics (years of age, gender, education, self-perceived health, chronic disease, and cognition), number of health care visits (MD visits and GP visits), and USC communication characteristics (explains results, explains treatment options, and listens to opinions and preferences) and encouragement. The results of the regression analyses are presented in **Table 4**.

In model 1, patients with lower secondary education felt significantly less encouraged to discuss physical problems (OR = 0.45, 95% CI [0.21, 0.94]), emotional problems (OR = 0.52, 95% CI [0.28, 0.96], and social problems (OR = 0.55, 95% CI [0.31, 0.98]). Patients with a primary or no education felt less encouraged to discuss physical (OR = 0.27, 95% CI [0.13, 0.55]), emotional (OR = 0.39, 95% CI [0.21, 0.72], and social problems (OR = 0.47,

TABLE 3

Perceived Encouragement and Patient and USC Communication Characteristics[a]

Patient Characteristics	Physical Problems % [95% CI]	Emotional Problems % [95% CI]	Sensitive Problems % [95% CI]	Social Problems % [95% CI]
Total (*N* = 720)	82 [78.5, 85]	71.3 [67.4, 75]	58.1 [53.8, 62.2]	61.3 [57.1, 65.3]
Gender				
Female (*n* = 395)	83.4 [79.1, 87]	74.7 [69.7, 79.1]**	62.3 [56.9, 67.5]**	64.7 [59.3, 69.9]
Male (*n* = 325)	80.3 [75, 84.7]	67.4 [61.4, 72.8]	53.1 [46.8, 52.2]	57.2 [51.1, 63.2]
Age (years)				
50-59 (*n* = 269)	83.7 [78.1, 88.1]	72.1 [65.6, 77.9]	62.2 [55.5, 68.5]	69.1 [62.5, 74.9]
60-69 (*n* = 242)	77.2 [70.4, 82.9]	70.8 [63.6, 77.1]	57.1 [49.7, 64.1]	58.9 [51.5, 65.9]
70+ (*n* = 209)	84.3 [78.0, 89]	70.8 [63.5, 77.2]	52.5 [44.8, 60.2]	51.5 [43.8, 59]*
Marital status				
Married/partnership (*n* = 523)	81.5 [78.1, 88.1]	69.9 [65.6, 77.7]	59.5 [55.5, 68.5]	64.2 [62.5, 74.9]
Divorced/widowed (*n* = 128)	86.4 [78, 89]	78.5 [63.5, 79.2]	59.8 [44.8, 60.2]	58.8 [43.8, 59]
Never married (*n* = 69)	75.9 [70.4, 82.9]	65.5 [63.6, 77.1]	48.6 [49.7, 64.1]	52.2 [51.5, 65.9]
Education				
No education/primary (*n* = 317)	75.8 [69.1, 81.4]**	66.4 [59.1, 73.0]	54.2 [46.8, 61.4]	52.2 [44.9, 59.5]*
Lower secondary (*n* = 205)	79.4 [71, 85.9]	67.1 [57.9, 75.1]	53.8 [44.5, 62.8]	58.4 [49, 67.2]
Upper secondary (*n* = 233)	85.6 [78.3, 90.8]	75.7 [67.7, 82.2]	62.2 [53.4, 70.3]	66.5 [58.1, 73.9]
Third level (*n* = 246)	89 [82.7, 93.2]	77.1 [69.2, 83.5]	63 [54.6, 70.7]	71.5 [63.3, 78.5]
Citizen				
Yes (*n* = 682)	81.9 [78.4, 84.9]	71.8 [67.8, 75.7]	57.9 [53.6, 62.1]	61.9 [57.6, 65.9]
No (*n* = 38)	83.3 [65.2, 93]	62.1 [42.3, 78.6]	61.2 [41.9, 77.6]	49.6 [31.2, 68.1]
Occupation				
Employed/self-employed (*n* = 250)	80.9 [74.8, 85.9]	69.7 [62.7, 75.8]	59 [51.9, 65.8]	68.7 [61.9, 74.8]
Homemaker (*n* = 141)	88.5 [81.6, 93]	78.6 [70.5, 85.0]	60.2 [51, 68.7]	58.7 [49.5, 67.4]
Retired (*n* = 251)	79.9 [73.7, 85]	67.3 [60.5, 73.4]	53.8 [46.7, 60.7]	55.9 [48.9, 62.7]
Out of work (*n* = 66)	81.1 [68.4, 90]	78.8 [66.1, 87.6]	65.5 [51.7, 77.1]	58.4 [44.9, 70.8]
Self-perceived health				
Excellent/very good (*n* = 360)	82.9 [77.9, 86.9]	74.3 [68.7, 79.2]	62.3 [56.3, 67.9]	66.4 [60.5, 71.8]
Less than good (*n* = 359)	81.1 [76.3, 85.1]	68.8 [63.2, 73.9]	54.4 [48.5, 60.1]	56.8 [51.0, 62.3]**

TABLE 3 (*continued*)

Perceived Encouragement and Patient and USC Communication Characteristics[a]

Patient Characteristics	Physical Problems % [95% CI]	Emotional Problems % [95% CI]	Sensitive Problems % [95% CI]	Social Problems % [95% CI]
Chronic disease				
Two or more chronic diseases (*n* = 306)	82.7 [77.4, 87]	70.6 [64.5, 76]	53.5 [47.1, 59.8]	55.5 [49.2, 61.7]**
One chronic disease (*n* = 216)	83.5 [77.1, 88.3]	74.3 [67.3, 80.2]	64 [56.5, 70.8]	68.2 [60.9, 74.7]
None (*n* = 197)	78.6 [71.2, 84.5]	69.4 [61.3, 76.4]	59 [50.7, 66.9]	63 [54.8, 70.6]
Cognition				
Excellent/very good (*n* = 591)	82.5 [78.7, 85.7]	71.1 [66.7, 75.1]	59.7 [55, 64.2]	63.6 [59, 67.9]**
Less than very good (*n* = 128)	80 [71.3, 86.6]	72.9 [63.4, 80.6]	51.2 [41.6, 60.8]	51.3 [41.6, 60.9]
Depression				
No depression (*n* =537)	82.3 [78.4, 85.6]	71.7 [67.2, 75.8]	58.3 [53.5, 63]	61.8 [57.1, 66.2]
Moderate/severe depression (*n* = 23)	81.6 [73.4, 87.6]	70.8 [61.7, 78.5]	57 [47.5, 65.9]	61.2 [51.8, 69.8]
MD visits in the past 12 months				
Yes (*n* = 848)	84.5 [80.9, 87.5]***	73.3 [69.1, 77.1]**	59.1 [54.5, 63.5]	62.7 [58.2, 66.9]
No (*n* = 148)	68.6 [57.6, 77.8]	61.1 [49.8, 71.3]	52.7 [41.4, 63.7]	52.4 [41.2, 63.3]
GP visits in the past 12 months				
Yes (*n* = 831)	84.7 [81.1, 87.7]	73.6 [69.4, 77.4]	59 [54.4, 63.5]	62.5 [58, 66.9]
No (*n* = 165)	76.9 [46.7, 92.7]	60.6 [34.3, 82]	62.2 [35.6, 83]	68.4 [40.8, 87.2]
Explains results				
Yes (*n* = 532)	90 [86.7, 92.5]***	79.1 [74.9, 82.7]***	64.7 [60, 69.2]***	68.4 [63.8, 72.6]***
No (*n* =162)	54.6 [46, 63]	45 [36.5, 53.8]	36.4 [28.3, 45.3]	37.6 [29.5, 46.4]
Explains treatment options				
Yes (*n* = 505)	90.2 [86.9, 92.8]***	79.8 [75.6, 83.5]***	65 [60.1, 69.5]***	69 [64.3, 73.3]***
No (*n* = 175)	58.1 [49.8, 66]	46.4 [38.1, 54.9]	37.7 [29.9, 46.2]	38 [30.2, 46.5]
Listens to opinions and preferences				
Yes (*n* = 487)	91.5 [88.3, 93.9]***	80.6 [76.4, 84.2]**	65.3 [60.4, 69.9]***	71.1 [66.5, 75.3]***
No (*n* = 198)	56.8 [48.9, 64.3]	47.3 [39.5, 55.3]	39 [31.6, 47]	35.2 [28.1, 43.1]

Note. Results based on chi-squared tests of difference in proportions. CI = confidence interval; GP = general practitioner; MD = medical doctor; USC = usual source of care.
[a]Includes participant responses of "strongly encouraged" and "rather encouraged."
* $p < .01$. ** $p < .05$. *** $p < .001$.

95% CI [0.27, 0.81]). Women felt more encouraged than men to discuss sensitive (OR = 1.56, 95% CI [1.04, 2.36], and social problems (OR = 1.69, 95% CI [1.11, 2.56]) and patients who were out of work were more than twice as likely as employed patients to feel encouraged to discuss emotional problems (OR = 2.32, 95% CI [1.00, 5.35]).

In Model 2, USC communication factors were significantly associated with encouragement. Patients who reported that their USC explains medical examination results were more likely to feel encouraged to talk about physical (OR = 2.82, 95% CI [1.15, 6.91]) and social problems (OR = 2.02, 95% CI [1.01, 4.04]). Patients who reported that their USC listens to their opinions and preferences were significantly more likely to feel encouraged to talk about physical (OR = 4.49, 95% CI [2.24, 9.01]), emotional (OR = 2.31, 95% CI [1.27, 4.21]), and social problems (OR = 2.88, 95% CI [1.60, 5.18]). The inclusion of USC communication characteristics in model 2 attenuated the significant effect of education and occupation on encouragement observed in model 1 and three ORs increased; the association between gender (being female) and the encouragement to talk about social problems (OR = 1.84, 95% CI [1.09, 3.11]), the association between less-than-good cognition and encouragement to talk about emotional problems (OR = 1.87, 95% CI [1.05, 3.34]), and the association between looking after home/family and encouragement to talk about social problems (OR = 0.41, 95% CI [0.20, 0.84]).

DISCUSSION

This is the first study in Ireland to investigate the extent to which older people feel encouraged by their USC to talk about different health problems. The findings suggest that the nature of these medical encounters is predominantly biomedical insofar as patients feel discouraged to discuss social and emotional health problems, meaning that the psychosocial needs of older patients may be overlooked in these medical encounters. Furthermore, a substantial proportion of older adults reported that their USC has a closed style of communication, meaning their USC rarely or never explained the results of tests to them, heeded their preferences, or explained different treatment options. Taken together, these findings suggest that a substantial proportion of providers do not engage their older patients in shared decision-making, and their communication style inhibits a patient's capacity to actively engage in the medical encounter. This is a problematic finding in view of previous evidence that shared decision-making between patients and health care professionals improves a range of patient outcomes, including quality of life (Arora et al., 2009) and illness-related anxiety (Shay & Lafata, 2015), and leads to more efficient use of health care services (Wilson et al., 2010) and greater perceived treatment choice (Mandelblatt et al., 2006).

Previous research has demonstrated that communication between health care providers and patients is a reciprocal process influenced by the characteristics and capabilities of both patients and providers (Verlinde et al., 2012), and the results of the current study showed several differences among patient socio-demographic characteristics. First, a strong gender difference in relation to sensitive and social problems was apparent: women felt more encouraged by their USC to talk about sensitive and social problems. Maintaining multiple social roles such as marriage, motherhood, and employment has been cited as the greatest source of stress for women (Freeman & Freeman, 2013), and this may explain why women in this survey felt more encouraged to talk about social problems than men. Homemakers felt more encouraged to talk about social health problems. As most of the homemakers in this sample were women, these findings are consistent with previously observed gender differences in social roles and stressors and willingness to discuss social problems (Freeman & Freeman, 2013). Second, although patients with lower education consistently reported feeling discouraged to discuss physical, emotional, and social problems, the association was no longer significant when positive USC communication was controlled for. It may be the case that patients with lower education may benefit more from a patient-centered style of communication compared with patients with higher education. Identifying thresholds like this can be used to inform targeted approaches.

Overall, participants felt more encouraged to discuss physical, emotional, and social problems when their USC explained their medical examination results and listened to their opinions and preferences. This finding is consistent with previous research that illustrated that patients ask more questions after physicians' explanation of test results (Murtagh, Furber, & Thomas, 2013) and that patients express their concerns, anxieties, and expectations when doctors display less "control-dominance" in medical encounters (Cecil & Killeen, 1997).

The findings of this study add to a growing body of HL evidence from Ireland that has already shown that older adults, in particular, are motivated for a health-literate health care system and believe that better and more accessible health information would improve their overall health (Coughlan et al, 2013). With an increased focus on strengthening primary and community care in Ireland, it will be necessary to improve people's access to health information and their capacity to use it through health education and improved health

TABLE 4

Binary Logistic Regressions of Perceived Encouragement on Patient Characteristics, Health Care Use, and USC Communication Characteristics

	Physical Problems		Emotional Problems		Sensitive Problems		Social Problems	
	Odds Ratio [95% CI]		Odds Ratio [95% CI]		Odd Ratio [95% CI]		Odds Ratio [95% CI]	
Patient Characteristics	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Female (versus male)	0.88 [0.55, 1.43]	0.88 [0.45, 1.72]	1.09 [0.71, 1.66]	1.07 [0.63, 1.82]	**1.56 [1.04, 2.36]***	1.55 [0.96, 2.48]	**1.69 [1.11, 2.56]***	**1.84 [1.09, 3.11]***
Age (years)	1.02 [0.99, 1.06]	1.02 [0.97, 1.06]	1.01 [0.99, 1.04]	1.01 [0.97, 1.04]	1 [0.98, 1.03]	1 [0.97, 1.03]	0.99 [0.96, 1.01]	0.98 [0.95, 1.01]
Marital status (ref: married/ partnership)								
Divorced/widowed	1.47 [0.74, 2.93]	1.19 [0.50, 2.84]	1.77 [0.98, 3.19]	2 [0.99, 4.01]	1.09 [0.65, 1.83]	1.09 [0.61, 1.95]	1 [0.60, 1.66]	0.95 [0.52, 1.72]
Never married	0.76 [0.38, 1.53]	1.02 [0.40, 2.58]	0.80 [0.44, 1.47]	0.86 [0.42, 1.77]	0.64 [0.36, 1.14]	0.70 [0.37, 1.34]	0.66 [0.37, 1.19]	0.65 [0.33, 1.29]
Education (ref: third level)								
No education/primary	**0.27 [0.13, 0.55]*****	0.49 [0.19, 1.27]	**0.39 [0.21, 0.72]****	0.55 [0.27, 1.15]	0.62 [0.36, 1.06]	0.93 [0.51, 1.71]	**0.47 [0.27, .81]****	0.76 [0.40, 1.45]
Lower secondary	**0.45 [0.21, 0.94]***	1.04 [0.34, 3.18]	**0.52 [0.28, 0.96]***	0.84 [0.40, 1.77]	0.63 [0.36, 1.08]	0.86 [0.47, 1.57]	**0.55 [0.31, .98]***	0.83 [0.43, 1.58]
Upper secondary	0.67 [0.30, 1.47]	1.10 [0.39, 3.12]	0.80 [0.44, 1.48]	1.01 [0.50, 2.05]	0.82 [0.48, 1.39]	1.05 [0.58, 1.91]	0.74 [0.42, 1.31]	0.79 [0.42, 1.50]
Citizen (ref: no)								
Yes	1 [0.78, 1.31]	1.15 [.71, 1.88]	0.86 [0.68, 1.08]	0.90 [0.62, 1.29]	0.98 [0.79, 1.22]	1.04 [0.79, 1.37]	0.85 [0.68, 1.06]	0.90 [0.67, 1.20]
Occupation (ref: employed)								
Homemaker	1.88 [0.88, 4.05]	2.14 [0.72, 6.38]	1.49 [0.81, 2.72]	1.22 [0.59, 2.55]	0.91 [0.51, 1.63]	0.75 [0.39, 1.44]	0.68 [0.38, 1.22]	**0.41 [0.20, 0.84]***
Retired	0.74 [0.37, 1.52]	0.74 [0.28, 1.97]	0.77 [0.43, 1.40]	0.69 [0.34, 1.41]	0.89 [0.52, 1.53]	0.93 [0.51, 1.71]	0.83 [0.48, 1.45]	0.63 [0.33, 1.22]
Out of work	1.5 [0.63, 3.58]	0.96 [0.35, 2.63]	**2.32 [1.00, 5.35]***	1.70 [0.69, 4.16]	1.93 [0.94, 3.97]	1.54 [0.72, 3.29]	0.87 [0.43, 1.76]	0.53 [0.25, 1.14]
Self-perceived health (ref: excellent/very good)								
Less than good	0.87 [0.51, 1.49]	1 [0.50, 2]	0.72 [0.45, 1.14]	0.82 [0.47, 1.42]	0.87 [0.58, 1.32]	0.98 [0.61, 1.58]	0.96 [0.64, 1.45]	1.08 [0.66, 1.76]
Chronic disease (ref: none]								
One chronic disease	1.32 [0.72, 2.43]	0.77 [0.33, 1.83]	1.22 [0.72, 2.06]	0.95 [0.46, 1.94]	1.32 [0.81, 2.16]	1.03 [0.56, 1.92]	1.37 [0.83, 2.28]	1.06 [0.54, 2.09]
Two or more chronic diseases	1.19 [0.64, 2.19]	0.58 [0.23, 1.47]	1.03 [0.61, 1.76]	0.74 [0.36, 1.53]	0.90 [0.55, 1.47]	0.63 [0.34, 1.14]	0.93 [0.56, 1.52]	0.66 [0.34, 1.26]
Cognition (ref: good)								
Less than very good	1.18 [0.68, 2.06]	1.1 [0.59, 2.05]	1.43 [0.86, 2.39]	**1.87 [1.05, 3.34]***	0.79 [0.50, 1.27]	0.72 [0.43, 1.22]	0.79 [0.49, 1.26]	0.73 [0.42, 1.27]
Depression symptoms (0-10 symptoms)	1.01 [0.90, 1.14]	1.01 [0.87, 1.17]	1.02 [0.92, 1.13]	0.99 [0.88, 1.12]	0.94 [0.86, 1.04]	0.92 [0.83, 1.02]	0.98 [0.89, 1.08]	0.96 [0.86, 1.06]
MD visits in the past 12 months	-	0.96 [0.91, 1.01]	-	0.96 [0.92, 1.01]	-	0.99 [0.95, 1.03]	-	1 [0.95, 1.06]
GP visits in the past 12 months	-	1.04 [0.97, 1.12]	-	1.06 [1, 1.13]	-	1.02 [0.97, 1.08]	-	1 [0.94, 1.07]

TABLE 4 (*continued*)

Binary Logistic Regressions of Perceived Encouragement on Patient Characteristics, Health Care Use, and USC Communication Characteristics

Patient Characteristics	Physical Problems		Emotional Problems		Sensitive Problems		Social Problems	
	Odds Ratio [95% CI]		Odds Ratio [95% CI]		Odds Ratio [95% CI]		Odds Ratio [95% CI]	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Explains results (ref: no)	-	**2.82 [1.15, 6.91]***	-	1.93 [0.89, 4.19]	-	1.71 [0.82, 3.58]	-	**2.02 [1.01, 4.04]***
Explains options (ref: no)	-	1.24 [0.51, 3]	-	1.5 [0.67, 3.35]	-	1.78 [0.86, 3.67]	-	1.44 [0.71, 2.92]
Listens to opinions (ref: no)	-	**4.49 [2.24, 9.01]*****	-	**2.31 [1.27, 4.21]****	-	1.45 [0.81, 2.60]	-	**2.88 [1.60, 5.18]*****
Constant	1.85	0.54	1.21	0.29	1.13	0.52	5.93	1.99
Prob(F) >	0.11	0	0.01	0	0.13	0	0	0
n	656	547	643	539	627	527	637	535

Note: Significant results are in bold. CI = confidence interval; Prob(F) = probability that the null hypothesis for the full model is true; ref = reference category (for the dependent variables); USC = usual source of care.
*$p < .01$, **$p < .05$, ***$p < .001$.

care communication (Nutbeam, 2000). Positive health care interactions provide patients with opportunities to engage with and appraise health care information and can lead to greater sense of empowerment and self-efficacy (Epstein & Street, 2011), improve patient outcomes (Hixon, 2004; Kleinbeck, 2005), and enhance patient safety (Byrd & Thompson, 2008). As such, provider-led efforts to enhance the capacity of patients to actively engage in health care settings are important for improving the HL skills of the population and for lifelong health and well-being.

There are a number of limitations to this study that are worth noting. First, the measure of encouragement only reflects patient views. What participants consider "discouraging" behavior was not documented, and participants' ability to identify verbal (such as prompts and follow-up questions) and nonverbal (such as eye contact and body language) cues from their USC may vary. Future studies should involve both providers and patients to measure the extent to which they encourage and feel encouraged in the medical encounter, respectively, and how these are interpreted. Indeed, previous research has found discrepancies between patients' and doctors' impressions of patient knowledge and shared-decision making (Hawkins, Batterhem, Elsworth & Osborne, 2017; Olson & Windish, 2010). Notwithstanding this limitation, the measures used in this study are self-reported and, therefore, they constitute a valid and accurate reflection of the patients' regular experience with their USC, regardless of what their USC does or does not do. Second, personality type, such as open or conscientious, was not measured, and personality has previously been linked to both health-seeking behavior and certain communication styles. For example, increased emergency department admissions have been recorded for patients with lower openness (Friedman, Veazie, Chapman, Willard, & Duberstein, 2013), and adults with peaceful, phlegmatic personalities (Littaner, 1983), who are characterized as being natural followers, tend not to be open communicators (Emanuel, 2013). Future studies would be enhanced by the inclusion of a measure of personality type. Third, the quality of primary health care interactions for older patients has now been linked to unnecessary hospital care use in other countries (Barker, Steventon, & Deeny, 2017; Haber, Wensky, & McCall, 2016). However, information on acute health care use was not sufficient in the present data to investigate this association in Ireland, so this would be a valuable area for future research. Finally, a measure of patient HL was not included in this study; therefore, HL of the sample is not known. The results of this study suggest that patients with lower levels of education are likely to benefit the most from a patient-centered approach in terms of disclosing different types of health prob-

lems. Therefore, future waves of this survey would benefit from the inclusion of a measure of HL to further investigate the role of patient-encouragement for patients with lower levels of HL in addition to lower levels of education.

CONCLUSION

A large proportion of older patients in Ireland felt discouraged to talk about sensitive and social health problems with their USC, and an increased focus on these health and social care needs is required to promote lifelong health, well-being, and healthy aging. Older patients felt more encouraged to talk about physical, emotional, and social health problems when their USC employed an open style of communication, such as explaining the results of medical tests to patients and listening to their opinions and preferences when choosing treatments. Overall, these findings suggest that open and patient-centered communication techniques can encourage the disclosure of a range of health problems that are prevalent among older patients in Ireland but are currently underreported. As such, promoting the active engagement of older patients in routine health care interactions is an important step in improving the responsiveness and HL of the health care system as well as patient HL, and for healthy population aging.

REFERENCES

Altin, S., & Stock, S. (2016). The impact of health literacy, patient-centered communication and shared decision-making on patients' satisfaction with care received in German primary care. *BMC Health Services Research*, *16*(1), 450. doi:10.1186/s12913-016-1693-y

Arora, N. K., Weaver, K. E., Clayman, M. L., Oakley-Girvan, I., & Potosky, A. L. (2009). Physicians' decision-making style and psychosocial outcomes among cancer survivors. *Patient Education and Counseling*, *77*(3), 404-412. doi:10.1016/j.pec.2009.10.004

Barker, I., Steventon, A., & Deeny, S. (2017). Association between continuity of care in general practice and hospital admissions for ambulatory care sensitive conditions: Cross sectional study of routinely collected, personal level data. *British Medical Journal*, *356*, j84. doi:10.1136/bmj.j84

Bertakis, K., & Azari, R. (2011). Patient-centered care is associated with decreased health care utilization. *Journal of the American Board of Family Medicine, 24*(3), 229-239. doi:10.3122/jabfm.2011.03.100170

Börsch-Supan, A. (2017). *Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 2. Release version: 6.0.0. SHARE-ERIC*. Retrieved from Survey of Health, Ageing and Retirement in Europe website: http://www.share-project.org/data-documentation/waves-overview/wave-2.html

Börsch-Supan, A., Brugiavini, A., Jürges, H., Kapteyn, A., Mackenbach, A., Siegrist, J., & Weber, G. (Eds.). (2008). *First results from the Survey of Health, Ageing and Retirement in Europe (2004-2007). Starting the longitudinal dimension.* Retrieved from Survey of Health, Ageing and Retirement in Europe website: http://www.share-project.org/fileadmin/pdf_documentation/FRB2/FRB2_all_chapters.pdf

Brabers, A. E., Rademakers, J. J., Groenewegen, P. P., van Dijk, L., & de Jong, J. D. (2017). What role does health literacy play in patients' involvement in medical decision-making? *PLOS One, 12*(3), e0173316. doi:10.1371/journal.pone.0173316

Byrd, J., & Thompson, L. (2008). "It's safe to ask": Promoting patient safety through health literacy. *Healthcare Quarterly, 11*(3), 91-94.

Cecil, D., & Killeen, I. (1997). Control, compliance, and satisfaction in the family practice encounter. *Family Medicine, 29*(9), 653-657.

Committee on Quality of Healthcare in America. (2001). *Crossing the quality chasm: A new health system for the 21st Century*. Retrieved from Institute of Medicine website: http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf

Coughlan, D., Turner, B., & Trujillo, A. (2013). Motivation for a health-literate health care system—Does socioeconomic status play a substantial role? Implications for an Irish health policymaker. *Journal of Health Communication, 18*(Suppl. 1), 158-171. doi:10.1080/10810730.2013.825674

Department of Health, Healthy Ireland. (2013a). *Positive ageing-starts now! The national positive ageing strategy*. Retrieved from Department of Health website: https://health.gov.ie/wp-content/uploads/2014/03/National_Positive_Ageing_Strategy_English.pdf

Department of Health, Healthy Ireland. (2013b). *Healthy Ireland–A framework for improved health and wellbeing 2013-2025*. Retrieved from Department of Health website: https://health.gov.ie/wp-content/uploads/2014/03/HealthyIrelandBrochureWA2.pdf

Elwyn, G., Laitner, S., Coulter, A., Walker, E., Watson, P., & Thomson, R. (2010). Implementing shared decision making in the NHS. *BMJ, 341*, c5146. doi:10.1136/bmj.c5146

Emanuel, C. (2013). Do certain personality types have a particular communications style? *International Journal of Social Science and Humanities, 2*(1), 4-10.

Epstein, R., & Street, R. (2011). The values and value of patient-centered care. *Annals of Family Medicine, 9*(2), 100-103. doi:10.1370/afm.1239

Freeman, D., & Freeman, J. (2013). *The stressed sex: Uncovering the truth about men, women, and mental health.* Oxford, England: Oxford University Press.

Friedman, B., Veazie, P., Chapman, B., Willard, M., Duberstein, P. (2013). Is personality associated with health care use by older adults? *Millbank Quarterly*, *19*(3), 491-527. doi:10.1111/1468-0009.12024

Gibney, S., & Doyle, G. (2017). Self-rated health literacy is associated with exercise frequency among adults aged 50+ in Ireland. *European Journal of Public Health, 27*(4), 755-761. doi:10.1093/eurpub/ckx028

Haber, S., Wensky, S., & McCall, N. (2016). Reducing inpatient hospital and emergency room utilization among nursing home residents: The role of patient-provider relationships. *Journal of Aging and Health, 29*(3), 510-530. doi:10.1177/0898264316641074

Hawkins, M., Gill, S., Batterham, R., Elsworth, G., & Osborne, R. (2017). The Health Literacy Questionnaire (HLQ) at the patient-clinician interface: A qualitative study of what patients and clinicians mean by their HLQ scores. *BMC Health Services Research, 17*(1), 309. doi:10.1186/s12913-017-2254-8

Health Service Executive. (2015). *Healthy Ireland in the Health Services. National Implementation Plan 2015-2017*. Retrieved from https://www.hse.ie/eng/about/who/healthwellbeing/healthy-ireland/healthy-ireland-in-the-health-services-implementation-plan-2015-2017.pdf

Health Service Executive, Department of Health and Children. (2008). *National strategy for service user involvement in the Irish Health Service: 2008-2013*. Retrieved from https://www.hse.ie/eng/services/

publications/your-service,-your-say-consumer-affairs/strategy/service-user-involvement.pdf

Hixon, AL. (2004). Functional health literacy: Improving health outcomes. *American Family Physician, 69*(9), 2077-2078.

Kleinbeck, C. (2005). Reaching positive diabetes outcomes for patients with low literacy. *Home Healthcare Nurse, 23*(1), 16-22.

Littaner, F. (1983). *Personality plus*. Grand Rapids, MI: Baker Publishing Group.

MacLeod, S., Musich, S., Gulyas, S., Cheng, Y., Tkatch, R., Cempellin, D., … Yeh, C. S. (2017). The impact of inadequate health literacy on patient satisfaction, healthcare utilization, and expenditures among older adults. *Geriatric Nursing, 38*(4), 334-341. doi:10.1016/j.gerinurse.2016.12.003.

Mandelblatt, J., Kreling, B., Figeuriedo, M., & Feng, S. (2006). What is the impact of shared decision making on treatment and outcomes for older women with breast cancer? *Journal of Clinical Oncology, 24*(30), 4908-4913. doi:10.1200/JCO.2006.07.1159

McGarrigle, C., Donoghue, O., Scarlett, S., & Kenny, R. (Eds.). (2017). *Health and wellbeing: Active ageing for older adults in Ireland. Evidence from The Irish Longitudinal Study on Ageing*. Retrieved from The Irish Longitudinal Study on Ageing website: https://tilda.tcd.ie/publications/reports/pdf/w3-key-findings-report/TILDA%20Wave%203%20Key%20Findings%20report.pdf

Murtagh, G., Furber, L., & Thomas, A. (2013). Patient-initiated questions: How can doctors encourage them and improve the consultation process? A qualitative study. *BMJ Open, 3*(10), e003112. doi:10.1136/bmjopen-2013-003112

Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International, 15*(3), 259-267. doi:10.1093/heapro/15.3.259

Olson, D., & Windish, D. (2010). Communication discrepancies between physicians and hospitalized patients. *Archives of Internal Medicine, 170*(15), 1302-1307. doi:10.1001/archinternmed.2010.239

Prince, M., Reischies, F., Beekman, A., Fuhrer, R., Jonker, C., Kivela, S. L., . . . Copeland JR (1999). Development of the EURO-D scale—A European, Union initiative to compare symptoms of depression in 14 European centres. *The British Journal of Psychiatry, 174*, 330-338.

Ratzan, S. C., Parker, R. M. (2000). Introduction. In C. R. Seldon, M. Zorn, S. C. Ratzan, & R. M. Parker (Eds), *National Library of Medicine current bibliographies in medicine: Health literacy*. Washington, DC: National Institutes of Health, US Department of Health and Human Services.

Roter, D., Stewart, M., Putnam, S., Lipkin, M., & Stiles, W. (1997). Communication patterns of primary care physicians. *Journal of the American Medical Association, 277*(4), 350-356.

Schulz, P. J., & Nakamoto, K. (2013). Health literacy and patient empowerment in health communication: The importance of separating conjoined twins. *Patient Education and Counseling, 90*(1) 4-11. doi:10.1016/j.pec.2012.09.006

Shay, L., & Lafata, J. (2015). Where is the evidence? A systematic review of shared decision making and patient outcomes. *Medical Decision Making, 35*(1), 114-131. doi:10.1016/j.pec.2012.09.006

Street, R. (1991). Information-giving in medical consultations: The influence of patients' communicative styles and personal characteristics. *Social Science & Medicine, 32*(5), 541-548.

Street, R. (1992). Communicative styles and adaptations in physician-parent consultations. *Social Science & Medicine, 34(10)*, 1155-1163.

Verlinde, E., de Laender, N., de Maesschalck, S., Deveugele, M., & Willems, S. (2012). The social gradient in doctor-patient communication. *International Journal for Equity in Health, 11*(1), 12-25. doi:10.1186/1475-9276-11-12.

Weingart, S., Zhu, J., Chiappetta, L., Stuver, S., Schneider, E. C., Epstein, A. M., . . . Weissman, J. S. (2011). Hospitalized patients' participation and its impact on quality of care and patient safety. *International Journal for Quality in Healthcare, 23*(3), 269-277. doi:10.1093/intqhc/mzr002

Williams, S., Haskard, K., & DiMatteo, M. R. (2007). The therapeutic effects of the physician-older patient relationship: Effective communication with vulnerable older patients. *Clinical Interventions in Aging, 2*(3), 453-467.

Wilson, S., Strub, P., Buist, A., Knowles, S., Lavori, P. W., Lapidus, J., & Vollmer, W. M.; Better Outcomes of Asthma Treatment (BOAT) Study Group. (2010). Shared treatment decision making improves adherence and outcomes in poorly controlled asthma. *American Journal of Respiratory and Critical Care*, *181*(6), 566-577. doi:10.1164/rccm.200906-0907OC

Wren, M., Keegan, C., Walsh, B., Bergin, A., Eighan, J., Brick, A., . . . Banks, J. (2017). *Projections of demand for healthcare in Ireland, 2015-2030: First report from the Hippocrates model.* Retrieved from Economic and Social Research Institute website: https://www.esri.ie/pubs/RS67.pdf

Zarcadoolas, C., Pleasant, A., & Greer, D. (2009). *Advancing health literacy: A framework for understanding and action*. San Francisco, CA: John Wiley & Sons.