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Social capital as an instrument for health literacy promotion among community-dwelling older adults in Hong Kong

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ABSTRACT

This study investigates how different forms of social capital influence the health literacy of community-dwelling older adults. Semi-structured interviews were conducted with 24 older adults aged 65 and above living in Hong Kong. Thematic analysis technique was employed to analyse the data. The findings showed that both structural and cognitive forms of social capital were available to most of the older adults. However, some struggled to access common forms of social capital, such as bonding and expressed distrust in their neighbours. Some respondents demonstrated sufficient health literacy (e.g. seeking a second medical opinion), while others had limited health literacy (e.g. difficulties seeking advice during medical consultations). The influence of social capital on older adults' health literacy was evident in four areas: (1) social capital and access to health information; (2) managing infodemic and evaluating healthcare information; (3) social capital and quality of healthcare; and (4) adverse influence of social capital for health literacy and health-related outcomes. Health literacy can impel older adults towards healthy ageing, and its reinforcement can be strengthened by incorporating various forms of social capital. This is because the health literacy of older adults is fundamentally tied to social interactions.

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Introduction

Estimates show that one in six people globally will be 60 years and above by 2030 (World Health Organization, 2022); the most significant increase in the older population is occurring in Eastern Asia (UNDESA, 2019). Places such as Hong Kong are now a 'super-aged' society (Census and Statistics Department, 2023b). For the first time, in 2022, 20.8% of Hong Kong's mid-year population was aged 65 and above and is projected to rise to 35% by 2069 (Census and Statistics Department, 2020, 2023a). However, deteriorating health due to multimorbidity, disabilities, and geriatric syndrome inhibits many older adults from participating in socioeconomic activities at the level they desire (World Health Organization, 2022). To some extent, this situation underpins concerted

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global efforts to promote healthy ageing (WHO, 2023). In East Asia, the emphasis on a productivist welfare regime – one which focuses on economic productivity and continued labour market participation as the foundation of social welfare (Choi, 2012; Holliday, 2000) – means that promoting healthy and active ageing is critical to the sustenance of such systems and overall well-being of older adults (Wen et al., 2022).

Health literacy is considered one of the critical determinants of healthy ageing (Amoah et al., 2022; Leung et al., 2016). It comprises an individual's knowledge of and skills in accessing, understanding, appraising and applying information to promote health, prevent diseases and manage everyday healthcare needs to improve quality of life (Sørensen et al., 2013). Using causal pathway modelling techniques, it has been shown that adequate health literacy improves health outcomes (Paasche-Orlow & Wolf, 2007). Adequate health literacy enables people to obtain the requisite health knowledge to improve access to and utilise health services, cultivate desirable health behaviours, and empower people to engage proactively with health providers (Paasche-Orlow & Wolf, 2007). Older adults with sufficient health literacy are likely to adopt protective health behaviours (e.g. non-smoking, exercising regularly, and limiting alcohol intake) (Kobayashi et al., 2016); adhere to medical instructions (Leung et al., 2018), which lead to positive health outcomes (Nutbeam, 2008). Because of its empowering nature, health literacy has long been considered a vital social policy window, as it is a determinant and outcome of the health-related well-being of vulnerable populations (Nutbeam, 2008).

Health systems and governments continue to and are expected to, promote health literacy among older adults to enable them to participate actively in their health (WHO, 2023). However, the role of informal support systems and socio-environmental factors in shaping health literacy among older adults are yet to be fully explored and integrated into extant efforts, particularly in East Asian societies, where health literacy research and practice are emerging. One such socio-environmental factor is social capital (Amoah et al., 2022; Kim et al., 2015; Lee et al., 2009). This is because ageing and health literacy occur within social contexts, where friends, family, neighbours and communities co-produce and disseminate health knowledge, practices and perceptions (Samerski, 2019). Social capital refers to the resources such as information, instrumental (e.g. money, assistance in doing chores) and emotional (e.g. sympathising with the sick) support that is available through different social networks and facilitated by trust and norms of reciprocity (Putnam, 2000; Szreter & Woolcock, 2004). According to the social capital theory, the support that emerges from social networks influences people's knowledge and decisions about their health (Haslam & Haslam, 2019). This is why researchers and practitioners advocate for integrating social capital into policies about population health and well-being (Haslam & Haslam, 2019). Considering that older age is associated with inadequate health literacy (Kobayashi et al., 2016), social capital can be fundamental to how older adults participate in matters concerning their health.

While the relationship between social capital and health literacy has been studied in parts of the Far East and Africa (e.g. Amoah et al., 2022; Cui et al., 2021; Kim et al., 2015), there is a dearth of work documenting the relationship between social capital and older adults in Hong Kong. For instance, Kim et al. (2015) found in South Korea that social capital enhances health information efficacy and the scope of health information. This is similar to findings in mainland China, where social capital was correlated with the health literacy of older persons (Cui et al., 2021). In Ghana, social capital has been found to shape how health literacy affects health status and health behaviours among older persons (Amoah et al., 2021a). In Hong Kong, existing studies have mainly examined the connection between health literacy, medication adherence, and the incidence of hospitalisation (Leung et al., 2016, 2018) and dementia literacy issues (Parial et al., 2023) among older adults. Therefore, this study extends the literature on social capital and health literacy in the context of healthy ageing by documenting the findings of the following two objectives:

1. an examination of the characteristics of *health literacy and social capital* among community-dwelling older adults in Hong Kong; and

2. an examination of the role of different kinds of *social capital* in the health literacy of community-dwelling older adults in Hong Kong.

The study offers insights into how and when social capital can be called upon and utilised as part of health literacy advancement in Hong Kong and places where age-friendly conditions are actively being promoted (Amoah et al., 2021b; Hung et al., 2023).

Social capital theory and health literacy among older adults

Social capital comprises cognitive and structural components. The cognitive component consists of the intangible aspects of social relationships, such as trust in others, reciprocity, and a sense of fairness. Structural social capital describes the characteristics of social networks, such as the frequency of contact and the nature of relationships (Szreter & Woolcock, 2004). The literature distinguishes three common types of structural social capital: bonding, bridging and linking social capital (Szreter & Woolcock, 2004). Bonding social capital emerges through strong ties such as family and close friends. Bridging social capital describes resources from people of different backgrounds, such as friends of a friend and people in different social groups (e.g. religion, ethnicity). Linking social capital refers to relationships between people of different socioeconomic and power statuses and how people relate to institutions, community leaders and professionals (Amoah, 2017; Szreter & Woolcock, 2004). Thus, bridging and linking social capital often emerge from weak social relationships (Szreter & Woolcock, 2004).

Both cognitive and structural dimensions of social capital can condition health literacy and related outcomes of older people at individual and collective levels (Haslam & Haslam, 2019; Szreter & Woolcock, 2004). At the individual level, social capital can provide informational support (e.g. sharing information on health services with friends and family) and social influence (i.e. opportunities one stands to gain by association with those in advantageous positions in society), which affect health outcomes (Kawachi & Berkman, 2014). This support can guide individuals with inadequate health literacy in obtaining the appropriate resources to improve their health (Haslam & Haslam, 2019). At the collective level, *social contagion* – the extent to which social norms, practices and knowledge are consciously or inadvertently transmitted through social networks – shapes individual behaviours and everyday choices about health matters, including their knowledge and related skills (Chinn, 2011; Waverijn et al., 2016). These theoretical pathways show that social capital can be influential for older adults' health literacy. To our knowledge, no study has empirically investigated how the different forms of social capital influence health literacy among older adults in Hong Kong. The present study thus breaks new ground on the role of social capital in the health literacy of older adults in the 'super-aged' city.

Methods

This study employed the exploratory phenomenological design to emphasise participants' experiences and worldviews (Creswell, 2014). Data were gathered from 24 community-dwelling older adults in Hong Kong from November 2020 to June 2021.

Sampling and participants

The research collaborated with Neighbourhood Elderly Centres (i.e. elderly/elders centres) and non-governmental organisations in Hong Kong to invite potential participants for interviews. The elders' centres are a form of community support services to enable older adults to 'age in place' (Social Welfare Department, 2023). Participants were selected through a purposive sampling approach. Participants were selected for the study if they were: (1) aged 65 years and above; (2) physically active (i.e. did not require significant help to get by everyday activities); and (3) living

in the community and not a residential care home. Staff and flyers at the centres helped to convey information about the project to potential participants. Participants were primarily from self-selection of older adults who volunteered to be interviewed. Others were also recruited through personal contacts and canvassing by the research team. Each participant received a HK$100 shopping voucher as an honorarium. Data analysis showed sample adequacy, as theoretical saturation was reached for most issues explored. The characteristics of the participants are shown in Table 1.

Data collection

Semi-structured in-depth interviews enabled participants to share their lived experiences relative to the study research objectives (Creswell, 2014). The interviews – which were audio-recorded – took place remotely through telephone as the study period coincided with the height of the COVID-19 pandemic in Hong Kong when strict social distancing measures were in place.

The interviews comprised three parts. The first part explored characteristics of participants' bonding, bridging, and linking social aspects of capital and cognitive social capital, such as trust in their neighbours, family, and health institutions (e.g. What instances make you trust or not trust the people?). The second part explored their health literacy in terms of how they accessed, understood, evaluated, and applied health information within and outside clinical settings. Examples within clinical settings included their assessment of how well they interacted with health professionals, their understanding of medical instructions and their attitudes towards seeking a second opinion from health professionals. Discussions about their health literacy outside clinical settings concerned sources of health information at home and how they relied on their social networks for second opinions on health matters. Other discussions included acquiring and applying health information on their everyday experiences and situations concerning how they sought, understood and applied health

Table 1. Characteristics of participants in the study.

Variable	Frequency (n = 24)	%
Ages		
65–74	14	58.3
75–84	8	33.3
85 or above	2	8.3
Sex		
Male	11	45.8
Female	13	54.2
Education		
Uneducated/pre-school	4	16.7
Primary school	6	25.0
Lower secondary school	3	12.5
Higher secondary school	6	25.0
Tertiary (Bachelors degree)	4	16.7
Postgraduate education	1	4.2
Marital Status		
Divorced	1	4.2
Widowed/Separated	3	12.5
Married	20	83.3
Number of children		
0	3	12.5
1	5	20.8
2	11	45.8
3	4	16.7
5	1	4.2
Living Arrangements		
Living with family	18	75.0
Living with a domestic helper	2	8.3
Living alone	4	16.7
Employment status		
Retired	24	100

information about health promotion, prevention of diseases and engagement with healthcare and health services. The third and most crucial part explored how the different forms of social capital influenced their health literacy (e.g. Do you sometimes rely on someone else to use health services or to understand health information? Who? What issues? Why?).

The interview guide is attached as Appendix 2. Most interviews lasted about 40–60 minutes. The interviews were conducted in Cantonese – the predominant local dialect – by trained native Cantonese interviewers. The Sub-Committee on Research Ethics of the Research Committee of Lingnan University approved the study protocol (EC042/1819). Verbal informed consent was obtained from all participants before the interview.

Data analysis

The interviews were translated and transcribed into English. An experienced language expert independently validated the transcriptions. The analysis involved a deductive thematic analysis technique guided by tenets of the social capital theory and the concept of health literacy. However, the inductive technique was also employed to offer new insights beyond the conceptual nature of social capital and health literacy. Creswell's (2014) approach to thematic analysis guided the data analysis process. This process involves open coding based on an *a priori* designed codebook prepared by one of the authors. The codes were summarised into categories and later into broader themes. Two authors were involved in the analysis with the support of NVivo software. Disagreements during the analysis process were mediated through consensus building.

Findings

The participants were mostly aged 65–74 years and predominantly females (54.2%). Most of them completed primary (25%) or secondary (25%) school as their highest level of education. They were mostly married (83.3%), lived with their family (75%), and all retired (100%), as shown in Table 1. In line with the research objectives, the findings are presented under three broad areas, with the core themes identified under each area. The three areas are characteristics of older adults' social capital, their health literacy, and the role of social capital in their health literacy.

Characteristics of older adults' health literacy

The data showed two main findings regarding the characteristics of their health literacy: the sources and characteristics of health information, understanding and evaluation of health information, and application of health information. Relevant quotations (Q) from the interviews in support of the findings are indicated as 'Q 1, 2, 3 … n', as shown in Appendix 1, Tables 1 and 2.

Sources and characteristics of access to health information

Participants' primary sources of health information were television, the Internet and their close family and friends (Quotation 1, Q1). The reliance on informal sources (e.g. family, friends, and media) of health information were usually caused by complications in seeking help from health professionals and institutions, even during medical consultations (Q2). Seeking health information through some official channels was challenging for many participants as they were unfamiliar with the processes and opportunities available (Q3). Additionally, because of low educational attainment, some participants could not obtain the health information they needed and demonstrated limited knowledge about health-related matters (Q4).

Understanding, evaluating and applying health information

For many participants, *understanding* the health information they obtained from different sources (e.g. online and health professionals) was problematic due to the wide use of medical jargon (Q6).

Unfortunately, obtaining clarification about their confusion was challenging partly because of their inability to engage with health service providers and difficulties getting help from health professionals (Q7). However, some older adults demonstrated sufficient health literacy and could evaluate health information they initially received (e.g. from health professionals and online) by seeking a second opinion from other sources such as health professionals whenever they felt unconvinced by initial medical advice or needed to manage the cost of care (Q8). Additionally, those with sufficient health literacy demonstrated caution about medical advice they received from different sources and the use of unprescribed medications (Q9). They also remained circumspect about utilising health information online due to the possibility of misinformation (Q10).

Finally, a characteristic of their health literacy was evident in the measures they took to prevent diseases. Many kept active lifestyles and clean environments to prevent diseases, as indicated in 'Q11' in Appendix 1, Table 2.

Kinds of social capital among Hong Kong older adults

Many older adults had social networks that offered different health literacy support, as evidenced by the quotations in Table 3 in Appendix 1. Support from their close friends and relatives was the most common (Q12). Notwithstanding, some older adults lived alone or had little contact with immediate family and friends – indicating low bonding social capital. This was exacerbated by social distancing measures during the COVID-19 pandemic when the data was gathered (Q13). Regarding bridging and linking social capital, some older adults carefully planned their social network composition to generate support to prevent loneliness in later life (e.g. during retirement). Some joined community groups/associations to generate bridging and even linking social capital (Q14). Nonetheless, many participants felt they had low bridging social capital due to generational differences among residents in their neighbourhoods. Older and younger neighbours were perceived to have different interests, culminating in social distance between neighbours (Q15). Linking social capital among older adults was usually through informal relationships with institutions (e.g. health and social service providers). Some accessed such institutional support through their bonding social capital (e.g. close friends who were health professionals) (Q16).

Cognitive aspects of social capital, such as a sense of harmony in their neighbourhoods, were common among the participants. Some participants claimed their community members 'cared about each other' and got along well (Q17). Others also felt they lived in communities where their neighbours and acquaintances could be trusted (Q17). However, the extent of trust was predicated on the strength of social relationships and perceptions about personality and character. Factors such as the extent of familiarity, a person's physical appearance and health-related behaviours (e.g. wearing a face mask during COVID-19) influenced the older adults' assessment of whether a neighbour could be trusted (Q18).

Role of social capital in health literacy of older adults in Hong Kong

Considering the difficulties that many older adults in Hong Kong face in seeking and utilising health information, different kinds of social capital played a significant role in their health literacy. These roles are presented under four sub-themes, namely, (1) Social capital and access to health information; (2) Social capital and quality healthcare; (3) Managing infodemic and evaluation of healthcare information; and (4) Adverse influence of social capital on health literacy and health-related well-being.

Social capital and access to health information

Many older adults received health information through different sources of bridging social capital (e.g. neighbours) and linking social capital (e.g. informal connection to public institutions and

professionals). However, the role of bonding social capital was most common, especially among those with low educational attainment:

> Since I am not well-educated, what I know about health mainly comes from my children … my friends and … neighbours. (P16)

The participants often sought help through their bonding social capital to read and explain health information:

> Sometimes when I don't understand something, my daughter helps me read about it. She would explain to me after reading it. (P05)

In contrast, older adults who felt competent about health matters sought health information by themselves and actively shared such information with their friends whom they perceived to have similar health problems as them:

> I've learned and shared information about allergic rhinitis with my friend. I have leisure time to read newspapers, research things like that and obtain information. (P20)

Hence, social capital created an avenue for older adults to receive and share health knowledge/information within their social network. However, reliance on bonding social capital for health information was not always preferred, as some participants struggled to obtain timely responses to their health inquiries: 'They (grandchildren) answer me when they are free' (P04). Some also felt that reliance on others for health information could weaken personal initiative to enhance their health literacy:

> I can't strengthen my knowledge this way (relying on others) since I can learn it by collecting information myself. … People cannot teach you. … . You need to solve the problems by yourself. (P10)

Correspondingly, some participants were more cautious about their choice of the sources of health information to obtain trustworthy information. Instead of relying on immediate family and friends, some sought information through their linking social capital. They joined programmes that enabled them to obtain informal connections to health practitioners and institutional resources:

> For opinions from my friends, I simply just listen and forget about them. For associations like the one where I do volunteer work, I trust what the nurses and doctors say. (P19)

However, while some participants sought information from institutions, others considered relying mainly on such support as inadequate. Instead, they complemented those unofficial institutional support with their bonding social capital to grant them a better understanding of medical services and their health conditions:

> The elders' centre can't help me with this. They only tell you about your blood pressure level. … . However, I usually discuss it with my friends as we are all old. … We have similar health conditions. … we ask each other about the effects after taking medicines. (P13)

Interestingly, older adults who perceived their health literacy as sufficient preferred not to rely on others to access and understand health information: '*I'm good at this (accessing the latest health information), so I usually don't need to ask them (neighbours)*' (P01).

Social capital and health literacy in healthcare settings

The role of social capital in health literacy was also demonstrated by how it influenced older adults' ability to use health services and engage with health practitioners effectively. Bonding social capital was crucial to how older adults perceived and utilised health services. For instance, the participants' evaluation of their healthcare experiences was often based on comparisons with the health experiences of their friends. Such comparisons, which emerged through care information exchanges, enhanced older adults' engagement with health professionals and sometimes served as a source of feedback to care providers when participants raised concerns to their care providers:

> She (a friend) was referred to an Internal Medicine specialist. … I asked her whether she takes two of my heart medicines. She said no. However, she had been prescribed Nitroglycerin. … I said that meant she had a heart problem as well. … She asked the doctor in the follow-up consultation why she needed Nitroglycerin. … The doctor changed her back from a specialist clinic to a general outpatient clinic … (P13)

Some older adults went beyond their bonding social capital to seek health information from their bridging and linking social capital to improve their skills and knowledge of health problems and promote effective communication with health professionals:

> I'm taught how to communicate with health professionals and learn more about different diseases bit by bit. … from other social connections than my children and friends. (P16)

The need to learn how to communicate effectively with health personnel stemmed from the years of experience they derived from engaging with the public healthcare system. According to the participants, health professionals offered little health education unless patients asked. Thus, those with sufficient health literacy skills took the initiative to obtain needed professional advice:

> We [Patients] need to take the initiative to ask [for further information]. … I don't think it only happens to me, but about 80% of service users in Hong Kong do … (P01)

Owing to these challenges, older adults who felt less knowledgeable about their medical conditions relied on their bonding social capital during medical consultations:

> They (family members) explain my condition when consulting a doctor. (P22)

Linking social capital, which they generated by engaging in volunteer activities, aided some older adults to interact better with health professionals:

> The social workers from the centre where I volunteer … taught us to jot down the things we want to know before consulting a doctor. (P18)

However, the extent to which all the structural forms of social capital contributed to older adults' health literacy was partially tied to cognitive social capital – particularly trust. Even health information and support offered through bonding social capital were evaluated on the merit of the trustworthiness of information sources:

> Sometimes, my friends tell me what I should do to improve my knee joint pain, it's not a must to trust them. … I need to find out if they are suitable for me … before I believe them. (P18)

> … for information I cannot understand, I first ask people I trust, such as my husband. (P01)

Social capital, managing infodemic and evaluating health information

Social capital was also instrumental in how older adults in Hong Kong dealt with the infodemic and evaluated the information they received daily. On the issue of infodemic, some older adults were conscious of the increasing incidence of infodemic online and were conscious about verifying the information they obtained before applying them:

> Much false information is spread by the Internet; we must verify the facts. (P17)

The older adults relied on their bonding and linking social capital to verify and evaluate the quality of information they accessed, particularly those online:

> Sometimes, the information on the Internet may not be true. … I asked my children about the information, and they said it was fake. (P18)

> I am using a smartphone now. … We (friends and family) share photos and information. Once I do not understand something, I will ask one of the staff at the elders centre. (P12)

Social capital also helped older adults to evaluate the health information available to them – an indication of sufficient health literacy. When they had doubts about the care and medical advice they

received, some older adults evaluated such information by consulting their social capital, particularly bonding social capital, to obtain a second opinion. Such social capital usually comprised friends whom they considered knowledgeable about health issues due to experience or training:

> I sometimes ask my friends for more opinions (after medical consultations). (P20)

However, the extent or the frequency by which the older adults relied on their bonding and other forms of social capital to evaluate health information was influenced by the extent of the trust they had in people of their social networks. Once the older adults felt that the health professionals they consulted were 'good' and could be trusted, they often saw no reason to seek a second opinion from other professionals:

> Someone said other doctors are good, but I keep consulting my family doctor because I trust him very much. (P19)

Therefore, the social capital of older adults was fundamental to their ability to access and apply health information selectively.

Adverse influence of social capital on health literacy

While different forms of social capital were essential to the health literacy of older adults, there were notable situations where it directly or indirectly affected their health literacy adversely. One such situation was the inadequacy or absence of social capital. For some older adults, the absence or perceived inadequacy of different kinds of social capital resulted in dissatisfaction regarding their health literacy.

> My daughters are people of the new generation. They do not care about me. … I have not received help (in promoting health) from my daughters, except paying rent. (P23)

The adverse consequence of low social capital on health literacy was more evident among older adults concerned about chronic diseases. For such people, low linking social capital (e.g. informal connection to health professionals) hampered their likelihood of accessing trustworthy information, which lowered the likelihood of seeking care.

> I have a prostate condition … I wonder if such conditions may develop tumours or cancer at some point … .Doctors won't bother to answer you if you are not consulting them for treatment … I can't find any healthcare professional who can answer … (P23)

However, sometimes, health information provided to older adults, particularly regarding access to healthcare, is incorrect. By adhering to this incorrect information from their trusted peers, older adults sometimes followed the advice without seeking a second opinion. This trust in unreliable information sometimes results in healthcare decisions that are harmful to a patient's health:

> There was pain in my nasal area, and the doctors asked me to do the surgery. … One of my neighbours told me that I should have the surgery as soon as possible … I asked the neighbour where she did the surgery, and she recommended Dr [name withheld] to me … During the surgery, … . My trigeminal nerve was broken … I feel pain all the time until now. (P14)

Notwithstanding such negative aspects of social capital to health literacy and resulting health outcomes, some participants insisted that limited access to social capital has a negative effect on their health literacy:

> If you do not participate in anything in society [in reference to joining social groups/associations], you will become stupid and know nothing [about health matters]. (P07)

Discussion

The present study examined how cognitive and structural dimensions of social capital influence health literacy – a critical health asset – among community-dwelling older adults in a super-aged

society; Hong Kong. The findings indicated that both social capital components are fundamental to how older adults access, evaluate and apply health information within and outside clinical settings to prevent diseases, promote their health and engage with health services. The core findings are discussed thematically below:

The state of social capital and health literacy among older adults in Hong Kong

The older adults' experiences showed that different kinds of social capital do not function in isolation as the older adults sometimes relied on their bonding social capital to generate linking social capital (e.g. connections to health institutions). Cognitive social capital, such as trust and sense of harmony, dictated how they connected to their neighbours (i.e. bridging social capital) and even family.

The finding about the role of cognitive social capital supports claims that the cognitive component facilitates other aspects of social capital by strengthening social cohesion and forming social networks (Helliwell & Putnam, 2004). However, these findings contradict recent concerns about dissipating community-based and intergenerational support in Hong Kong (Bai, 2019) since both structural and cognitive forms of social capital were found among the older adults in this study.

Interestingly, some participants had limited access to bonding social capital due to the COVID-19 pandemic when this study was carried out. The situation of these older adults was no different from those in other places (e.g. the Netherlands) during the pandemic (van Tilburg et al., 2020). Nevertheless, this finding indicates that access to even the most abundant form of social capital can be challenging for community-dwelling older adults during a crisis, such as a pandemic. This calls for a reassessment of ways to ensure sustained access to at least basic forms of social capital as part of the healthy ageing agenda being pursued in Hong Kong (Amoah et al., 2021b) and globally (World Health Organization, 2021).

Some older adults demonstrated sufficient health literacy, which was demonstrated in how they sought second medical opinion to reduce health care costs. In contrast, others had inadequate health literacy (e.g. difficulties obtaining information and requiring support during medical consultation), and the observations in this study are generally no different to other studies in this regard (Leung et al., 2018). This and other studies indicate that low health literacy among older adults is sometimes due to low education attainment (Amoah et al., 2022; Leung et al., 2018). However, this study also showed that health services in Hong Kong (e.g. health information services) did not adequately meet the health literacy needs of older adults during the duration of the study. According to the Institute of Medicine's health literacy framework (Nielsen-Bohlman et al., 2004), the health system in a place and its organisation are critical determinants of health literacy, and evidence from this study supports the Institute's assertion. Therefore, the limitations in the health literacy of older adults in Hong Kong were partly due to a combined effect of individual deficiencies (e.g. low literacy skills) and gaps in health services. To boost the health literacy of older adults as part of the productivist welfare (Amoah et al., 2021b). This position is imperative, considering the indications in this study that sufficient health literacy empowers vulnerable populations to participate(-Nutbeam, 2000).

Social capital and access to health information among older adults in Hong Kong

Many participants relied on social capital to access and interpret health information. This was unsurprising and corroborates other studies that show that older adults consistently depend on social networks for health information support (Kim et al., 2015). Because of the importance of social capital, recent conceptualizations of health literacy are accounting for the role of social networks (Sørensen et al., 2013).

In the context of this study, the reliance of participants on bonding in particular and bridging social capital for health information can be attributed to the extra pressure on the health and social service system during the COVID-19 pandemic, which led to downsizing health services and even suspension of several non-COVID-19 services in Hong Kong and neighbouring places such as mainland China and Singapore (Wong et al., 2021). With the pandemic over, it is essential to rethink and re-organize health services and public health information delivery channels to enable older adults to manage their ill health more successfully. Moreover, this study has demonstrated that trust is essential to the influential role that social capital plays in assisting older adults in dealing with their health service needs. While bonding social capital is usually the first point of contact for health information (Amoah et al., 2018), this study indicates that older adults sometimes prefer information from weak social ties, such as linking social capital, as they trust information from such sources. However, as people are usually aware of the competencies of their close social ties, seeking extra support through weak ties does not entirely signify distrust in bonding social capital but rather a matter of information shopping (Aikins, 2005). Such situations also signify the relevance of multiple forms of social capital in health literacy. Future studies can extend this finding by exploring the differing impacts of various types of social capital on health literacy as an extension to debates on the diversity of social capital and its function.

Moreover, this study has revealed that sufficient health literacy reduces reliance on social capital for health information. In many ways, this demonstrates how critical it is to empower older adults to improve their health literacy. Enhancing their health literacy skills will enable them to take responsibility for their health and relieve pressure on the health system (Sørensen et al., 2013). This is why proactive approaches must be employed to tap into health literacy support systems offered through social capital to promote healthy ageing.

Social capital, management of infodemic and health information evaluation

The findings have shown that bonding and linking social capital are important to how older adults evaluate health information. Reliance on bonding and linking social capital, instead of professional second opinion, corroborates debates on the role of social relationships and healthcare decision-making (Amoah et al., 2018; Haslam & Haslam, 2019). Specifically, this study shows that social capital enabled older adults to deal with infodemic. Research during the COVID-19 pandemic showed that people with high social capital were less likely to be infected or die from the disease. We attributed this result to the support in managing the infodemic and how the older adults adhered to interventions for the disease. This finding indicates that professional health advice and publicly available information are sieved through informal mechanisms before being applied, as propounded by the social organisation strategy framework (Pescosolido, 1992). The framework argues that health decisions (including how health information is accessed and used) are socially constructed through interactions and consultations with others (Pescosolido, 1992), as exemplified by Amoah et al. (2018). Hence, those social interactions (and the mechanisms involved) that produce health decisions must be contextually understood and considered in health information delivery. The extensive reliance on social networks for health information and medical advice reiterates gaps in health and social services (e.g. access to appropriate medical advice) in Hong Kong. Such gaps can leave older adults vulnerable to the downsides of social capital, such as misinformation and misuse of services (Villalonga-Olives & Kawachi, 2017). In anticipation and experience of such negative influence, some older adults in this study hesitated to seek health advice from untrusted social networks.

The findings also suggest that while some structural aspects of social capital can influence the health literacy of community-dwelling older adults, cognitive dimensions (e.g. trust) determine the actions that older adults face with health advice through different social networks. Hence, this finding supports claims that trust enhances health literacy (Turhan et al., 2022) by cultivating people's curiosity about events around them (Chinn, 2011). In an era of infodemic, these findings

signal a need for health providers to move beyond acknowledging the influence of different forms of social capital in health literacy to build a tripartite trustful relationship among service users, their acquaintances and health providers to ensure adequate access and utilisation of medical advice and health information (Lee et al., 2004).

Social capital and health literacy and context of healthcare and service delivery

Social capital helped older adults in Hong Kong access and make healthcare decisions, particularly in ensuring effective communication with health professionals. This finding supports claims that people with low health literacy have difficulty engaging with health professionals (Lee et al., 2004). Within the conceptual discourse on health literacy, this finding reiterates the dimension of communicative/interactive literacy – the skills required to actively derive meaning and apply information from different forms of communication (Chinn, 2011). Given the well-established limitations of older adults' health literacy skills (Amoah et al., 2022), such as difficulties in engaging with health providers (Lee et al., 2004), our findings indicates that community-dwelling older adults in Hong Kong can benefit from enhanced social capital. Indeed, social capital sometimes acts as a surrogate in health-related decision-making for some older adults, including when and where healthcare is sought (Lee et al., 2004). Therefore, older adults in Hong Kong are likely to struggle with health literacy and poor healthcare without adequate structural and cognitive forms of social capital, especially when it comes to seeking healthcare.

The dark side of social capital for health literacy among older adults

Many of the older adults struggled to obtain proper health information without adequate linking social capital (e.g. informal access to professionals), which highlights the exclusionary nature of social capital (Villalonga-Olives & Kawachi, 2017) even in the context of health literacy; according to this study. While social capital offers convenient access to health information to older adults (Lee et al., 2004), the present study cautions that the quality of such information and the sources are equally important given the potentially compromising consequences for health knowledge and even health outcomes when improper health information is applied (Kawachi & Berkman, 2014). This implies that advocating for more social capital, given the overwhelming evidence of positive effects on health-related outcomes (Haslam & Haslam, 2019), should be accompanied by caution against extensive and exclusive reliance on such informal sources for health information.

In Hong Kong, social service agencies such as elders' centres and newly formed district health centres can be fundamental in alleviating the negative aspects of social capital on health literacy by offering avenues for the public to seek second opinions on the health advice they receive informally. Such community services can enhance social identification among older adults who use the services. Increased social identification motivates people to trust each other, share, and adopt health resources that emerge from their groups (Haslam & Haslam, 2019). Therefore, investment in more social services can empower older adults by boosting their social capital. Positioning their health literacy is more than an individual matter; it is a collective issue (Kim et al., 2015).

Limitations of the study

While this study provides valuable insights for enhancing understanding and improving the health literacy of older adults, some potential drawbacks should be noted. The study does not include the views of health professionals and social workers who could have provided alternative perspectives to the experiences of older adults. Also, the study relied on telephone interviews instead of face-to-face interviews. Because of this, potentially vital information such as body language and gestures of interviewees, which could have prompted more discussions, were missing during the interviews. Potentially valuable variables such as the income of participants were not gathered. Such data

could have refined the results to provide for subtle distinctions in the application of the study. Nonetheless, the data has provided adequate insights into older adults' views and experiences regarding their social capital and its connection to health literacy, as evidenced by the consistency of the findings with other research.

Conclusions

This study has offered empirical insights into how social capital influences the health literacy of community-dwelling older adults in Hong Kong, a super-aged society with rising concerns about the health-related quality of life of its ageing population. Both structural and cognitive forms of social capital were available to older adults. However, some participants had difficulties accessing even the most prevalent forms of social capital, such as bonding social capital. Likewise, while many older adults demonstrated sufficient health literacy, others had inadequate health literacy, as evidenced by their experiences (e.g. seeking a second opinion). Furthermore, the structural and cognitive social capital of older adults complementarily shaped their health literacy by aiding them in accessing and applying health information, managing infodemic, and interacting effectively with health service providers.

Conversely, reliance on social capital also produced adverse consequences for health literacy. Nonetheless, given growing concerns about infodemic and complexities in health and social service systems, social capital can be a vital asset to service users and care providers as part of their efforts to ensure effective dissemination and use of health information. In view of these findings, this study argues that the health literacy of older adults cannot be treated merely as a personal issue. Instead, the health literacy of older adults in Hong Kong is a communal phenomenon as their skills and knowledge emerge through multilayered interactions across different stakeholders in their social networks. To promote health literacy among older adults through social capital, this study proposes these approaches:

- The health literacy of older persons should be assessed as part of triage services in clinical and even non-clinical health settings, using many readily available tools to identify cases of inadequate health literacy. Based on findings from this study, social capital should be integrated into health information services of older adults with low health literacy. Involvement of social networks and support systems improves older adults' healthcare experience and promotes adherence to health advice (Lee et al., 2004). Health providers should proactively identify and collaborate with primary social networks (not necessarily immediate family members) as avenues for transmitting proper health information to older adults.
- Furthermore, many older adults lack access to resourceful linking and bridging social capital to improve their access and utilisation of proper health information. Hence, older adults can be supported in generating these forms of social capital by connecting them to agencies and qualified individuals (e.g. allied health personnel and community leaders). To ensure the sustainability of this recommendation, it can be implemented through primary healthcare agencies/services such as the District Health Centres in Hong Kong.
- Finally, an important step towards activating the utility of social capital for the health literacy of older adults would require a conscious effort to build trust between health services/personnel and communities of ageing populations. Trust is fundamental to how older adults in Hong Kong seek and use health information. To build trust between older adults and health services, friendly relationships between health staff and service users and active community/neighbourhood engagement will be essential.

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Author contributions

PAA and VMYT designed and coordinated the data collection for the study. PAA conceived this article and led in data analyses. VMYT helped in the data analysis. PAA drafted the article with a contribution in terms of literature and methodology from MA and VMYT.

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