

ORIGINAL ARTICLE

The association of social capital and mental well-being among older residents living in public housing in Macau Special Administrative Region (S.A.R.) – A qualitative case study of Seac Pai Van

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Abstract

Macau is a rapidly aging city, with 13.8% of the population aged over 65. Social capital has been identified as a crucial protective factor for negative mental health outcomes, yet its relationship with mental health among older adults in Macau remains unclear. This study thematically analyzed the narratives of 19 in-depth face-to-face interviews of Cantonese-speaking elderly aged 60 or above residing in the Seac Pai Van public housing project, the largest public housing project in Macau. This study aimed to collect information on how social networks and social participation impact their mental well-being that may shed light on the promotion of resident mental health in future public housing developments. Results revealed shallow social capital in the community and a high prevalence of loneliness among senior residents who resided in the studied estate. The study also shed light on the participants' thoughts on death, including suicidal ideation, and how they are shaped by their mental health situation and environment. The findings highlight the need to revisit the current mental health policy in Macau and address the urban and architectural design and social organization in new communities, empowering communities to build a friendly environment.

KEYWORDS

elderly, loneliness, Macau, qualitative study, social capital

1 | INTRODUCTION

The World Health Organization (WHO) (2023) defines mental health as “a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community.” Mental health encompasses more than just the absence of mental diseases (World Health Organization, 2023). It is a part of a complex continuum. Mental health conditions comprise mental disorders, psychosocial disabilities, states of mental distress, malfunctioning, and the risk of self-harm. More than 20% of the global population aged 60 and above are affected by mental or neurological disorders (World Health Organization, 2017); and, particularly, the prevalence of depression among the elderly ranges between 7.8% and 34.8% (Tengku Mohd et al., 2019), leading to a decline in quality of life, an

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increase in the cost of caregiving, and a risk of suicide (Brådvik, 2018). A study found that the suicide rates among older adults were three times higher than other populations (He et al., 2021), resulting in extensive loss. While in Macau, research shows that 8% of people have depression, with the most affected group being female older adults (Hall et al., 2017).

Social capital, defined as “features of social organizations, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated aims” (Putnam, 1994, p. 167), is found to be a significant protective factor for negative mental health (De Silva et al., 2007; Fiorillo et al., 2019; Hamano et al., 2010). It encompasses cognitive, social, and structured social capital (Almedom, 2005; Wong et al., 2018). Cognitive social capital refers to mutual trust, social norms of reciprocity, and shared values that influence people’s perceptions toward communication and collaboration with others (Almedom, 2005; Harpham, 2008; Lin, 2001). Structural social capital pertains to the observable actions and behaviors of individuals within a network (Portes, 1998).

Like many developed and urbanized cities, Macau, a Special Administrative Region of China, is facing a rapid aging phenomenon. As the most densely populated city in the world, with 672,800 people residing in 32.9 square km (World Bank, 2022a, 2022b), the elderly population aged over 65 years old has reached 13.8% of the whole population (Macao Statistics and Census Service, 2022). Although Macau is an urbanized city, the traditional Chinese culture of being kind, hospitable, and generous to others has been preserved. Macau is known for being a close-knit society where people are likely to encounter acquaintances on the street, yet it is not entirely identical to the classical narrative of “acquaintance society” like towns in China as introduced by Chinese sociologist Fei Xiaotong (Zhou & Gong, 2017), giving rise to a unique network of connections in a densely populated city.

This study focuses on the Seac Pai Van public housing estate, the largest public housing project in Macau, with a population of over 60,000 residents. Seac Pai Van is composed of both economic and social housing, with the former could be leased or sold while the latter being leased only to economically or socially disadvantaged groups (Macao Government, 2023). First group of residents moved into Seac Pai Van in 2013 (Government Information Bureau of the Macao S.A.R., 2013). There were 13.2% and 6.4% of Macau residents residing in economic and social housing, respectively, in 2021. Among the whole project, Lok Kuan Building, with 4672 flats and 3314 of them being studio flats, is the only social housing. Seac Pai Van is located in Coloane, one of the most aged districts in Macau, with 14.6% of older people aged 65 or over, 1.3% higher than the general population. As a “new living community” located far from the center of Macau, Seac Pai Van is home to a marginalized population, including a significant number of older adults.

This study conducted an in-depth qualitative study within one public housing estate to explore the relationship between aspects of social capital and mental health among the elderly in Macau. Specifically, this qualitative study aims to investigate the perceptions and experiences of older adults toward social capital and its impact on their mental health and well-being. The findings provide insights into how social capital can be leveraged to promote mental health and well-being and inform policies and interventions to address mental health issues among older adults in Macau and other similar cultural contexts.

2 | LITERATURE REVIEW

Mental health is a combination of emotion and psychological and social well-being (Clarke et al., 2011; Keyes, 2002). The two continua model proposes that mental health is not a binary concept of the presence or absence of mental illness, even though they are both related, but rather a continuum that ranges from *flourishing* to *languishing* (Keyes, 2002, 2005). *Flourishing* represents a state of high subjective well-being and optimal psychological and social functioning, while *languishing* refers to experiencing low levels of subjective well-being and psychological and social well-being (Keyes, 2002). Psychological well-being includes self-acceptance, purpose in life, autonomy, positive relationships, environmental mastery, and personal growth, while optimal functioning is characterized by social coherence, acceptance, actualization, contribution, and integration (Keyes, 1998; Ryff, 1989; Ryff & Keyes, 1995).

While both social well-being and social capital recognize the interconnectedness between individuals and their social environment, as well as the value of social interactions and connections in fostering positive mental health and quality of life (Keyes, 1998; Lu et al., 2022; Westerhof & Keyes, 2009), social capital may emphasize the collective perspective, especially how society is being facilitated (Putnam, 1994), while social well-being holds a focus on the individual perspective concerning how social connections contribute to an individual’s well-being (Westerhof & Keyes, 2009).

Social connection is an important indicator of mental health risk and suicide. Research found that social connectedness is strongly associated with suicidal thoughts and behaviors among individuals with substance use disorders (You et al., 2011), while other studies have also indicated a correlation between less depressive symptoms and strong social support such as connections with family and friends and social and instrumental support in Asia (Tengku Mohd et al., 2019). For studies specified for Chinese adults, studies indicated a negative association between social capital in terms of trust and reciprocity and emotional problems that impact daily interactions (Norstrand & Xu, 2011), while social support may mediate loneliness and increase the risk of depression (Liu et al., 2014). A survey conducted by Tung Wah Group of Hospitals (2019) showed that 50% of the surveyed older participants aged 60 or older in Hong Kong reported signs of feeling a sense of loneliness. They often felt a lack of companionship, felt left out, and felt isolated from others because of living alone, having no children or

grandchildren living in Hong Kong, and not engaging with community elderly centers. The subjective experience of loneliness was found to be positively associated with severe mental and physical health-related consequences, including depression, anxiety, sleeping problems, poor immune system functioning, or even contributing to suicidal ideation (Frierson, 1991). Another research conducted during the COVID-19 pandemic also indicates that loneliness poses a negative effect on the mental health of older adults (Sadatnia et al., 2023).

Moreover, suicidal thoughts or attempts are widely recognized as important indicators of mental health due to their established association with various mental health conditions, while they are also a generally accepted indicator for public mental health (Batyrgareieva et al., 2020). A recent study conducted in rural China examined the link between suicide and loneliness and found that loneliness can help detect older adults who are at risk of committing suicide and therefore suggest building stronger social support systems (Niu et al., 2020).

The positive impact of social capital on mental well-being is found across cultures. A multilevel study in rural areas of China suggested that trust was positively linked to individual and village psychological health and well-being and impacted health and well-being by influencing social networks (Yip et al., 2007). Another study conducted in Japan showed that social capital at the ecological level may promote better mental health outcomes among older adults (Hamano et al., 2010). A panel study also revealed that being an active member of an organization is negatively associated with mental health problems (Fiorillo et al., 2019).

In a study that reviews existing research on the relationship between social capital and depression among older adults in the Asian context, it perceives social capital as resources embedded in social relationships that individuals and groups can use to generate productive outcomes that benefit themselves or society. The study reveals inconsistency in results as some studies associate both structural and cognitive social capital with depression, while others connect only cognitive social capital due to diverse measurement tools and the blending of individual and ecological social capital (Lum, 2022).

One comprehensive cross-sectional study conducted in Hong Kong perceived social capital as a critical factor in societal efficiency. It is defined as features of social organization, such as trust, norms, and networks. It breaks down into two categories: structural and cognitive. Structural social capital pertains to the observable interactions between individuals, groups, or organizations, while cognitive social capital encompasses the norms, values, and beliefs that guide individual participation in society. The study unearthed a compelling finding: cognitive social capital has a more pronounced mediating effect on mental well-being than its structural counterpart. This indicates the pivotal role of social capital, particularly its cognitive aspect, in promoting mental health among older adults (Lu et al., 2022).

Research on depression, well-being, and social capital in Macau is notably scarce. A previous study identified a negative correlation between elements of social capital, such as reciprocity and trust, and depression. This finding underscored the potential role of social capital in bolstering mental well-being among Macau's older adults, as reflected by the Patient Health Questionnaire (PHQ-9) (Wu et al., 2016). Yet, the specific factors driving this association remain unexplored.

NGOs, including Macau Caritas, prioritize social networks and community support in their services for the elderly. In 2017, Macau Caritas inaugurated a service center in Coloane to provide comprehensive care for frail individuals with high care needs. The center also extends home care and support to elderly residents in Coloane with limited self-care abilities, health issues, or lacking family support, including isolated seniors and elderly couples. The center emphasizes home-based services and collaborations with community networks to provide the necessary care and improve the quality of life for those in need, allowing them to continue living in the community comfortably. This approach indicates Caritas' belief in home-based elder caregivers as a vital social network resource. Hence, while the causal relationship between depression and social networks may not be definitive, the positive impact of social networks is apparent (Macau Social Services Facilities Guide, 2017).

This study takes a more nuanced approach to examining mental well-being among older residents in Macau. We broaden our scope to include self-evaluations of feelings of loneliness and reports of suicidal ideation/attempts, as both provide first-person insights into residents' psychological health. Loneliness reflects cognitive appraisals of social ties, while suicidal thoughts/behaviors indicate severe distress. We also evaluate two dimensions of social capital impacting mental health: cognitive and structural. Cognitive capital refers to personal perceptions of bonds, measured via loneliness. Structural capital relates to community characteristics, explored through environmental/service views.

3 | METHODOLOGY

An exploratory qualitative study was conducted, adopting the purposive sampling technique. A pilot interview was done with two elderlies residing at the public housing to refine the scope of the study. With the assistance of a non-governmental organization (NGO), namely the Center of the Caritas Macau Short-Term Food Assistance Service (Seac Pai Van), our potential participants who were the ex-and-current service recipients of the NGO were recruited. The registered social workers, who are trained in research ethics and learned about the scope and purpose of the study, at the center first engaged and introduced the research to their service users who fulfilled the inclusion criteria. The inclusion criteria for the study were defined as (1) residents in public housing, (2) aged 60 or older, and (3) Cantonese-speaking individuals. These criteria were chosen based on the focus of the research on the mental well-being of older adults residing in public housing in Macau.

Interviews were conducted in the Center of the Caritas Macau Short-Term Food Assistance Service (Seac Pai Van) or at the interviewees' house, subject to their physical well-being. Participants were explained thoroughly about the research procedures and purposes, voluntary



participation, and confidentiality. Informed consent was obtained from each participant for the purpose of interviewing and recording, except for one interviewee who refused to be recorded, leading to the reliance on detailed notetaking instead. Nineteen valid face-to-face interviews were done among the 30 participants who initially accepted the invitation. The remaining 11 participants either refused to address their mental health issues or had strong accents from different Chinese dialects, making it difficult for the interviewer to comprehend their responses. The decision to include only participants who could clearly explain their experiences in Cantonese was critical to ensuring the accuracy and trustworthiness of the data collected. All the interviews lasted for 50–80 min and were conducted in Cantonese by the first author based on a semi-structured interview guide devised by the study's conceptualization and developed collaboratively by all authors before the study.

The chosen sample size of 19 participants, while relatively small, was deemed appropriate for this qualitative study. The rigorous data collection and analysis process, along with the expertise of the research team and the achievement of data saturation, may further support the validity and reliability of the findings.

During the data collection process, to fit in the literacy level of the participants and the socio-cultural context, “social capital” is explained as “Ren Qing Wei (人情味)” to participants, which is a Chinese term that is not entirely translatable to English and referred to as social capital in government campaigns (H.K. Government, 2013; Information Services Department Hong Kong, 2014). It refers to a sense of warmth, friendliness, hospitality, and human touch in social interactions. One can use this term to indicate the extent to which individuals demonstrate care and worry for one another, as well as the depth of personal bonds and emotional closeness in social exchanges. In the remaining sections of the present paper, social capital is used interchangeably as Ren Qing Wei (人情味), as that was how it was understood by our participants. The interviews were designed to understand more about participants' experiences with their social networks and social participation and the impacts on their mental well-being. Questions included their relationship with family, friends, relatives, and neighborhood; conceptualization of social capital; self-perception of mental health situation (including how they view their emotional state, loneliness, and suicidal ideation); caregiving situation; experiences of seeking help from others (including family, friends, relatives, neighbors, and professionals); satisfaction of social facilities and environment; perception of loneliness and lonely death; and thoughts of suicide and death. Sample questions for conceptualization of social capital and self-perception of mental health situations include “What is social capital (termed as “Ren Qing Wei”) to you?,” “How is it (not) important to you?,” “Did you feel this sense of Ren Qing Wei within this community?,” “How is Ren Qing Wei influencing your mental well-being?” “To you, what is the definition of a good mental well-being?,” “Anytime recently you feel at that state of well-being?,” “How does a lonely person feels like, and do you feel lonely recently? If so, how is it linked with your mental well-being?,” “Did you ever have any suicidal ideation or attempts recently?”

Transcripts were analyzed through the thematic analysis approach (Braun & Clarke, 2022). The data analysis approach included multiple iterative cycles, beginning with familiarizing the data by reading and re-reading the transcripts to get a thorough grasp of the content. Inductive coding techniques were then utilized to identify initial codes that emerged from the data.

The primary coding technique was carried out by the first author, with careful supervision from the second author, who performed as an experienced researcher in qualitative analysis, to assure the rigor of the analysis. Collaborative coding decisions were made, with meetings held among the research team to review and develop the coding scheme. Following the initial coding phase, the codes were categorized into themes based on similarities and patterns. This procedure included constant code and theme comparisons, as well as discussions among the research team to assure the accuracy and consistency of the selected themes.

The entire research team maintained a neutral stance, as they had no prior knowledge of the participants, promoting objectivity in the analysis process.

4 | RESULTS

The interview involved 19 participants, 15 of whom were females and four were males. The participants were aged between 62 and 79 years old. The majority of the participants were widowed ($n=9$) or single ($n=4$), while four were married and two were divorced. On average, the participants had lived in public housing for 7 years, with a range of 5–10 years. The old-age pension was the main source of income for most of the participants, while one participant had a full-time job. The physical condition of the participants varied, with two elderly reporting good physical health and 14 reporting poor physical health. Similarly, the participants' mental health conditions varied, with 8 reporting fair mental health and 11 reporting poor mental health. Most of the participants lived alone ($n=16$) (See Table 1).

Based on two cycles of coding and a thematic analysis, five themes and 20 sub-themes were generated, including (1) Shallow social capital in Seac Pai Van (sub-themes, i.e., Poor relationships with family/children/relatives, Poor relationships with friends, Poor relationships with neighborhood, Low social trust, Social participation); (2) Poor mental health conditions (sub-themes, i.e., Grief, Caregiver stress, Living condition, Physical condition); (3) Loneliness (sub-themes, i.e., Solo dwelling, Physical condition, Loss of social role); (4) Death wishes (sub-themes, i.e., Lonely death, Suicide and Suicidal ideation); and (5) Poor living environment (sub-themes, i.e., Facilities and services, Witness of death, Age homogeneity, Isolated area).



TABLE 1 Profile of participants in the study.

No.	Sex	Age	Marital status	Year of residence	Main source of income	Physical condition	Mental condition	Special living features
1	F	73	Single	7	Old-age Pension	Good	Fair	Solo dwelling
2	F	74	Widowed	>5	Old-age Pension	Poor	Fair	Solo dwelling
3	F	71	Married	7	Old-age Pension	Poor	Poor	Double aging
4	F	78	Widowed	8	Old-age Pension	Poor	Poor	Solo dwelling
5	F	74	Widowed	5	Old-age Pension	Poor	Fair	Solo dwelling
6	F	73	Married (Caregiver)	7	Old-age Pension	Poor	Poor	Solo dwelling
7	F	70	Divorced	7	Old-age Pension, some financial support from children	Poor	Fair	Solo dwelling
8	F	77	Widowed (Ex-caregiver)	6	Old-age Pension	Poor	Poor	Solo dwelling
9	M	67	Single	5	Old-age Pension	Poor	Fair	Solo dwelling
10	M	73	Divorced	8	Old-age Pension	Fair	Poor	Solo dwelling
11	M	73	Widowed (Ex-caregiver)	9	Old-age Pension	Fair	Fair	Solo dwelling
12	F	76	Married (Caregiver)	9	Old-age Pension	Poor	Fair	Double aging
13	M	67	Married (Caregiver)	5	Full Time job	Good	Poor	Unknown
14	F	71	Widowed	7	Old-age Pension, some financial support from children	Poor	Poor	Solo dwelling
15	F	79	Widowed	9	Old-age Pension	Poor	Poor	Solo dwelling
16	F	62	Single	8	Early Old-age Pension	Poor	Poor	Solo dwelling
17	F	64	Widowed	8	Early Old-age Pension	Poor	Poor	Solo dwelling
18	F	74	Single	10	Old-age Pension	Fair	Fair	Solo dwelling
19	F	77	Widowed	9	Old-age Pension	Poor	Poor	Solo dwelling

4.1 | Shallow social capital in Seac Pai Van

Most interviewees reported that they had felt shallow or no social capital within the community despite moving into this estate for over five years. Regarding how they conceptualize social capital, most participants perceived it as “reciprocity” and “mutual help and care.” Some also refers to “social connection and communication.” Most of them expressed a strong anticipation and recognition of the significance of social capital in their daily lives. They emphasized that when social capital is strong, it brings them a profound sense of happiness and positivity, elevating their feelings of being cared for and valued. Some participants even state that social capital is invaluable and cannot be substituted by material wealth.

It's very important. If your neighbors aren't getting along, can you live happily? Definitely not. If everyone is friendly..., it makes you feel good, and everyone gets along. Money is not enough to make you happy if everyone is distant or unhappy with each other. (#3)

The interviewees' perceptions of having shallow or no social capital in Seac Pai Van were mainly related to their poor relationships with families, children and relatives, friends, and the neighborhood. Several participants attempted to elucidate the factors responsible for their limited social connections, attributing them primarily to community isolation, a fear of burdening others, and the constraints imposed by their adult children's shift work in the gambling-related tourism industry, which hindered frequent visits.

Some people talk, others don't. Neighbors will greet each other when they go out, but this is the only thing they would do, so there is no actual warmth or friendliness in the neighborhood. It's just surface-level interactions. Some people die without anyone knowing here. (#10)

Yes, I really want to find them (my children) and talk to them, to have some fun. But then, I rethink about how I might hear people gossiping about me when I go out and young people now might complain about me being annoying if they see me looking for them often. (#17)



Those people ignore me, so I ignore them. There's no friendliness. But there's nothing we can do. That's just how the city works... People close their doors and stay inside. If they don't know you then you won't know them, they won't care about you when you need help.

(#13)

These negative experiences within social networks, featured by the lack of reciprocity and mutual support, have significantly eroded the level of social trust among individuals. Consequently, they have become more inclined to withdraw socially due to fears of being gossiped about, ignored, or looked down upon. This withdrawal, in turn, contributes to their unwillingness to seek assistance from family, friends, relatives, or professionals. It is noteworthy that this resistance to seeking help contradicts their own understanding of "social capital," which emphasizes reciprocity and mutual aid. The deep-seated belief that "no one can help" appears to be firmly stamped in their hearts and minds.

Sometimes neighbors invite me to sit and chat with them, but I don't like doing such things. They gossip a lot and talk behind others' backs. As my teeth were decayed and I'm lame, people would make fun of me. My friends are not my close friends. So, when I talk about my problems and how lonely I am, people may laugh at me. That's why I keep them all to myself.

(#15)

Why talk about these (sad, personal, problematic) things? No one would be able to care about you. I won't say those things. Why talk about family matters? It's unnecessary to bring them up. You have to handle such things on your own, and there's no reason to talk about family matters with others. If you don't want people to know, then keep it to yourself... Even if you let others know, what can they do for you? You still have to rely on yourself!

(#6)

It's not because I can handle it on my own. If you tell someone, they will spread it out. I know what people are like. This is how I think about it (not seeking help). How can you reveal your innermost thoughts to others? It's not private!

(#16)

Interestingly, participants who engaged in greater social participation, especially through volunteering in their neighborhood, tended to perceive a higher level of social capital and placed a greater value on it compared to other participants. They acknowledged that volunteering served as a tangible manifestation of social capital, bringing them a sense of happiness and purpose in life.

It's good to help others, which is also helping yourself. It feels very fulfilling. Helping others feels good, and when you visit someone, they feel happy too. Volunteering helps to distract oneself and also helps others, accumulating good deeds for oneself.

(#12)

4.2 | Poor mental health conditions

Most of the participants reported having poor mental health conditions, which were intricately connected to their struggles with sleep disturbances and loss of appetite. They attributed their mental health challenges to grieving for someone's death, loneliness, caregiver stress, unsatisfied living conditions, poor physical health, and being social.

Sometimes I cry, I have no clue what will happen in the future. I just hope that I won't be dying alone at home without anyone knowing. When I call them (children and grandchildren), no one answers. Even when I called my grandson, his phone was turned off. He made excuses saying that it's running out of battery or something else. I get so annoyed hearing these things all the time. Sometimes I ask why they don't answer the phone. Then they would tell my daughter-in-law that I scolded them. But they won't come visit or call you. It's like they don't care about you at all. I really miss them.

(#14)

Sometimes when I'm sleeping, I think, even if he (husband) had dementia, at least there was someone with me. Now there's no one after he died. I used to be very annoyed when he was here, but now he's gone. I feel like it would be better if he were still here.

(#8)



After he got dementia, he didn't know how to control his bladder, so he would wet his pants. You had to change his pants, but when you took them off, he would hit you. If you stood in front of him, he would punch you, and if you stood behind him, he would push you. There was once when he hit me in the bathroom, and I had to be hospitalized immediately. All the doctors knew he hit me. Sometimes I couldn't beat him, and I fought for my life to get out. The doctors said he had dementia, so he wasn't guilty of hitting me, but I was guilty of hitting him back. He doesn't even know what he's doing, but I have to endure it. I have to endure it no matter what. He hit my children too.

(#8)

4.3 | Loneliness

Many participants expressed feelings of loneliness, which were closely intertwined with their poor mental health conditions, primarily due to living alone. The experience of loneliness was also found to be associated with thoughts of death and suicidal ideation among these individuals. However, due to their fear of burdening others, they refrained from disclosing their true feelings and their deep longing for meaningful and genuine connections, particularly with their children and friends.

(Have you thought of finding someone to talk to?) Yes, but I can't think of anyone who is my closest companion, no one is. Everyone wants to be with their own children, I also think like that too. I feel lonely on my own now... I often think that it's better to go to sleep and not wake up tomorrow. At this life stage, I have to think about these things, but it's a scary image.

(#16)

In particular, participant #13 who newly arrived in Macau and was a full time working 67-year-old man while also taking care of his disabled spouse and son had strong suicidal ideation. He reported that he did not have any social network in Macau and was not able to network with neighbors for his long working and caregiving hours.

We (caregivers) are all like this, for the whole life. I am almost seventy years old. I have put up with this from my teenage years until now. There's no way, it's helpless, but I must continue. Endure it. If you don't survive? Then it's just like people say, jumping off a building to die. But there's no reason..... It's just I can't even die even if I wanted to, when you have those two disabled people holding you back. That's just how it is.

(#13)

4.4 | Death wishes

Most of the interviewees shared their experiences of hearing about or witnessing cases of lonely deaths and suicides within their neighborhood. Having such experiences heightened the fear of death among some participants, thus impacting their overall mood and mental health.

It's not just in the news, there are many cases I have seen with my own eyes... and I feel like I'm in that situation every minute. To be frank, I just hope to die in a good way. It's normal you die here, and no one knows. It's just a matter of whether it happens sooner or later. My son took almost half an hour to come over, and would you think I am still alive? When a person is in their seventies, you can't control too much, it's just like muddling through.

(#19)

Yes, that's true. Being alone all the time, if something were to happen to me while living here, no one would know until the people living next door smelled it. If they don't smell it, then nobody knows. That's just how it is.

(#17)

Recently, there's a lot of elderly women who have died at home without anyone knowing.... Hearing these stories is shocking and bewildering. We have just met some days before, and then hearing people say that she has died. At that moment, I was very bewildered, not knowing whether to believe it or not. The people from her family had come to visit her a couple of days



earlier, but it's impossible for them to visit her every day. We checked on her, but there was no response, and when we went to knock on her door, we found that she had been dead on her sofa for several days. We have several cases like this on my floor.

(#12)

Regarding suicidal ideation, 11 (58%) out of 19 interviewees disclosed experiencing thoughts of suicide, primarily attributed to feelings of loneliness and poor physical health. However, they would conceal their suicidal ideation and display reluctance to seek help. The prevailing reason for not committing suicide, despite their presence, was the fear of burdening their family.

It's better for me to die earlier than him (husband). I really have no choice. My son heard me say that. There seemed to be no way out, and when you think like that and no one is there to advise you, you will end up in that situation. That's just how people are. When you see no hope left in the world, it's a dead end. Suicide relieves the pain; I think it's ending the pain.

(#8)

Nowadays, when I can't think of a way out, I think about dying. Sometimes my heart feels very heavy, and I even have the urge to jump off. But I wonder what would happen if I jumped? I would just end up broken and shattered, and that's not a good outcome.

(#15)

One widowed old lady shared her perspective, expressing a preference for suicide over dying alone in a state of loneliness. She explained that while suicide may be visible to others, lonely death entails dying alone accompanied by loneliness, abandonment, and sadness.

It's true that when someone jumps off a building, there may be people who see it happen. But if you die alone, no one will know. It's hard to say when I might do something foolish like jumping off a building.

(#17)

On the contrary, those who did not report having suicidal ideation commented that suicide is worthless and could not comprehend why some individuals resort to such actions.

It's a pity that at their age, the government has money to give, and they don't need to rely on young people for money. Why do they need to die? I think it's very sad and pitiful that they choose to take their own lives away. If someone has no money and their children don't support them, some people may think about dying sooner, but if there is money and support available here, why would they choose to die?

(#2)

Suicide represents someone wanting to end their own life, and I don't think it's worth it. They are unwilling to take that first step... In Macau, there is the Lifeline Macau, which provides a 24-hour crisis hotline for those in need. Despite these resources being available, some individuals are still unwilling to seek help and take that first step towards recovery.

(#1)

4.5 | Poor living environment

We also found that environmental factors significantly contribute to establishing and enriching social capital and an individual's mental health condition. "Living environment" here refers to the context of residing in the public housing in Macau, including the physical environment, design of public space, structure of the building, as well as facilities and services. Environmental factors that influence social capital and mental well-being generated from this study include dissatisfaction with available facilities and services, the neighborhood's structural characteristics that facilitate the observation of deaths, the presence of age homogeneity within the community, and the isolated nature of the area.

One female participant shared about how the open public space is unfriendly to elderly, thus discouraging them from leaving their home and connecting.

Nowadays, many parks have chess boards for people to play on, but in Seac Pai Van, some people even have to draw their own chess boards. Moreover, there aren't many activities for people to do besides things like exercise with the equipment, and not everyone enjoys those activities, or unable to. That's why I don't go to the open area very often to play.

(#7)

One male participant shared how he felt about the female-oriented social services that discouraged him from joining and bonding with neighbors.

I don't know what to talk about with them, as they have their own culture. Communication is different... When I try to talk to them, I don't know if they understand me. Additionally, since it's a women's association, and I am a man, they are the main characters, and I am the outsider. When I enter, it's like they feel surprised or uncomfortable.

(#10)

A female participant who lived alone shared her experience of receiving frequent visits from volunteers who rarely engaged in conversations about emotions or mental health. On the other hand, she reported infrequent visits from professionals such as social workers.

The social workers say that they have too much work to do, and they haven't been able to visit everyone who needs assistance. They only feel pity and sad when someone completed suicide before receiving help. Sometimes, social workers may rely on volunteers like me to conduct home visits. Social workers may have too many tasks to handle and may not be able to help everyone. They are unable to cater our needs.

(#12)

Another participant shared about the loneliness created by the large population of elderly living in the neighborhood.

If only the elderly are living here, I won't feel happiness. Many elderly people are isolated and keep their doors closed. Some don't like to greet people, and others are reluctant to go outside. They feel very lonely, and there is a sense of lifelessness and gloom.

(#3)

5 | DISCUSSION

The present qualitative study focuses explicitly on the residents of Macau's most significant public housing project to explore how social capital impacts elderly mental health. The results show how low levels of social capital are positively associated with poor mental health conditions, which is consistent with previous research conducted in Macau (Wu et al., 2016), mainland China (Chen et al., 2015), and other places such as Finland, the United Kingdom, and South Korea (Kim & Kim, 2017; Nieminen et al., 2010; Tampubolon et al., 2013). Also, when the physical and cultural facilities do not facilitate social network building or easy access to public facilities among the residents, the residents will likely feel social disintegration and a sense of isolation.

Another noteworthy aspect is the unique work situation of the working population in Macau, which contributes to the mental health of the elderly in Macau. Many local residents are employed in the casino and pleasure industries, often requiring shift work or longer hours, which limits the frequency of family visits for elderly residents, potentially contributing to their feelings of isolation. Hence, it seems that the participants who resided in the studied area were affected by individual and communal levels of social disintegration. More specifically, a major domain explored is loneliness. Studies showed that loneliness is a potential risk factor for many common mental disorders, for example, depression and anxiety, among older adults (Lee et al., 2021; Lu, 2022). Loneliness is also one of the most significant factors contributing to suicidal ideation and attempts among this age group (Beutel et al., 2017; Teo et al., 2018; Zhang et al., 2021). According to the statistics from the Office of the Secretary for Security of Macau, there has been increasing trend of suicide deaths from 2017 to 2022 (Gabinete do Secretário para a Segurança, 2023). For the age range of 55 or above, the number of recorded cases has a 152% increase from 29 cases in 2017, representing 55% of the total number of suicidal cases in 2022. Some participants in the present study reported how a sense of helplessness, worthlessness, and powerlessness contributes to loneliness, thus inducing suicidal ideation. The results generated a vicious cycle, indicating how loneliness is positioned among the sampled older adults. Being physically or mentally unwell, most participants tend to stay at home and refuse to go out unless necessary, that is, for doctor appointments or grocery purchases. Their refusal to connect with others and leave their homes, causing social isolation, has increased their loneliness and lowered their physical and mental well-being.



Moreover, the shallow social capital within the community discourages them from breaking through social isolation and increasing social connectedness, which is corroborated by recent research in Japan (Saito et al., 2017). In their multilevel panel study, results indicated that more significant community-level social capital was linked to reduced social isolation, which is a major cause of lonely death in Japan. The findings suggest that interventions targeted at enhancing community-level social capital could be a viable approach to alleviate social isolation and enhance social connectedness. Our results also echo that a lower social capital level predicts a poorer mental health condition, which is aligned with other studies (Wu et al., 2016; Yip et al., 2007). The shallow social capital strengthens the social norm of not seeking assistance from others and hiding their hardships on their own (Du et al., 2022). The respondents did not seek help mainly because they feared being a burden to their families (primarily children) and friends, as well as the worry of being gossiped about in the neighborhood. It was not because they think they can handle everything on their own or that they are fully capable of living alone, but because the belief that “no one can help” and that “personal affairs shall not be told” has been deeply rooted in their minds. This belief contradicts their conceptualization of “social capital,” as in reciprocity and mutual help. Participants also revealed that though they desire to be visited by children or have friends or connections with others, the fear always overrides it and eventually hides the desires on their own. Although this is an “acquaintance society,” the low level of social trust has not provided a strong backup for the older adults to voice out their concerns, and a safe mental environment is yet to be established. To add, most participants reported witnessing or encountering conflicts in social organizations that increased their fear of being talked behind. Such findings corroborate a recent qualitative study conducted in China (Du et al., 2022). The study reported the reasons behind the refusal to seek help based on three themes: (i) the desire to be independent; (ii) the fear of overburdening their family; and (iii) the fear of bothering others (excluding family) due to a lack of trust. A low level of social trust also results in a reluctance to build new connections within the neighborhood by refusing to join social activities, thus increasing social isolation and loneliness, which is positively correlated to mortality in studies (Ong et al., 2016; Steptoe et al., 2013).

Adopting the Person-In-Environment (P.I.E.) model, people's actions and conduct are influenced by the interplay between themselves and their surroundings, and both individuals and their environment have a reciprocal impact on each other (Garvin & Epstein, 1981). The present study reveals several important environmental factors contributing to older adults' mental well-being, especially the housing estates' design and location and the homogeneity of the age range. Participants revealed that the balcony design is easily accessible for committing suicide, and it is common for them to witness suicide deaths or see workers moving the corpses of neighbors after lonely deaths. Participants reported fears related to death after encountering such experiences, which was identical to related research on witnesses of suicidal deaths (Hales et al., 2014). Those who are related to the deceased, the witness, or “survivors-victims” have additional complex feelings such as shame, guilt, hatred, and perplexity (Andress & Corey, 1978).

Additionally, participants also raised attention to the vast population of elderly people in the neighborhood and reported that age homogeneity had created a sense of loneliness and gloominess. Much research has shown the importance of creating an intergenerational society that favors interactions between generations (Nieboer & Cramm, 2018; Tiraphat et al., 2017; World Health Organization, 2017; Zhong et al., 2020). As revealed in the studies, the establishment of intergenerational communities has positive effects on mental health outcomes among older adults. These outcomes include lower levels of depression, anxiety, and loneliness and higher levels of life satisfaction, social support, and self-esteem while offering opportunities for older adults to participate in meaningful activities with youngsters, contributing to feelings of purpose and belonging.

6 | IMPLICATIONS, LIMITATIONS, AND FUTURE DIRECTIONS

The implications of this research paper emphasize the importance of estate development that has a friendly environment and a robust infrastructure in preventing isolation and building social capital within communities. Developing new communities should prioritize establishing social welfare organizations, strategizing housing allocation, and promoting intergenerational living arrangements to facilitate the natural formation of social capital that can reduce isolation and prevent further deterioration of mental well-being.

Both internal and external infrastructure significantly influence community adaptation. However, environmental factors may contribute to isolation. For instance, this study sheds light on a potential concern in the architectural design of densely populated, high-rise housing communities. The Lok Kuan Building, comprising six high-rises with 28 to 29 floors each and approximately 32 flats per floor, totaling 4672 flats, presents a case in point. Each flat features a rear balcony linked to an atrium, a design intended to foster a sense of community by creating public spaces. Yet, the potential misuse of these spaces by individuals grappling with loneliness, depression, or suicidal thoughts is a serious and significant concern. As revealed by participants in the study, the atrium and rear balcony design may unintentionally facilitate and make visible suicidal incidents, leading to further depression among witnesses. Addressing design flaws, preventing misuse of spaces, and promoting community adaptation can reduce feelings of isolation and disconnection. Enhancing community ties and trust can be accomplished by fostering a sense of belonging through community bonding opportunities, such as community gardens, and promoting pride in the community.

Moreover, this study highlights the need to revisit the current mental health policy in Macau and address the urban and architectural design and social organization in the new community. The Macau S.A.R. government began funding social organizations to provide mental

health services for citizens in 2008 and established a four-level model for community mental health services based on recommendations from the World Health Organization: the first level encompasses all relevant services within the community, the second level provides specialized community mental health services, the third level refers patients to health centers, and the fourth level refers patients to the Psychiatry Department of the Conde de São Januário Hospital Centre (Government Information Bureau of the Macao S.A.R., 2014).

However, this study suggests that this model may be inadequate, as it does not address the specific concerns of elderly citizens. For example, the fear of being gossiped about revealed in the study points to a lack of cognitive social capital, as elderly residents are afraid to interact with others due to potential gossip or embarrassment. This highlights the need for psychological training and social skills development to help build confidence in neighborhood communities and reduce such fears. The current social organizations are also burdened with heavy workloads and unable to provide sufficient home visits to identify suicidal thoughts and prevent suicide early enough. The fear of dying alone at home also reflected the lack of social networks among the elderly. Additionally, there is a lack of follow-up for elderly individuals in the community who experience mental health issues. It is crucial to address these issues in Seac Pai Van and ensure that mental health policies are tailored to the specific needs and concerns of elderly citizens, with adequate support and resources for community organizations to provide effective mental health services. The study's limitations include its small sample size, and future research could involve larger samples and interdisciplinary collaboration to better understand the relationship between environment, design, and mental well-being in other communities.

7 | CONCLUSION

This study highlights the positive relationship between social capital and mental well-being among elderly residents in public housing in Macau. Low levels of social capital are associated with poor mental well-being, often due to feelings of loneliness stemming from factors such as caregiver stress and poor physical health. Lack of social trust and fear of gossiping further hinder seeking assistance and contribute to social isolation. The study suggests the need for social welfare organizations and intergenerational living arrangements in developing new communities. Future research could explore the impact of architectural design and public space accessibility on the mental well-being of older adults, leading to appropriate interventions to support this vulnerable group.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflict of interest.

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REFERENCES

- Almedom, A. M. (2005). Social capital and mental health: An interdisciplinary review of primary evidence. *Social Science & Medicine*, 61(5), 943–964. <https://doi.org/10.1016/j.socscimed.2004.12.025>
- Andress, V. R., & Corey, D. M. (1978). Survivor-victims: who discovers or witnesses suicide? *Psychological Reports*, 42(3), 759–764. <https://doi.org/10.2466/pr0.1978.42.3.759>
- Batyrgareieva, V. S., Kalinina, A. V., & Babenko, A. M. (2020). Suicide as an indicator of the public mental health in Ukraine (including period of COVID-19). *Wiadomości Lekarskie*, 73(12), 2743–2751. <https://doi.org/10.36740/wlek202012208>
- Beutel, M. E., Klein, E. M., Brähler, E., Reiner, I., Jünger, C., Michal, M., Wiltink, J., Wild, P. S., Münzel, T., Lackner, K. J., & Tibubos, A. N. (2017). Loneliness in the general population: Prevalence, determinants and relations to mental health. *BMC Psychiatry*, 17(1), 97. <https://doi.org/10.1186/s12888-017-1262-x>
- Brådvik, L. (2018). Suicide risk and mental disorders. *International Journal of Environmental Research and Public Health*, 15(9), 2028. <https://doi.org/10.3390/ijerph15092028>
- Braun, V., & Clarke, V. (2022). *Thematic analysis a practical guide*. Sage.
- Chen, X., Zhou, Z., Li, X., & Zhang, J. (2015). Social capital and mental health in rural and urban China: A composite hypothesis approach. *PLoS One*, 10(9), e0136174.

- Clarke, A., Friede, T., Putz, R., Ashdown, J., Martin, S., Blake, A., Adi, Y., Parkinson, J., Flynn, P., Platt, S., & Stewart-Brown, S. (2011). Warwick-Edinburgh mental well-being scale (WEMWBS): Validated for teenage school students in England and Scotland. A mixed methods assessment. *BMC Public Health*, 11(1), 487. <https://doi.org/10.1186/1471-2458-11-487>
- De Silva, M. J., Huttly, S. R., Harpham, T., & Kenward, M. G. (2007). Social capital and mental health: A comparative analysis of four low income countries. *Social Science & Medicine*, 64(1), 5–20. <https://doi.org/10.1016/j.socscimed.2006.08.044>
- Du, Q., Gong, N., Hu, Q., Chen, G., Xie, J., Luo, L., Cheng, Y., & Zhang, M. (2022). Why do older adults living alone in cities cease seeking assistance? A qualitative study in China. *BMC Geriatrics*, 22(1), 540. <https://doi.org/10.1186/s12877-022-03217-x>
- Fiorillo, D., Lubrano Lavadera, G., & Nappo, N. (2019). Structural social capital and mental health: A panel study. *Applied Economics*, 52(19), 2079–2095. <https://doi.org/10.1080/00036846.2019.1682508>
- Frierson, R. L. (1991). Suicide attempts by the old and the very old. *Archives of Internal Medicine*, 151(1), 141–144. <https://doi.org/10.1001/archinte.151.1.141>
- Gabinete do Secretário para a Segurança. (2023). 罪案數字. 統計資料 - 澳門特別行政區政府 保安司司長辦公室. <https://www.gss.gov.mo/cht/statistic.aspx>
- Garvin, C. D., & Epstein, R. (1981). *The life model of social work practice: Advances in theory and practice*. Columbia University Press.
- Government Information Bureau of the Macao S.A.R. (2013, April 15). 石排灣社屋-樂群樓首批租戶上樓. 澳門特別行政區政府入口網站. <https://www.gov.mo/zh-hant/news/108871/>
- Government Information Bureau of the Macao S.A.R. (2014, September 6). 衛生局持續關注精神病患者需求 四階級精神健康服務全面提供支援. 澳門特別行政區政府入口網站. <https://www.gov.mo/zh-hant/news/127958/>
- Hales, H., Freeman, M., Edmondson, A., & Taylor, P. (2014). Witnessing suicide-related behavior in prison. *Crisis*, 35(1), 10–17. <https://doi.org/10.1027/0227-5910/a000223>
- Hall, B. J., Lam, A. I. F., Wu, T. L., Hou, W.-K., Latkin, C., & Galea, S. (2017). The epidemiology of current depression in Macau, China: Towards a plan for mental health action. *Social Psychiatry and Psychiatric Epidemiology*, 52(10), 1227–1235. <https://doi.org/10.1007/s00127-017-1415-8>
- Hamano, T., Fujisawa, Y., Ishida, Y., Subramanian, S. V., Kawachi, I., & Shiwaku, K. (2010). Social capital and mental health in Japan: A multilevel analysis. *PLoS One*, 5(10), e13214. <https://doi.org/10.1371/journal.pone.0013214>
- Harpham, T. (2008). The measurement of community social capital through surveys. In I. Kawachi, S. V. Subramanian, & D. Kim (Eds.), *Social capital and health* (pp. 51–62). Springer.
- He, J., Ouyang, F., Qiu, D., Li, L., Li, Y., & Xiao, S. (2021). Time trends and predictions of suicide mortality for people aged 70 years and over from 1990 to 2030 based on the global burden of disease study 2017. *Frontiers in Psychiatry*, 12, 721343. <https://doi.org/10.3389/fpsy.2021.721343>
- HK H.K. Government. (2013, March 1). 互信、互助、互動 共同建立社會資本(附圖). <https://www.info.gov.hk/gia/general/201611/26/P2016112500360p.htm>
- Information Services Department Hong Kong. (2014, December 8). 集結社會力量 建立互助網絡. 香港政府新聞網 - 類別 - 政府評論 - 集結社會力量 建立互助網絡. https://www.news.gov.hk/tc/record/html/2014/12/20141209_113652.shtml
- Keyes, C. L. (1998). Social well-being. *Social Psychology Quarterly*, 61, 121–140.
- Keyes, C. L. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, 43(2), 207–222. <https://doi.org/10.2307/3090197>
- Keyes, C. L. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology*, 73(3), 539–548. <https://doi.org/10.1037/0022-006x.73.3.539>
- Kim, J. H., & Kim, J. H. (2017). Social capital and mental health in Seoul, South Korea: A multilevel analysis of 4,734 people in 25 administrative areas. *Social Science & Medicine*, 192, 25–33. <https://doi.org/10.1016/j.socscimed.2017.09.036>
- Lee, S. L., Pearce, E., Ajnakina, O., Johnson, S., Lewis, G., Mann, F., Pitman, A., Solmi, F., Sommerlad, A., Steptoe, A., Tymoszuk, U., & Lewis, G. (2021). The association between loneliness and depressive symptoms among adults aged 50 years and older: A 12-year population-based cohort study. *The Lancet Psychiatry*, 8(1), 48–57. [https://doi.org/10.1016/S2215-0366\(20\)30383-7](https://doi.org/10.1016/S2215-0366(20)30383-7)
- Lin, N. (2001). *Social capital: A theory of social structure and action*. Cambridge University Press.
- Liu, L., Gou, Z., & Zuo, J. (2014). Social support mediates loneliness and depression in elderly people. *Journal of Health Psychology*, 21(5), 750–758. <https://doi.org/10.1177/1359105314536941>
- Lu, N. (2022). *Loneliness among older adults during the COVID-19 pandemic: The role of family and community social capital*. Springer.
- Lu, S., Guo, Y., Chui, C., Liu, Y., Chan, O. F., Chan, S. W., & Lum, T. Y. (2022). Neighborhood environment and mental well-being among Chinese older adults: The mediating role of social capital. *Innovation in Aging*, 6(7), igac070. <https://doi.org/10.1093/geroni/igac070>
- Lum, T. (2022). Social capital and geriatric depression in the Asian context. *International Psychogeriatrics*, 34(8), 671–673. <https://doi.org/10.1017/S1041610222000576>
- Macao Government. (2023). 公共房屋. 澳門特別行政區政府入口網站. <https://www.gov.mo/zh-hant/browse/public-housing/>
- Macao Statistics and Census Service. (2022). *Dsec.gov.mo*. Macao Statistics and Census Service – 2021 Household Surveys. https://www.dsec.gov.mo/getAttachment/b9cf8539-4731-48a9-8319-116d761ea03a/C_CEN_PUB_2021_Y.aspx
- Macao Social Services Facilities Guide. (2017). 澳門社會服務設施指南. 澳門特別行政區政府入口網站. <https://iasweb.ias.gov.mo/inst/detailChinese.jsp?id=C8002&call=1>
- Nieboer, A. P., & Cramm, J. M. (2018). Age-friendly communities matter for older people's well-being. *Journal of Happiness Studies*, 19(8), 2405–2420. <https://doi.org/10.1007/s10902-017-9923-5>
- Nieminen, T., Martelin, T., Koskinen, S., Aro, H., Alanen, E., & Hyyppä, M. T. (2010). Social capital as a determinant of self-rated health and psychological well-being. *International Journal of Public Health*, 55(6), 531–542. <https://doi.org/10.1007/s00038-010-0151-0>
- Niu, L., Jia, C., Ma, Z., Wang, G., Sun, B., Zhang, D., & Zhou, L. (2020). Loneliness, hopelessness and suicide in later life: A case-control psychological autopsy study in rural China. *Epidemiology and Psychiatric Sciences*, 29, e119. <https://doi.org/10.1017/s2045796020000335>
- Norstrand, J. A., & Xu, Q. (2011). Social capital and health outcomes among older adults in China: The urban-rural dimension. *The Gerontologist*, 52(3), 325–334. <https://doi.org/10.1093/geront/gnr072>
- Ong, A. D., Uchino, B. N., & Wethington, E. (2016). Loneliness and health in older adults: A mini-review and synthesis. *Gerontology*, 62(4), 443–449. <https://doi.org/10.1159/000441651>
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24, 1–24.
- Putnam, R. (1994). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.

- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Ryff, C. D., & Keyes, C. L. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719–727. <https://doi.org/10.1037/0022-3514.69.4.719>
- Sadatnia, M., Jalali, A., Tapak, L., & Shamsaei, F. (2023). The relationship between mental health and loneliness in the elderly during the covid-19 pandemic. *Journal of Ageing and Longevity*, 3(3), 433–441. <https://doi.org/10.3390/jal3030017>
- Saito, M., Kondo, K., Aida, J., Kondo, N., & Ojima, T. (2017). Community-level social capital and social isolation in Japan: A multilevel panel study. *Innovation in Aging*, 1(suppl_1), 450. <https://doi.org/10.1093/geroni/igx004.1608>
- Stephens, A., Shankar, A., Demakakos, P., & Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. *Proceedings of the National Academy of Sciences of the United States of America*, 110(15), 5797–5801. <https://doi.org/10.1073/pnas.1219686110>
- Tampubolon, G., Subramanian, S. V., & Kawachi, I. (2013). Neighbourhood social capital and individual self-rated health in Wales. *Health Economics*, 22(1), 14–21. <https://doi.org/10.1002/hec.2774>
- Tengku Mohd, T. A., Yunus, R. M., Hairi, F., Hairi, N. N., & Choo, W. Y. (2019). Social support and depression among community dwelling older adults in Asia: A systematic review. *BMJ Open*, 9(7), e026667. <https://doi.org/10.1136/bmjopen-2018-026667>
- Teo, A. R., Marsh, H. E., Forsberg, C. W., Nicolaidis, C., Chen, J. I., Newsom, J., Saha, S., & Dobscha, S. K. (2018). Loneliness is closely associated with depression outcomes and suicidal ideation among military veterans in primary care. *Journal of Affective Disorders*, 230, 42–49. <https://doi.org/10.1016/j.jad.2018.01.003>
- Tiraphat, S., Peltzer, K., Thamma-Aphiphol, K., & Suthisukon, K. (2017). The role of age-friendly environments on quality of life among Thai older adults. *International Journal of Environmental Research and Public Health*, 14(3), 282. <https://doi.org/10.3390/ijerph14030282>
- Tung Wah Group of Hospitals. (2019). *A survey of elderly mental health in HK: Final report 2019*. Tung Wah Group of Hospitals.
- Westerhof, G. J., & Keyes, C. L. (2009). Mental illness and mental health: The two continua model across the lifespan. *Journal of Adult Development*, 17(2), 110–119. <https://doi.org/10.1007/s10804-009-9082-y>
- Wong, H., Huang, Y., Fu, Y., & Zhang, Y. (2018). Impacts of structural social capital and cognitive social capital on the psychological status of survivors of the Yaan earthquake. *Applied Research in Quality of Life*, 14(5), 1411–1433. <https://doi.org/10.1007/s11482-018-9661-9>
- World Bank. (2022a). *Population density (people per sq. km of land area) - Macao Sar, China*. World Bank Open Data. <https://data.worldbank.org/indicator/EN.POP.DNST?locations=MO>
- World Bank. (2022b). *Land area (sq. km) | data - World Bank open data | data*. World Bank Open Data. <https://data.worldbank.org/indicator/AG.LND.TOTL.K2>
- World Health Organization. (2017). *Mental health of older adults. Fact Sheet*. <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
- World Health Organization. (2023). *Mental health*. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- Wu, T. L., Hall, B. J., Canham, S. L., & Lam, A. I. (2016). The association between social capital and depression among Chinese older adults living in public housing. *Journal of Nervous and Mental Disease*, 204(10), 764–769. <https://doi.org/10.1097/nmd.0000000000000561>
- Yip, W., Subramanian, S. V., Mitchell, A. D., Lee, D. T. S., Wang, J., & Kawachi, I. (2007). Does social capital enhance health and well-being? Evidence from rural China. *Social Science & Medicine*, 64(1), 35–49. <https://doi.org/10.1016/j.socscimed.2006.08.027>
- You, S., Van Orden, K. A., & Conner, K. R. (2011). Social connections and suicidal thoughts and behavior. *Psychology of Addictive Behaviors*, 25(1), 180–184. <https://doi.org/10.1037/a0020936>
- Zhang, D., Wang, R., Zhao, X., Zhang, J., Jia, J., Su, Y., & Wang, K. (2021). Role of resilience and social support in the relationship between loneliness and suicidal ideation among Chinese nursing home residents. *Aging & Mental Health*, 25(7), 1262–1272. <https://doi.org/10.1080/13607863.2020.1786798>
- Zhong, S., Lee, C., Foster, M. J., & Bian, J. (2020). Intergenerational communities: A systematic literature review of intergenerational interactions and older adults' health-related outcomes. *Social Science & Medicine* (1982), 264, 113374. <https://doi.org/10.1016/j.socscimed.2020.113374>
- Zhou, D., & Gong, N. (2017). Social morality from the perspective of cultural transformation – Studies on cultural transformation (3). *Thinking*, 43(3), 78–85.

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