



**Communicating with Companions. The Impact of Companion Empowerment and
Companion Literacy on the Well-being of Elderly Patients**


Ana Suárez Vázquez, Leticia Suárez Álvarez and Ana Belén del Río Lanza

Department of Business Administration, University of Oviedo

Author Note

Ana Suárez Vázquez  <https://orcid.org/0000-0003-4257-9367>

Leticia Suárez Álvarez  <https://orcid.org/0000-0001-5162-0531>

Ana Belén del Río Lanza  <https://orcid.org/0000-0002-9716-8269>

This research was funded by Ministerio de Economía, Hacienda y Competitividad, Gobierno de España, grant number ECO2016-76783-R

Corresponding author at Ana Suárez Vázquez, Faculty of Economics and Business, University of Oviedo, Avda. del Cristo s/n, 33017 Oviedo (Asturias) Spain, Phone +34 985 10 28 21, Fax +34 985 10 37 08, anasv@uniovi.es

**This is an Accepted Manuscript of an article published by Taylor & Francis in
Health Communication on 17 Dec 2020 available at
<http://www.tandfonline.com/10.1080/10410236.2020.1862398>**

Abstract

The complexity of the current healthcare ecosystem justifies the convenience of targeting patients' companions in health communication strategies. Designing successful interventions requires taking into account which keys should be pressed in companions in order to generate positive outcomes in the accompanied patients. In particular, this paper explores how companion health empowerment and companion health literacy affect the well-being of chronically-ill elderly patients. Data for this research come from a cross-sectional quantitative study including 1,814 individuals (907 chronically-ill elderly patients and their 907 companions). Data were collected through two online questionnaires, one for patients and one for companions. The findings suggest that companion health empowerment is defined by the dimensions information search empowerment and knowledge development and decision participation empowerment. Furthermore, the distinction between functional, interactive and critical health literacy has revealed to be useful for comprehending companion health literacy. A structural equation model shows that critical health literacy sets the threshold above which companion health literacy improves accompanied patient well-being, even more so when it is backed up by companion information search empowerment and by companion knowledge development and decision participation empowerment.

Keywords: health literacy, health empowerment, companions, elderly patients, well-being

Communicating with companions. The impact of companion empowerment and companion literacy on the well-being of elderly patients

Over the past few decades one of the most significant changes in the healthcare industry has been patient participation in the healthcare process (Danaher & Gallan, 2016). Health service quality improvement efforts contributed to this change but there are also economic reasons, since the more active role of patients contributes to controlling healthcare costs (Sharma & Conduit, 2016). The growing focus on patient involvement in healthcare is equally extended to other people frequently involved in the medical encounter, the non-professional friends or family—hereafter, companions—(Laidsaar-Powell et al., 2013).

Understanding companions' experiences is a topic with great potential in health services research (Danaher & Gallan, 2016; Keeling et al., 2018). Local networks, such as family members or close friends, can carry out a variety of functions during a medical encounter (Ellingson, 2002): recalling of information, physical support, emotional support, note taking, decision support or translation. In fact, previous studies have shown that companion involvement can provoke positive consequences in terms of patient visit satisfaction, patient understanding or quantity and quality of information exchanged (Laidsaar-Powell et al., 2013). A relevant issue yet to be solved is how to promote these desirable outcomes when designing communication strategies targeted to companions. In the context of communication interactions between healthcare professionals and patients, the variables health empowerment and health literacy have assumed dominating roles (Schulz & Nakamoto, 2013). The purpose of this paper is to draw on previous studies about patient health empowerment and patient health literacy to ascertain how to integrate companion health empowerment and companion health literacy to improve the impact of communication targeted to companions.

Recent evolution of the healthcare environment supports the relevance of the objective of this study. In 2019, one of the ten threats to global health signaled by the World Health Organization was vaccine hesitancy. Currently, debate among schools that could require an eventual covid-19 vaccine and parents that are hesitant to give it to their children (Chuck, 2020), illustrates the relevance of studying both companion health literacy and companion health empowerment. The reluctance of parents to vaccinate their children exemplifies that the psychological sense of personal control over a decision that affects the health of a third person (companion health empowerment) does not necessarily mean that the decision maker is adequately informed (companion health literacy). In this paper we focus on companions of chronically-ill elderly patients. This choice is justified by the fact that aging populations, and an increasing number of people with chronic or long-term conditions, are key drivers impacting financial sustainability of today's healthcare ecosystem (Deloitte, 2020). Moreover, the role of companions is crucial in this context. Not in vain, non-paid attendants, usually family members, are a common phenomenon in geriatrics and, precisely, the elderly segment is a heavy user of healthcare services (Ishikawa et al., 2005).

The contributions of this paper are twofold. First, no previous research has explored the relevance of adopting a holistic perspective of health literacy and health empowerment in the case of companions. Second, by studying health literacy and health empowerment of primary caregivers, some light is shed on the problem of how to manage communication programs specifically designed to reinforce effective social support from the companionship of family and friends.

Theoretical Background and Hypotheses Development

Health Empowerment

Empowerment is a complex and multidimensional concept (Gibson, 1991). In fact, the term patient empowerment has different meanings for different audiences (Palumbo, 2017). Broadly speaking, empowerment is usually considered a cornerstone of American culture and refers to the mechanism by which people are allowed to cope with their affairs themselves. Implicit in this definition is the notion of authority, someone is empowered to something when the dominant figure in this matter transfers to him or her part of the control (Rappaport, 1987). This redistribution of power, which is at the core of a patient-centered care approach (Keeling et al., 2018), involves a shift from a paternalistic model —the authority gives advice to the consumer— to a relational model —the consumer has the psychological sense of personal control over a particular decision — (Camacho et al., 2014). Thus, parallel to a process of “giving power by”, empowerment entails a process of “creating power with” (Aujoulat et al., 2007). Indeed, people cannot “be empowered” by others (Labonté & Laverack, 2008); empowerment is not about giving or taking power but supporting and helping patients “to make independent, knowledgeable decisions” (Anderson & Funnell, 2010, p. 279).

The prominence of empowerment in healthcare rests on its potential for improving cost-effectiveness of care, especially for chronically-ill patients (Bravo et al., 2015). In fact, empowered patients are key to achieve “an effective, efficient, and continuously improving health system” (Cosgrove et al., 2013, p. 321). The choices of chronically-ill patients that affect their health and well-being the most are made by themselves (Anderson et al., 2000; Suárez et al., 2017).

In the current health ecosystem, patient empowerment goes beyond the health professional-patient relationship, involving resources from friends and family (Danaher & Gallan, 2016). This means that patient empowerment has a social dimension and affects all the people included in the “patient’s inner circle” (Marzorati et al., 2018). Companions are an active part of the care process, providing support inside and outside of the hospital setting to healthcare providers (Bailo et al., 2019). As previously mentioned, empowerment is associated with health outcomes as well as with the development of psychosocial skills to deal with disease and treatment and life-related issues (Aujoulat et al., 2007), such as well-being (Bravo et al., 2015). Chronically-ill elderly patients may experience little improvements in health changes, but there is room for gaining in well-being (Keers et al., 2004).

There is no universal and global measure of empowerment (Zimmerman, 1995). In the specific context of chronic diseases, Prigge et al. (2015) proposed a conceptualization of patient empowerment based on the Self-Determination Theory. These authors defined patient empowerment as “a set of self-determined behaviors based on the patient’s individual needs for autonomy and competence, undertaken with the goal of actively dealing with their disease” (Prigge et al., 2015, p. 376). In accordance with this proposal, patient empowerment consists of three dimensions: (a) patient’s information search, associated with systematically and actively collecting information related with the disease and treatment; (b) knowledge development, actively and easily organizing disease-related information and trying to understand it with the aim of achieving expertise to keep up with the physician; (c) decision participation, patient-physician co-work to develop a treatment strategy and to make treatment decisions. In the case of companions, as explained in Section 3 of this paper, knowledge development and decision participation form a unique dimension, revealing

companion health empowerment as a two-dimensional construct: companion information search empowerment and companion knowledge development and decision participation empowerment. Hence, we posit the following hypotheses regarding the influence of companion empowerment on the well-being of the accompanied patients:

H1a: Higher levels of information search empowerment of companions of chronically-ill elderly patients lead to higher levels of well-being of the accompanied patients.

H1b: Higher levels of knowledge development and decision participation empowerment of companions of chronically-ill elderly patients lead to higher levels of well-being of the accompanied patients.

Health Literacy

First used in the seventies in a health education paper (Simonds, 1976), the term health literacy (a detailed revision of definitions and models can be seen in Sørensen et al., 2012) has evolved, as has the complexity of the health system (Ratzan, 2001). In recent times there has been renewed interest in health literacy due to the greater availability and accessibility of health-related information on the Internet, and the subsequent importance of eHealth literacy skills (Manafa & Wong, 2012).

Contrary to what could be logically thought, health literacy is not equivalent to literacy in general, even when there is a strong correlation between them (Sanders et al., 2009). In broad terms, researchers and policy makers often use the term health literacy to refer to “a set of skills that people need to function effectively in the healthcare environment” (Berkman et al., 2011, p. 97). The advances in the concept health literacy are supported by “its relative importance as a health determinant, its measurement, and

its potential for use to guide clinical practice, public health and public policy” (Nutbeam et al., 2018).

The United Nations ECOSOC Ministerial Declaration of 2009 identified health literacy as an important determinant of population health. First evidences about the relationship between health literacy and health outcomes appeared in the 1990s (Parker et al., 1995). Since then, research has produced inconsistent results. Mixed results have been reached both for the relationship between health literacy and health outcomes and for the results of interventions to improve the health of people with low literacy (Pignone et al., 2005). A possible explanation for these conflicting results lies in the fact that no gold standard exists for measuring health literacy (Berkman et al., 2011). Besides, as a health system is complex and multifaceted, multiple aspects can be measured to understand the impact of health literacy (Benson, 2020). In their systematic review of literature on literacy and health outcomes, DeWalt et al. (2004) concluded that low literacy is associated with a variety of adverse health conditions such as lower knowledge about health and health care, higher risks of hospitalization, poorer health status and the presence, control or outcomes of some chronic diseases. In 2011 an updated systematic review (Berkman et al., 2011) concluded that low health literacy is also associated with differential use of certain healthcare services and health-related outcomes such as the ability to demonstrate taking medications and interpret health messages. Paasche-Orlow and Wolf (2007) derived a component-causal model based on established associations between limited health literacy and health outcomes to provide potential mechanisms to explain such relationship.

With the exception of studies in the field of children with special healthcare needs (see, for example, Keim-Malpass et al., 2015) the impact of companion health literacy has not been fully elucidated. Studies in the field of pediatric health literacy

have suggested the convenience of broadening the concept of health literacy to consider collective health literacy, that is, health literacy of all people responsible for a child's healthcare (Sanders, 2009) and specific instruments for measuring parental health literacy have been proposed (Ayre et al., 2020). Moreover, both health institutions and research agree about the social nature of health literacy. It can be said that health literacy is a social resource (WHO, 2009). In fact, support from an individual's social environment can buffer the adverse effects of low health literacy (Lee et al., 2004) and elderly patients have specific learning needs arising from complexities associated with managing chronic diseases and cognitive and physical and/or psychological changes associated with aging (Speros, 2009).

Health literacy was originally assimilated to functional literacy, essentially, reading, comprehension, and numeracy skills (Rubinelli et al., 2009). Under this approach, being health literate implied being able to "apply literacy skills to health-related materials such as prescriptions, appointment cards, medicine labels, and directions for home healthcare" (Parker et al., 1995, p. 537). In spite of the importance of these skills, health literacy is more than the possibility of reading pamphlets or making health appointments and "implies the achievement of a level of knowledge, personal skills and confidence to take action to improve personal and community health by changing personal lifestyles and living conditions" (Nutbeam, 1998, p. 357). Thus, Nutbeam (2000) proposed a three-dimensional conceptualization of health literacy that distinguishes between: basic/ functional literacy, communicative/interactive literacy and critical literacy. Functional literacy mainly overlaps with the narrow vision of health literacy. Communicative and critical literacy refer to a mix of cognitive and social skills that in the former case are related to an active participation in the interchange of information, while, in the latter, allow to critically analyze the information. Therefore,

the following hypotheses can help to expand the knowledge on the impact of companion health literacy in the case of elderly patients with chronic illnesses:

H2a: Higher levels of functional health literacy of companions of chronically-ill elderly patients lead to higher levels of well-being of the accompanied patients.

H2b: Higher levels of interactive health literacy of companions of chronically-ill elderly patients lead to higher levels of well-being of the accompanied patients.

H2c: Higher levels of critical health literacy of companions of chronically-ill elderly patients lead to higher levels of well-being of the accompanied patients.

In the same way, to the World Health Organization, “By improving people’s access to health information, and their capacity to use it effectively, health literacy is critical to empowerment” (Nutbeam, 1998; p. 35). The connection between health literacy and health empowerment has been an object of debate in the scientific literature (Cron Dahl & Karlsson, 2016). Thus, the following hypotheses can be formulated:

H3a: Higher levels of companion functional health literacy lead to higher levels of companion information search empowerment.

H3b: Higher levels of companion interactive health literacy lead to higher levels of companion information search empowerment.

H3c: Higher levels of companion critical health literacy lead to higher levels of companion information search empowerment.

H3d: Higher levels of companion functional health literacy lead to higher levels of companion knowledge development and decision participation empowerment.

H3e: Higher levels of companion interactive health literacy lead to higher levels of companion knowledge development and decision participation empowerment.

H3f: Higher levels of companion critical health literacy lead to higher levels of companion knowledge development and decision participation empowerment.

Methodology

Data Collection

Data for this research come from a cross-sectional quantitative study through an online questionnaire targeted to patients and through an online questionnaire targeted to their companions. All items in the questionnaires were discussed with marketing researchers and health professionals. Furthermore, a pre-test was carried out (45 patients/45 companions) to assure the understandability and content validity of the items.

Our final sample includes a large number ($n_{\text{total}} = 1,814$) of chronically-ill elderly patients ($n_{\text{patients}}=907$) and their corresponding companions ($n_{\text{companions}}=907$). To the best of our knowledge, this sample can be regarded as unique. Other studies in the field have to date relied on one informative agent (patient, physician, companion) or on small samples with more than one agent. The data collection was carried out by trained collaborators who were full-time business students, and, in exchange for course credits, recruited respondents —chronically-ill elderly patients and their companions— via convenience sampling in their own environment as well as in health centers. Recruited participants received a link to an online questionnaire. Participants and companions completed the questionnaire independently.

Description of the Sample

The average age of patients was 75.3 ($SD=8.1$), almost equally distributed by gender (56% were female). Besides, 48.5% of the patients did not complete elementary or high school and 60.4% live by themselves. Most common chronic illnesses were

related to medical specialties such as cardiology (18.6%), traumatology (11.8%) and endocrinology (11.7%). Patients received assistance in tasks such as scheduling physician appointments (57.9%), managing medications (71.9%), writing, keeping and remembering physician prescriptions (73 %) and transportation (75.0%). Regarding the companions, 61% of the companions were female, their average age was 39.5 ($SD=16$), 46.1% are children and 35.5% are grandchildren of the patients they accompanied. 49.9% of the companions do paid work and 27.3% are students. As expected, taking into account that our study focused on elderly patients, the presence of spouses of patients is clearly lower than that described in previous studies on the role of companions (i.e. Wolff & Roter, 2011).

Measures

Companion Health Empowerment

Companions participating in the study completed the empowerment scale proposed by Prigge et al. (2015). As explained above, the original scale was designed to measure patient empowerment and consists of a three-dimensional scale.

Companion Health Literacy

Companions reported their health literacy through the FCCHL (Functional Communicative and Critical Health Literacy) scale based on Nutbeam (Nutbeam, 2000) and extensively cited both by academics and health institutions. As previously mentioned, this scale distinguishes between functional literacy, interactive literacy, and critical literacy.

Patient Well-being

Patients reported their perceived level of well-being by answering the MQOL-R (McGill Quality of Life Questionnaire-Revised) (Anderson et al., 2016; McColl-Kennedy et al., 2017). It was designed as a measure of the quality of life of people with life-threatening illness and defines quality of life as subjective well-being through four dimensions: physical, psychological, existential, and social. In comparison with alternative measures, the MQOL-R (14 items) includes the existential domain, the physical domain is not predominant and considers positive contributors to quality of life (Cohen et al., 2017).

Reliability and Validity of the Measurement Scales

To evaluate the reliability and validity of the measurement scales, we carried out a confirmatory factor analysis using EQS 6.2. The results¹ supported the internal consistency of each construct, since the composite reliability index reached acceptable values, close to or greater than 0.80 in all cases. Moreover, a high degree of shared variance was evident between the indicators of each construct, since average variance extracted (AVE) was greater than 0.50. Equally, the convergent validity of the scales was confirmed since each item loaded significantly on its respective construct and was over 0.5. As confirmation of the existence of discriminant validity, for each pair of latent variables the square root of AVE exceeded correlations between the latent variables. Discriminant validity was confirmed for companion health literacy and patient well-being, the confidence interval for the possible correlations between each pair of factors did not include the value 1. However, in the case of companion health empowerment, the original three-dimensional conceptualization cannot be supported.

¹ Details on the validation of measurement scales are available by request from the corresponding author.

The results suggested the convenience of considering a two-dimensional conceptualization that represents companion health empowerment through the dimension “Information search” (CISE) and through a second dimension that results from adding the items of the dimensions “Knowledge development” and “Decision participation” (CKDDPE).

Results

We tested the hypotheses with a structural equation model by using EQS 6.2, which operates upon the normalized variance–covariance matrix derived from the raw database. Table 1 shows the results of this analysis.

[Table 1 near here]

The structural model exhibited adequate fit (S-B χ^2 (329)=1414.3085 ($p<0.000$); BBNNFI=0.889; CFI=0.903; RMSEA=0.062). H1a states that CISE increases the well-being of the accompanied patient. The impact of CISE on the well-being of the patient is positively significant, in support of H1a. Furthermore, the results indicate a positive effect of CKDDPE on the well-being of the accompanied patient. Thus, H1b is supported.

H2a, H2b and H2c predict that functional, interactive and critical health literacy, respectively, increase the well-being of the accompanied patients. The impact of functional health literacy and interactive health literacy on the patients’ well-being is negatively significant. However, the results showed that critical health literacy positively and significantly affects the well-being of the accompanied patients. Therefore, H2a and H2b are reverse supported, while H2c is supported.

H3a and H3d posit that companion functional health literacy increases companion CISE and companion CKDDPE. We found that none of these effects are statistically significant, indicating that H3a and H3d are not supported.

H3b and H3e state that companion interactive health literacy increases CISE and CKDDPE, respectively. As the results have shown, the impact of companion interactive health literacy on CISE is not significant. Thus, H3b is not supported. Furthermore, the results revealed a significant and negative effect of interactive health literacy on CKDDPE. Thus, H3e is reverse supported.

H3c and H3f propose that companion critical health literacy raises CISE and CKDDPE, respectively. The results showed that both effects are significantly positive, in support of H3c and H3f.

Discussion and Conclusion

Discussion

The increasing complexity of health ecosystems signifies that, when defining health communication strategy for 2020 and beyond, both patients and their local networks should be taken into account (Leino, 2017). This paper is based on previous findings in the field of patient empowerment and patient health literacy and explores the effect of health literacy and health empowerment of companions of chronically-ill elderly patients on the well-being of the accompanied patients. Empowerment is especially relevant to contexts of chronic illness. In addition, elderly patients are those with more difficulties when it comes to reading and understanding medical information.

This study offers four primary implications for extant research into chronically-ill elderly patients' well-being. First, prior research has established that health empowerment and health literacy relate to health outcomes, but it did not provide a field

test of this framework for contexts of a family member participating in the physician-patient encounter. By doing so, through a cross-sectional quantitative study involving a paired sample of 907 chronically-ill elderly patients and their 907 non-paid companions, our results indicate that previous conceptualization of empowerment for patients suffering from chronic diseases should be reformulated when measuring companion empowerment. The original three-dimensional proposal by Prigge et al. (2015) suggests that patients' empowerment consists of the dimension "patients' information search", "patients' knowledge development" and "patients' decision participation with regard to suggested treatments". When extending this proposal to companions, results indicated problems with discriminant validity between the dimensions "companions' knowledge development" and "companions' decision participation". In the original Prigge et al. (2015) patient empowerment conceptualization, rooted in the Self-Determination Theory, the dimensions "information search" and "knowledge development" address the need for competence, while "patients' decision participation" addresses the need for autonomy. A possible explanation of the difference in the conceptual structure of the concept empowerment with regard to patients vs. companions could be that, for companions, developing knowledge does not satisfy the need for competence but rather the need for autonomy. Thus, our findings indicate that achieving expertise related with the disease of the accompanied patient (that is, acquiring "knowledge development") is a way to fulfill the companions' desire to experience that their role as companions responds to their own volition (that is, it responds to the need for autonomy), in the same way that decision participation does. Scholars have previously suggested that those patients that choose freely to delegate responsibility for decision-making can be considered empowered, even when they are not activated patients (Anderson et al. 1991; Aujoulat et al., 2007). Our findings provide evidence that, in the case of companions,

empowered companions are not necessarily activated companions. Perception of autonomy can be improved through knowledge development empowerment even without assuming responsibility for the accompanied patient's care through actively participating in decisions related to his/her treatment.

Secondly, this study reflects the relevance of taking into account the different health literacy dimensions when analyzing the influence of companion health literacy on companion health empowerment. We confirmed that the three-dimensional proposal of Nutbeam (2000) for patient health literacy can be extended to evaluate companion health literacy. A confirmatory factor analysis supported the internal consistency of the measurement scale used, its convergent validity and the discriminant validity between functional literacy, interactive literacy, and critical literacy. Further, on the one hand, our study demonstrates that functional health literacy of the companion is not enough to trigger companion empowerment, neither CISE nor CKDDPE. On the other hand, a higher level of interactive literacy of the companion does not increase the CISE and decreases CKDDPE. This negative effect of companion interactive literacy on CKDDPE indicates that a higher comfort of companions in searching for health information related to the patients they accompany diminishes their motivation to manage that information. This finding aligns with previous research reporting no outcome of programs designed to improve interactive literacy of older adults (Campbell & Nofli, 2005) and converges with evidence that older patients may be interested in learning about their health but, even so, they may prefer to delegate decisions on their healthcare providers (Manafa & Wong, 2012). We extend these findings by indicating that, in the context of chronically-ill elderly patients, this position can also be found in companions, not only in patients.

Thirdly, this study shows that critical health literacy sets the threshold above which companion health literacy pushes companion health empowerment. This finding converges with evidence about the social dimension of critical health literacy (Manafu & Wong, 2012). It has been suggested that there might be a “threshold effect” in the relationship between health literacy and health outcomes (Paasche-Orlow & Wolf, 2007). In this sense, our findings provide evidence that, for companions of chronically-ill elderly patients, critical health literacy signals the threshold above which companion health literacy improves CISE and CKDDPE.

Fourthly, this research responds to the call of previous literature about the necessity to identify the role of health literacy skills in potentially contributing towards well-being among the elderly (Manafu & Wong, 2012) by focusing on the role of companions. Thus, the final contribution of this study is related to research on the role of companions of chronically-ill elderly patients. Previous studies have demonstrated that accompanied vulnerable older adults show higher satisfaction with physician care than non-accompanied patients (Wolff & Roter, 2008) and a better experience during medical encounters (Rosland et al., 2011). We extend these findings by showing that the presence of companions also entails benefits in terms of accompanied patient well-being but that the capitalization of said benefits depends on the level of health literacy of the companions. Thus, critical literacy of the companion has a direct influence on the accompanied patients’ well-being and an indirect influence through its positive effect on the companions’ empowerment.

These findings must however be interpreted within the following limitations. The study of how companion health literacy and companion health empowerment affect patient well-being focuses specifically on non-paid companions. Further research could take into account professional companions. It could also address other types of

vulnerable patients beyond the elderly. Moreover, as friends, family and significant others can help to transmit knowledge to patients in daily life (Gordon et al., 2013), the effect of companion health literacy and companion health empowerment on patient health literacy and patient health empowerment should be studied. Furthermore, as the needs and vulnerability of the companions are frequently ignored (Leino, 2017), the effect of health communication strategies on the companions' well-being, and not only on that of the patients, merits further attention. This research could also be extended to consider the negative effect of companion involvement in terms of ethical concerns related to patient autonomy or patient privacy.

Conclusions

A better understanding of companion health literacy and companion health empowerment may help healthcare stakeholders manage companion communication more effectively. This study shows that, for companions, and as suggested by previous studies in the field of healthcare professional-patient communication (Schulz & Nakamoto, 2013), health literacy and health empowerment are distinct concepts. Furthermore, in the case of companions of chronically-ill elderly patients, critical literacy is the level of literacy able to trigger companion empowerment. We find that developing education strategies targeted to non-paid companions influences accompanied patients' well-being. Additionally, we provide guidance to develop more effective education strategies for companions.

Practice Implications

“The success or failure of medical care in the 21st century rests increasingly on the ability of patients (perhaps with help from their families) to carry out complex health instructions on their own” (Schwartzberg, 2002, p. 145). This paper shows that

chronic diseases and age-related changes render the “perhaps” of the previous quote unnecessary. The results obtained help to design health communication interventions able to optimize the patient-companion partnership.

Different strategies have been proposed by previous studies to improve communication with elderly adults. These strategies are designed to compensate for cognitive and sensory changes associated with aging (Speros, 2009). This research shows that, in terms of the effect on patients’ well-being, the companion is also a compensation resource able to ameliorate age-related deficiencies. This study signals the crucial role of identifying health literacy skills of companions during medical visit communication.

The distinct outcomes of the dimensions of companion health literacy have important implications for health communication initiatives. It is not possible to capitalize companions as a resource able to improve the well-being of chronically-ill elderly patients unless the companions achieve a literacy level able to encourage them to become responsible partners in the patients’ care. Critical literacy sets that cut-point. This paper highlights the risks of misidentifying the health literacy skills of companions of chronically-ill elderly patients. In the case of elderly patients, the patient-centered approach might be a companion/patient-centered approach. Efforts to determine strategies to effectively communicate health information to companions of elderly patients should be targeted to companions able to achieve a critical level of literacy.

The importance of contributing to develop the critical health literacy of companions means that communication strategies focused on the transmission of knowledge are not enough. Educational methods oriented to companions must be individualized to the companions’ level of literacy. Efforts should prioritize teaching strategies — communicating information through direct professional talk— over

supporting strategies —oriented to encourage companions through an indirect professional talk—. Besides, given that companion empowerment is a two-dimensional concept —CISE and CKDDPE— a conservative strategy with companions with lower health literacy would be to encourage them to search for information on the disease of the accompanied patient and to organize the information to better understand it. This avoids the risks associated with motivating companions to make treatment decisions, while preserving the benefits of empowerment in terms of gains both of competency and autonomy. This is an interesting difference with managing empowerment in companions vs patients. In the latter, gains of autonomy might necessarily involve decision participation.

Acknowledgements

We would like to thank the students who helped with the data collection and also the patients and companions that participated in the survey.

References

- Anderson, R. M., & Funnell, M. M. (2010). Patient empowerment: myths and misconceptions. *Patient Education and Counseling*, 79(3), 277-282.
<https://doi.org/10.1016/j.pec.2009.07.025>
- Anderson, R. M., Funnell, M. M., Barr, P. A., Dedrick, R. F., & Davis, W. K. (1991). Learning to empower patients: Results of professional education program for diabetes educators. *Diabetes care*, 14(7), 584-590.
<https://doi.org/10.2337/diacare.14.7.584>
- Anderson, R., Funnell, M., Carlson, A., Saleh-Statin, N., Cradock, S., & Skinner, T. C. (2000). Facilitating self-care through empowerment. In F.J. Snoek, & T.C.

- Skinner (Eds.), *Psychology in diabetes care* (pp. 69-97). John Wiley & Sons.
<https://doi.org/10.1002/0470846569.ch4>
- Anderson, L., Spanjol, J., Jefferies, J. G., Ostrom, A. L., Nations Baker, C., Bone, S. A.,
... & Rapp, J. M. (2016). Responsibility and well-being: resource integration
under responsabilization in expert services. *Journal of Public Policy &
Marketing*, 35(2), 262-279. <https://doi.org/10.1509%2Fjppm.15.140>
- Aujoulat, I., d'Hoore, W., & Deccache, A. (2007). Patient empowerment in theory and
practice: polysemy or cacophony? *Patient Education and Counseling*, 66(1), 13-
20. <https://doi.org/10.1016/j.pec.2006.09.008>
- Ayre, J., Costa, D. S., McCaffery, K. J., Nutbeam, D., & Muscat, D. M. (2020).
Validation of an Australian parenting health literacy skills instrument: The
parenting plus skills index. *Patient Education and Counseling*, 103(6), 1245-
1251. <https://doi.org/10.1016/j.pec.2020.01.012>
- Bailo, L., Guidi, P., Vergani, L., Marton, G., & Pravettoni, G. (2019). The patient
perspective: investigating patient empowerment enablers and barriers within the
oncological care process. *Ecancermedicalscience*, 13, 912.
<https://doi.org/10.3332/ecancer.2019.912>
- Benson, T. (2020). Measure what we want: a taxonomy of short generic person-reported
outcome and experience measures (PROMs and PREMs). *BMJ Open
Quality*, 9(1), e000789. <https://doi.org/10.1136/bmjopen-2019-000789>
- Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J., & Crotty, K. (2011).
Low health literacy and health outcomes: an updated systematic review. *Annals
of Internal Medicine*, 155(2), 97-107. [https://doi.org/10.7326/0003-4819-155-2-
201107190-00005](https://doi.org/10.7326/0003-4819-155-2-201107190-00005)

- Bravo, P., Edwards, A., Barr, P. J., Scholl, I., Elwyn, G., & McAllister, M. (2015). Conceptualising patient empowerment: a mixed methods study. *BMC Health Services Research*, 15(1), 252. <https://doi.org/10.1186/s12913-015-0907-z>
- Camacho, N., De Jong, M., & Stremersch, S. (2014). The effect of customer empowerment on adherence to expert advice. *International Journal of Research in Marketing*, 31(3), 293-308. <http://dx.doi.org/10.1016/j.ijresmar.2014.03.004>
- Campbell, R. J., & Nolfi, D. A. (2005). Teaching elderly adults to use the Internet to access health care information: before-after study. *Journal of Medical Internet Research*, 7(2), e19. <http://doi.org/10.2196/jmir.7.2.e19>
- Chuck, E. (2020, September 23). Many parents are hesitant to give their kids a Covid-19 vaccine. What if schools require it? *NbcNews*.
<https://www.nbcnews.com/news/us-news/many-parents-are-hesitant-give-their-kids-covid-19-vaccine-n1240741>
- Cohen, S. R., Sawatzky, R., Russell, L. B., Shahidi, J., Heyland, D. K., & Gadermann, A. M. (2017). Measuring the quality of life of people at the end of life: The McGill Quality of Life Questionnaire–Revised. *Palliative Medicine*, 31(2), 120-129. <https://doi.org/10.1177%2F0269216316659603>
- Cosgrove, D. M., Fisher, M., Gabow, P., Gottlieb, G., Halvorson, G. C., James, B. C., ... & Toussaint, J. S. (2013). Ten strategies to lower costs, improve quality, and engage patients: the view from leading health system CEOs. *Health Affairs*, 32(2), 321-327. <http://dx.doi.org/10.1377/hlthaff.2012.1074>
- Cron Dahl, K., & Eklund Karlsson, L. (2016). The nexus between health literacy and empowerment: A scoping review. *Sage Open*, 6(2), 1-7.
<https://doi.org/10.1177%2F2158244016646410>

- Danaher, T. S., & Gallan, A. S. (2016). Service research in health care: positively impacting lives. *Journal of Service Research*, *19*(4), 433-437.
<http://dx.doi.org/10.1177/1094670516666346>
- Deloitte (2020). 2020 Global health care outlook.
<https://www2.deloitte.com/global/en/pages/life-sciences-and-healthcare/articles/global-health-care-sector-outlook.html>
- DeWalt, D. A., Berkman, N. D., Sheridan, S., Lohr, K. N., & Pignone, M. P. (2004). Literacy and health outcomes. *Journal of General Internal Medicine*, *19*(12), 1228-1239. <https://doi.org/10.1111/j.1525-1497.2004.40153.x>
- Ellingson, L. L. (2002). The roles of companions in geriatric patient–interdisciplinary oncology team interactions. *Journal of Aging Studies*, *16*(4), 361-382.
[http://dx.doi.org/10.1016/S0890-4065\(02\)00071-3](http://dx.doi.org/10.1016/S0890-4065(02)00071-3)
- Gibson, C.H. (1991). A concept analysis of empowerment. *Journal of Advanced Nursing*, *16*(3), 345-361. <https://doi.org/10.1111/j.1365-2648.1991.tb01660.x>
- Gordon, C., Walker, M., & Carrick-Sen, D. (2013). Exploring risk, prevention and educational approaches for the non-diabetic offspring of patients with type 2 diabetes—a qualitative study. *Journal of Advanced Nursing*, *69*(12), 2726-2737.
<http://dx.doi.org/10.1111/jan.12162>
- Heijmans, M., Waverijn, G., Rademakers, J., van der Vaart, R., & Rijken, M. (2015). Functional, communicative and critical health literacy of chronic disease patients and their importance for self-management. *Patient Education and Counseling*, *98*(1), 41-48. <https://doi.org/10.1016/j.pec.2014.10.006>
- Ishikawa, H., Roter, D. L., Yamazaki, Y., & Takayama, T. (2005). Physician–elderly patient–companion communication and roles of companions in Japanese

geriatric encounters. *Social Science & Medicine*, 60(10), 2307-2320.

<http://dx.doi.org/10.1016/j.socscimed.2004.08.071>

Keeling, D. I., Laing, A., & De Ruyter, K. (2018). Evolving roles and structures of triadic engagement in healthcare. *Journal of Service Management*, 29(3), 352-377. <http://dx.doi.org/10.1108/JOSM-09-2016-0249>

Keers, J. C., Blaauwwekel, E. E., Hania, M., Bouma, J., Scholten-Jaegers, S. M., Sanderman, R., & Links, T. P. (2004). Diabetes rehabilitation: development and first results of a Multidisciplinary Intensive Education Program for patients with prolonged self-management difficulties. *Patient Education and Counseling*, 52(2), 151-157. [https://doi.org/10.1016/S0738-3991\(03\)00019-3](https://doi.org/10.1016/S0738-3991(03)00019-3)

Keim-Malpass, J., Letzkus, L. C., & Kennedy, C. (2015). Parent/caregiver health literacy among children with special health care needs: a systematic review of the literature. *BMC Pediatrics*, 15(1), 92. <https://doi.org/10.1186/s12887-015-0412-x>

Labonté, R., & Laverack, G. (2008). *Health promotion in action: from local to global empowerment*. Palgrave Macmillan. <https://doi.org/10.1057/9780230228375>

Laidsaar-Powell, R. C., Butow, P. N., Bu, S., Charles, C., Gafni, A., Lam, W. W., ... & Juraskova, I. (2013). Physician–patient–companion communication and decision-making: a systematic review of triadic medical consultations. *Patient Education and Counseling*, 91(1), 3-13. <http://dx.doi.org/10.1016/j.pec.2012.11.007>

Lee, S. Y. D., Arozullah, A. M., & Cho, Y. I. (2004). Health literacy, social support, and health: a research agenda. *Social Science & Medicine*, 58(7), 1309-1321. [https://doi.org/10.1016/S0277-9536\(03\)00329-0](https://doi.org/10.1016/S0277-9536(03)00329-0)

- Leino, H. M. (2017). Secondary but significant: secondary customers' existence, vulnerability and needs in care services. *Journal of Services Marketing*, 31(7), 760-770. <http://dx.doi.org/10.1108/JSM-05-2016-0199>
- Manafo, E., & Wong, S. (2012). Health literacy programs for older adults: a systematic literature review. *Health Education Research*, 27(6), 947-960. <https://doi.org/10.1093/her/cys067>
- Marzorati, C., Bailo, L., Mazzocco, K., & Pravettoni, G. (2018). Empowerment from patient's and caregiver's perspective in cancer care. *Health Psychology Open*, 5(2), 1-7. <https://doi.org/10.1177%2F2055102918815318>
- McColl-Kennedy, J. R., Hogan, S. J., Witell, L., & Snyder, H. (2017). Cocreative customer practices: Effects of health care customer value cocreation practices on well-being. *Journal of Business Research*, 70, 55-66. <http://dx.doi.org/10.1016/j.jbusres.2016.07.006>
- Nutbeam, D. (1998). Health promotion glossary. *Health Promotion International*, 13(4), 349-364. <http://dx.doi.org/10.1093/heapro/13.4.349>
- 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. <http://dx.doi.org/10.1093/heapro/15.3.259>
- Nutbeam, D., McGill, B., & Premkumar, P. (2018). Improving health literacy in community populations: a review of progress. *Health Promotion International*, 33(5), 901-911. <https://doi.org/10.1093/heapro/dax015>
- Palumbo, R. (2017). *The bright side and the dark side of patient empowerment: Co-creation and co-destruction of value in the healthcare environment*. Springer. <https://doi.org/10.1007/978-3-319-58344-0>

- Parker, R. M., Baker, D. W., Williams, M. V., & Nurss, J. R. (1995). The test of functional health literacy in adults. *Journal of General Internal Medicine*, *10*(10), 537-541. <http://dx.doi.org/10.1007/BF02640361>
- Paasche-Orlow, M. K., & Wolf, M. S. (2007). The causal pathways linking health literacy to health outcomes. *American Journal of Health Behavior*, *31*(1), S19-S26.
- Pignone, M., DeWalt, D. A., Sheridan, S., Berkman, N., & Lohr, K. N. (2005). Interventions to improve health outcomes for patients with low literacy. *Journal of General Internal Medicine*, *20*(2), 185-192. <https://doi.org/10.1111/j.1525-1497.2005.40208.x>
- Prigge, J. K., Dietz, B., Homburg, C., Hoyer, W. D., & Burton, J. L. (2015). Patient empowerment: A cross-disease exploration of antecedents and consequences. *International Journal of Research in Marketing*, *32*(4), 375-386. <http://dx.doi.org/10.1016/j.ijresmar.2015.05.009>
- Rappaport, J. (1987). Terms of empowerment/exemplars of prevention: Toward a theory for community psychology. *American Journal of Community Psychology*, *15*(2), 121-148. <http://dx.doi.org/10.1007/BF00919275>
- Ratzan, S. C. (2001). Health literacy: communication for the public good. *Health Promotion International*, *16*(2), 207-214. <http://dx.doi.org/10.1093/heapro/16.2.207>
- Rosland, A. M., Piette, J. D., Choi, H., & Heisler, M. (2011). Family and friend participation in primary care visits of patients with diabetes or heart failure: patient and physician determinants and experiences. *Medical Care*, *49*(1), 37. <http://dx.doi.org/10.1097/MLR.0b013e3181f37d28>

- Rubinelli, S., Schulz, P. J., & Nakamoto, K. (2009). Health literacy beyond knowledge and behaviour: letting the patient be a patient. *International Journal of Public Health*, 54(5), 307-311. <http://dx.doi.org/10.1007/s00038-009-0052-8>
- Sanders, L. M., Federico, S., Klass, P., Abrams, M. A., & Dreyer, B. (2009). Literacy and child health: a systematic review. *Archives of Pediatrics & Adolescent Medicine*, 163(2), 131-140. <http://dx.doi.org/10.1001/archpediatrics.2008.539>
- 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. <http://dx.doi.org/10.1016/j.pec.2012.09.006>
- Sharma, S., & Conduit, J. (2016). Cocreation culture in health care organizations. *Journal of Service Research*, 19(4), 438-457. <http://dx.doi.org/10.1177/109019817600400303>
- Simonds, S. K. (1976). Health education manpower in the United States. *Health Education Monographs*, 4(3), 208-225. <http://dx.doi.org/10.1177/109019817600400303>
- Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2012). Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health*, 12(1), 80. <http://dx.doi.org/10.1186/1471-2458-12-80>
- Suárez Vázquez, A., Del Río Lanza, A. B., Suárez Álvarez, L., & Vázquez Casielles, R. (2017). Empower me? Yes, please, but in my way: different patterns of experiencing empowerment in patients with chronic conditions. *Health Communication*, 32(7), 910-915. <https://doi.org/10.1080/10410236.2016.1196409>

- Schwartzberg, J.G. (2002). Low health literacy: what do your patients really understand? (Patient Safety). *Nursing Economics*, 20(3), 145-147.
- Speros, C.I., (2009). More than words: promoting health literacy in older adults" *OJIN: The Online Journal of Issues in Nursing*, 14(3), 5.
<https://doi.org/10.3912/OJIN.Vol14No03Man05>
- Wolff, J. L., & Roter, D. L. (2008). Hidden in plain sight: medical visit companions as a resource for vulnerable older adults. *Archives of Internal Medicine*, 168(13), 1409-1415. <http://dx.doi.org/10.1001/archinte.168.13.1409>
- WHO (2009). Health literacy and health behavior. *World Health Organization 7th Global Conference on Health Promotion*.
www.who.int/healthpromotion/conferences/7gchp/track2/en/
- Zimmerman, M. A. (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*, 23(5), 581-599.
<https://doi.org/10.1007/BF02506983>

Table 1*Hypothesis testing*

HYPHOTHESES	STANDARDIZED PATH COEFFICIENT (BETA)	t-VALUE	HYPHOTHESES TESTING RESULTS
H1a: Companion's Information Search Empowerment → Patient well-being (+)	+0.087	1.0E+38	Supported
H1b: Companion's Knowledge Development and Decision Participation Empowerment → Patient well-being (+)	+0.012	1.0E+38	Supported
H2a: Companion's Functional Literacy → Patient well-being (+)	-0.127	1.0E+38	Reverse supported
H2b: Companion's Interactive Literacy → Patient well-being (+)	-0.185	1.0E+38	Reverse supported
H2c: Companion's Critical Literacy → Patient well-being (+)	+0.007	1.0E+38	Supported
H3a: Companion's Functional Literacy → Companion's Information Search Empowerment (+)	-0.141	-1.858	Supported
H3b: Companion's Interactive Literacy → Companion's Information Search Empowerment (+)	-0.187	-1.917	Supported
H3c: Companion's Critical Literacy → Companion's Information Search Empowerment (+)	+0.182	+2.039	Supported
H3d: Companion's Functional Literacy → Companion's Knowledge Development and Decision Participation Empowerment (+)	-0.076	-1.392	Supported
H3e: Companion's Interactive Literacy → Companion's Knowledge Development and Decision Participation Empowerment (+)	-0.210	-3.683	Reverse supported
H3f: Companion's Critical Literacy → Companion's Knowledge Development and Decision Participation Empowerment (+)	+0.222	57.908	Supported

S-B c2 (329)=1414.3085 (p<0.000) BBNNFI=0.889 CFI=0.903 RMSEA=0.062