Exploring the dimensions of patient experience for community-based care programmes in a multi-ethnic Asian context

Chuan De Foo1*, Yan Lin Tan1, Pami Shrestha1,2, Ke Xin Eh2,3, Ian Yi Han Ang1,3, Milawaty Nurjono4,5, Sue-Anne Toh2,3,6, Farah Shiraz1,2

1 Saw Swee Hock School of Public Health, National University of Singapore, Singapore, Singapore, 2 Singapore Population Health Improvement Centre (SPHERIC), National University Health System, Singapore, Singapore, 3 Regional Health System Office, National University Health System, Singapore, Singapore, 4 Centre for Health Services and Policy Research (CHSPR), Saw Swee Hock School of Public Health National University of Singapore, Singapore, Singapore, 5 Health Services Research, Changi General Hospital, Singapore Health Services, Singapore, Singapore, 6 Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore

* ephchu@nus.edu.sg

Abstract

Introduction
The aim of this study is to explore patients' experiences with community-based care programmes (CCPs) and develop dimensions of patient experience salient to community-based care in Singapore. Most countries like Singapore are transforming its healthcare system from a hospital-centric model to a person-centered community-based care model to better manage the increasing chronic disease burden resulting from an ageing population. It is thus critical to understand the impact of hospital to community transitions from the patients' perspective. The exploration of patient experience will guide the development of an instrument for the evaluation of CCPs for quality improvement purposes.

Methods
A qualitative exploratory study was conducted where face-to-face in-depth interviews were conducted using a purposive sampling method with patients enrolled in CCPs. In total, 64 participants aged between 41 to 94 years were recruited. A deductive framework was developed using the Picker Patient Experience instrument to guide our analysis. Inductive coding was also conducted which resulted in emergence of new themes.

Results
Our findings highlighted eight key themes of patient experience: i) ensuring care continuity, ii) involvement of family, iii) access to emotional support, vi) ensuring physical comfort, v) coordination of services between providers, vi) providing patient education, vii) importance of respect for patients, and viii) healthcare financing.
Conclusion
Our results demonstrated that patient experience is multi-faceted, and dimensions of patient experience vary according to healthcare settings. As most patient experience frameworks were developed based on a single care setting in western populations, our findings can inform the development of a culturally relevant instrument to measure patient experience of community-based care for a multi-ethnic Asian context.

Introduction
Global population expansion and ageing have resulted in an increase in the number of people living with chronic conditions, and an overwhelming burden to healthcare infrastructures and budgets [1–3]. As a result, tertiary healthcare facilities in most countries are facing systemic stress from high bed occupancies, emergency department presentations, and readmission loads [4–6]. This unprecedented strain has created an urgency to provide care in the community for patients with stable chronic conditions, in order not to overwhelm resources at tertiary hospitals [7]. Transitional care programmes organise health and social care around patients for safe re-entry into the community for follow-up management [8]. As such, these programmes offer numerous advantages to a healthcare system, including the improvement of overall patient satisfaction, quality of life, clinical outcomes and cost containment, particularly through the attenuation of unplanned and avoidable hospital admissions [9–14]. Henceforth, there is increased emphasis on transitional care programmes which incorporate strategies that ensure optimal management of patients at all care interfaces [15, 16].

To ensure that transitional care programmes are optimally designed, experiences of patients enrolled in these programmes must be understood and enhanced. A meta-synthesis by Allen et al. (2016) had shown that positive patient experience served as levers for improving clinical outcomes and safety for multimorbid patients [17]. Positive patient experience is thus vital to the success of transitional care programmes as it augments the efficient usage of healthcare resources at all echelons of care [18, 19]. Furthermore, a systematic review by Doyle et al. (2013) found an association between positive patient experience and adherence to medical treatments, improved clinical effectiveness and outcomes in hospitals and primary care centres across various countries, including the United States of America (USA), United Kingdom (UK) and Taiwan [20]. Given the increased leverage and importance of such programmes, there is an impetus to determine the key dimensions of patient experience constituting a successful care transition.

Context of the study
Like many developed countries, Singapore, a multi-ethnic urban state in Southeast Asia, is facing a greying population. The disproportionately high number of elderly is coupled with an inevitable rise in chronic disease burden and surge in demand for long-term care management [21]. About half of Singaporean residents aged 60 years and above had reported having multiple chronic conditions, leading to a steady increase in healthcare utilisation and cost [22, 23]. Therefore, healthcare systems in Singapore have had to rapidly adapt to provide care in the community for stable chronic patients so as to prevent potential strain on tertiary hospital resources. To achieve this, healthcare systems had to effectively facilitate the integration of patient care across multiple care facets and settings. Henceforth, the public healthcare institutions in the country were organised into three integrated healthcare clusters, each forming one...
of three Regional Health Systems (RHSs). Each RHS has a full suite of services spanning across
different care settings and operated with the strategic vision of steering holistic patient-centred
care for the population [24]. Our study utilised data from the National University Health Sys-
tem (NUHS), one of three integrated healthcare clusters in Singapore. NUHS is helmed by the
National University Hospital (NUH), which works in close partnership with other regional
providers such as primary care physicians, community hospitals and academic health sciences
institutions in the Western region of Singapore [25].

With greater assimilation across providers, NUHS harnessed its network resources to pro-
vide community-based care, with the assurance that their community partners were well-
equipped to manage these patients. To that end, NUHS implemented their community right-
siting and post-discharge care programmes to permit seamless transition of chronic patients
from hospital to community [26]. Community right-siting programmes refer to initiatives
facilitating the timely discharge of clinically stable chronic patients who received care delivered
by multiple specialists from Specialist Outpatient Clinics (SOCs) to suitable community part-
tners [27]. Post-discharge care programmes refer to initiatives that manage patients with fre-
quent admissions, in need of high acuity care, and/or are non-ambulatory to be managed by a
care team after they have been discharged from hospital [28]. Hereinafter, transitional care
programmes which encompass a board range of services and environment designed to pro-
mote safe and timely passage of patients across care venues [8], such as the community right-
siting and post-discharge care programmes will be referred to as community-based care pro-
grammes (CCPs) (Details of CCPs are shown in S1 Table).

Defining the patient experience

Understanding the dimensions of patient experience is paramount in capturing the patient
experience accurately [29]. Despite the importance of patient experience, there is a dearth in
consensus on the dimensions of patient experience for CCPs. Motives for the derivation of
patient experience instruments and hence their dimensions across health systems and countries
vary from capturing the accountability of healthcare providers to enhancing patient choice,
improving quality of care or measuring the overall performance of a health system [30]. After a
review of existing literature, we found that most patient experience instruments were validated
in the western context and validated for use in a single care venue (Instruments reviewed in S2
Table). A critical inquiry performed by Wolf et al. (2014) was the only review we had found to
have evaluated a wide range of sources delineating patient experience definitions which elucid-
ated the overlapping dimensions across the sources as the overall well-being of the patient
influenced by the interplay of personal, societal and institutional factors at all venues of care
[31]. The review concluded that the definition derived by the Beryl Institute most accurately
captured the core components of patient experience: the ‘sum of all interactions, shaped by an
organisations’ culture, that influences patients perceptions across the continuum of care’ [32].

Measuring the patient experience

Using the dimensions explicated by Wolf et al. (2014) and the definition proposed by the Beryl
Institute, we concluded that the Picker Patient Experience instrument (PPE-15), conceived by
the Picker Institute Europe, was the most comprehensive in capturing the patient experience
[33]. Furthermore, the PPE-15 has also been validated in Hong Kong, demonstrating its cul-
tural relevance for deployment in an Asian city such as Singapore [34]. The PPE-15 dimen-
sions include: i) information and education, ii) care coordination, iii) physical comfort, iv) emotional support, v) respect for patient preferences, vi) involvement of family and friends, and vii) continuity and transition [33]. To further confirm that there were no other
instruments that better captured the dimensions than PPE-15, we created a comparison table to compare the instruments we had reviewed against the dimensions in PPE-15 (S3 Table).

Rationale for understanding patient experience in the Asian context

At the patient level, expectations and values of Asian patients are vastly different from Western patients as ethnic and socio-cultural nuances influence the receptiveness to seek care and sticking to a management plan [35, 36]. Kai et al. (2011) also highlighted the cultural variations between Asian and European patients regarding patient autonomy and involvement of the family in information disclosure and decision making for cancer patients in the UK [37]. At the systems level, healthcare financing and provision arrangements are conceived as articulations of the broader institutional and philosophical contexts. The diversity of the healthcare topography in Asian countries might render the applicability of western concepts and propositions of patient experience sub-relevant [38].

To our knowledge, most studies were conducted in predominantly western populations and had examined the patient experience within the ambit of a particular care setting such as general practice, inpatient or outpatient clinics. Thus, there is a paucity of empirical studies exploring the patient experience of CCPs in the Asian context. Therefore, the aim of this study is to explore patients’ experiences with CCPs and develop dimensions of patient experience salient to CCPs in the Singapore context.

Methodology

This qualitative study used data extracted from de-identified transcripts of interviews conducted as part of two other prior studies, whereby the evaluation of Post-Discharge Care Programmes (DSRB 2016–00410) and NUHS Right-Site Care Programmes (DSRB 2016–00914) were implemented by NUHS [39, 40]. A conceptual framework was subsequently used to analyse the transcripts for the derivation of themes salient patient experience for CCPs. We employed the Consolidated Criteria for Reporting of Qualitative Research (COREQ) throughout our study (S4 Table).

Sampling and recruitment process

Face-to-face in-depth interviews were conducted using a purposive sampling method. Participants were eligible if they were able to (a) give informed consent or have proxies who could provide consent on their behalf; and (b) converse in English, Mandarin, Malay or Tamil. Exclusion criteria included participants with cognitive dysfunction or those without a representative to provide consent on their behalf; or those who refused to be audio recorded.

Semi-structured interview guides were utilised for this study (S1 Appendix). Data was collected between 8 July 2016 to 26 April 2018. The interviews took between 22 minutes to 98 minutes and were conducted at a place of the participants’ convenience. No repeat interview was carried out. The interviews were audio-recorded, transcribed verbatim and coded thematically. A total of 30 transcripts were translated to English, 24 from Mandarin, 5 from Malay and 1 from Tamil. All audio transcripts and collected field notes were de-identified to maintain participants’ anonymity. Member checking, whereby the interview transcripts were sent back to the participants to be reviewed, was not performed.

Conceptual framework for analysis

We utilised the framework which was developed from PPE-15 to guide the initial coding process. Herein, we will summarise our data analysis procedure based on a five-step approach proposed by Ritchie and Spencer [41].
1. Familiarisation with data: Coders got acquainted with the data through reading and re-reading of transcripts. Notes were taken during the initial reading phase.

2. Identifying a framework: PPE-15 was concluded as most relevant for our analysis as it takes a comprehensive and holistic approach to the patient experience by covering all dimensions highlighted by Wolf et al. (2014).

3. Coding and indexing: We utilised the deductive framework which was developed from PPE-15 to guide the initial coding process. The key issues and concepts expressed by the participants formed additional themes and subthemes through an inductive coding process.

4. Charting: Specific pieces of data which were indexed in the previous stage were arranged into a framework matrix.

5. Mapping and interpretation: Associations and patterns within the data were elucidated for an accurate representation of the participants' experience.

**Ethics board approval**

Ethics approval was obtained from the National Healthcare Group, Singapore, Domain Specific Review Board (DSRB) before starting the study. The study reference number is 2018/00946.

**Results**

**Summary of participants demographic characteristics**

Table 1 summarizes the age, gender, and ethnicity of participants. In total, 64 participants aged between 41 to 94 years were recruited. Our participants have sufficiently represented the two genders and the three main ethnic groups in Singapore, namely Chinese, Malay and Indian, making our sample representative of a multi-ethnic population in Asia [42, 43].

Table 1. Characteristics of patients in community health programmes.

|                | N  | Sample composition (%) |
|----------------|----|------------------------|
| **Gender**     |    |                        |
| Male           | 39 | 60.9                   |
| Female         | 25 | 39.1                   |
| **Age**        |    |                        |
| 41 to 50       | 6  | 9.4                    |
| 51 to 60       | 8  | 12.5                   |
| 61 to 70       | 12 | 18.8                   |
| 71 to 80       | 23 | 35.9                   |
| 81 to 90       | 9  | 14.1                   |
| 91 to 100      | 6  | 9.4                    |
| **Ethnicity**  |    |                        |
| Chinese        | 44 | 68.8                   |
| Malay          | 12 | 18.8                   |
| Indian         | 8  | 12.5                   |

1 Total percentage might not sum to 100 due to rounding off to nearest one decimal place.

https://doi.org/10.1371/journal.pone.0242610.t001
Main findings

Our findings summarised in Table 2 revealed eight main themes and twelve additional subthemes that described the patient experience of patients enrolled in CCPs. When taken together, these themes fully encapsulate how the patients experienced their transitions across different care venues and the elements which they value. Not only were seven of the derived themes captured by PPE-15, a new theme, healthcare financing, was generated from the data during the inductive coding process.

1. Ensuring care continuity

The main theme of ensuring care continuity was reflected by participants as having care maintained throughout the patient journey. This was established by nurturing long-term patient-provider relationships when patients saw regular providers in the community post-discharge. A consistent relationship with the patients enabled providers to tailor individualised transitional care plans and instilled patients with the necessary skills for the self-management of their conditions. Ensuring care continuity was highlighted by two additional subthemes; 1.1 Familiarity with provider and 1.2 Empowerment to act in emergencies.

1.1. Familiarity with provider. Patients who received care from the same provider in the community had a heightened sense of familiarity, ease and confidence in their follow-up care. For providers, augmented acquaintance with patients’ previous medical and personal histories enabled them to construct more long-term personalised care plans encompassing lifestyle recommendations and recovery strategies.

“I feel that they are taking care of me, and with the same doctor, we also feel very confident.”

(IDI 51, Male, 65, Malay)

“[…] I can say it is better because I see a fixed doctor. Not like [hospital], whereby different doctors are on duty. So that particular doctor I see at [primary care clinic], he knows my condition well. He gives me almost 3–6 months visit [follow-up] […] there is a personal touch to that, not a bonding but a personal relationship with him […] advised me about my medical

Table 2. Main findings describing patient experiences of CCPs.

| Themes                        | Subthemes                                      |
|-------------------------------|------------------------------------------------|
| 1. Ensuring care continuity   | 1.1 Familiarity with provider                  |
|                               | 1.2 Empowered to act during emergencies        |
| 2. Involvement of family      | 2.1 Family’s involvement in decision-making    |
|                               | 2.2 Family’s involvement in caregiver duties   |
| 3. Access to emotional support|                                               |
| 4. Ensuring physical comfort  |                                               |
| 5. Coordination of services between providers | 5.1 Need for communication channels across care venues |
|                               | 5.2 Need for consistent instructions to patients |
| 6. Providing patient education| 6.1 Explanation of disease and treatment options |
|                               | 6.2 Provider’s perceptions of patient’s health literacy |
| 7. Importance of respect for patients | 7.1 Need for patient involvement in decision-making |
|                               | 7.2 Lack of involvement in decision-making     |
| 8. Healthcare Financing       | 8.1 Eligibility for financial subsidies        |
|                               | 8.2 Need for clear explanation of financial subsidies by providers |

https://doi.org/10.1371/journal.pone.0242610.t002
1.2. Empowered to act in emergencies. Providers equipped patients with the knowledge, confidence, and self-determination for their health as part of their management plan. This preparation enabled patients to appropriately address medical emergencies such as minor relapses or sudden deterioration in condition. Therefore, knowledge of symptom management and healthcare access to cope with simple complications when patients are in the community reduced unnecessary healthcare utilisation.

“Previously, it [asthma] was more severe. Now it is milder, and I just use the inhaler at home. The nurses also said that there is no need to go to the hospital, just use the inhaler at home, and that is fine. I used the inhaler myself when it is severe, and it is fine.”

(IDI 6, Male, 73, Chinese)

2. Involvement of family

The involvement of family members played a significant role in the decision-making process and was a key theme in this study. Participants emphasised how family members played a caregiving role for patients after the transition back home by acting as chaperones for patients to bridge the transition across care localities. Involvement of family was further highlighted with the following two subthemes; 2.2. Family’s involvement in decision-making and 2.2. Family’s involvement in caregiving duties.

2.1. Family’s involvement in decision-making.

Family members were devolved the responsibility to make decisions on care treatments, particularly for older patients who harboured the perception that their more educated children could better understand the technicalities of medical treatments. Patients’ children, therefore, served as conduits to translate the “medical intensive things” into simpler terms for patients to comprehend. Family members were also advised on the patient’s condition so that they could make more informed decisions on the patient’s management plan.

“Actually, when I go [follow-up at primary care clinic] the past few times, my daughter was there. So certain things, technical, medical intensive things, [doctor] tell her, and she will explain it to me.”

(IDI 51, Male, 65, Malay)

”They [doctors] called for a meeting with all my family members since they had to test if it was benign or malignant then decide on the course of action. There were medications that could be taken to shrink the tumour, because if left it as it is, it might worsen [… ] They [doctors] called us [family] down to listen to what we [family] have to say and to let us know what they felt was best too.”

(IDI 38, Female, 92, Chinese)

2.2. Family’s involvement in caregiver duties. Family members were highly involved in certain aspects of post-hospital patient care. The duties included the monitoring of medication schedules, ensuring the consumption of correct medicine dosage which facilitated the completion of care processes post-discharge and responding to medical emergencies appropriately.
“My daughter helps with the medication […] she will arrange the medication in terms of my weekly intake.”

(IDI 15, Male, 78, Chinese)

“Later at the night 12 o’clock, called my brother […] As a nurse, he will know what to do. Early in the morning 6 o’clock, called my brother again, so my brother had to rush down [for the emergency] […] my brother also had to work, middle of the night 12 o’clock, morning 6 o’clock, call him, he drives, it’s very distracting for him.”

(IDI 29, Male, 79, Chinese)

3. Access to emotional support

Emotional care called for providers to confer compassionate care readily through discussing and allaying patients’ existing fears and anxieties. Participants revealed that the discharge process was also less intimidating when their healthcare providers and family members were present emotionally during the interactions and available for them after they re-enter the community.

“He [nurse] also visited me at the ward to encourage me to get better soon [before transitioning into the community].”

(IDI 7, Male, 74, Chinese)

“She [care coordinator] would often call us to see if we have any issues and that is sort of asking us about our well-being [matters] that we would like to talk to her about [patient is already in the community].”

(IDI 60, Male, 65, Chinese)

“My younger brothers all have very nice wives. I have one brother’s wife, every day will call me [patient is already discharged]. Today, she got dialysis so she cannot call me […] My sisters, my brothers, they all love me so much.”

(IDI 56, Male, 65, Malay)

4. Ensuring physical comfort

Prompt and calibrated pain management is a universal requirement for healthcare, necessitating providers to reduce patients’ pain during instances of discomfort and to complete medical procedures for the patient with the least amount of discomfort.

“I tell my doctor I got some there [patient’s hand] got pain […] that day they found it and they jabbed the steroid.”

(IDI 23, Male, 59, Indian)

“The doctor also never tell me to and also never tell me to off the thing for one hour or give me painkiller. He just opened [undress the wound] like that. The first time it was opened, I shout like hell […] Sister [nurse’s name] came and said next time cannot open. Must wait for half an hour or one hour after giving you the painkiller. From that time onwards, I asked doctor do not open.”

(IDI 46, Male, 57, Malay)
5. Coordination of services between providers

Care integration along the patient journey called for a degree of coordination between healthcare entities which entailed accurate dissemination of the patient’s management plan and instructions across care interfaces. Participants expressed that having clear channels for the sharing of information could have prevented the duplication of healthcare services and fragmentation of care. Therefore, coordination of services between providers was captured by the two subthemes; 5.1. Need for communication channels across care venues and 5.2. Need for consistent instructions to patients.

5.1. Need for communication channels across care venues. Poor communication between providers from tertiary hospitals and community partners during referrals led to disjointed care management strategies. Community partner providers should have access to the full details regarding patient’s treatment plans to provide safe and effective post-hospital care.

“The problem is that the doctor does not have full details of my records, my profile all during my stay in [care venue A] for the past few months. I had a few months stay at [care venue B], but that is only a few months […] do not have the full information of what [procedures] I had gone through at [care venue A].”

(IDI 47, Male, 58, Malay)

5.2. Need for consistent instructions to patients. The provision of care management instructions from providers to patients shifting from tertiary hospitals to the community should be consistent to ensure that patients receive the same treatment and quality of care throughout their patient journey. Therefore, reciprocal communication between providers could have reduced conflicting instructions regarding medication regimens and other care processes, which made adherence to care plans confusing for patients.

“Pharmacy say actually this one cannot take together with don’t know what medicine. Because before breakfast must take this thyroid medicine. Then do not know how many hours apart then can take that one, so another medicine cannot take together […] I found out myself, so when doctor mentioned something I said no, it is not like this.”

(IDI 41, Female, 94, Chinese)

6. Providing patient education

The provision of timely and unambiguous information regarding patients’ disease conditions and management trajectories was discovered as an essential pre-requisite for patients to take the necessary steps to plan their care before transitioning into the community. The main theme, providing patient education was expanded by the two subthemes; 6.1. Explanation of disease and treatment options and 6.2. Provider’s perception of patient’s health literacy.

6.1. Explanation of disease and treatment options. Providers furnished patients with information regarding their disease conditions such as the pathophysiology of disease, prospective medical procedures, or recommended medications. Presenting comprehensible and objective information aided patients in weighing the benefits and risks involved in selecting prospective treatment plans, which allowed patients to act on the information based on their best interest.
“[Doctor] said that if there was a blockage of stools, it exerts pressure on the urinary tract and prevents from passing urine as well.”

(IDI 13, Male, 77, Chinese)

“If I take too much cholesterol medication, there is a chance I might contract cataract.”

(IDI 1, Male, 63, Chinese)

“They [doctors] told me first what the risks were. Then I said never mind I will do it.”

(IDI 55, Female, 72, Malay)

6.2. Provider’s perception of patient’s health literacy. Some providers harboured the impression that detailed explanations of the disease condition and treatment options were unnecessary due to their assumption that patients could not understand the medical jargon. Flawed perceptions of patients’ inability to comprehend the technicalities of their treatment plans eroded the shared decision-making authority.

“[...] even though I asked a lot of them [doctors] about the medicine, how the vitamin D can be improved, they are telling about the sunlight; sunlight is one of the things, general way of talking.”

(IDI 51, Male, 65, Malay)

7. Importance of respect for patients

Respect for patients’ preferences engendered their active engagement in the decision-making process for their plan of care. Furthermore, the consent process laid the foundation for the fiduciary relationship between patient and provider, enabling the patients to translate their values and priorities into decisions. This made importance of respect for patients a salient theme for patient experience in CCPs and it was encapsulated by the two subthemes; 7.1. Need for patient involvement in decision-making and 7.2. Lack of desire to be consulted on decision-making.

7.1. Need for patient involvement in decision-making. Some providers did not respect patients’ autonomy in the decision-making process, whereby a certain aspect of the care plan was changed without prior consultation with the patient. Thus, providers in the community need to consult the patients before making any adjustments to the care plans especially when patients are on regimens carried forward from hospital settings. Patients have their own preferences and should be engaged prior to making any changes such that their goals and expectations are assimilated into the care plan.

“I brought it over from here [hospital name]. I felt the medicine brought over from the hospital was changed by them so they will give me medicine from their side [community partner] [...] So sometimes I feel that I have to get used to the medicine from this side [community partner]. But I wonder why they would like to change for me [...] However, I have been taking medicine from this brand all the time. You ask me to make a switch suddenly, and I felt quite weird, but their pharmacy did not explain anything to us. They just make a change of medicine directly.”

(IDI 32, Female, 71, Chinese)
7.2. Lack of desire to be consulted on decision-making. Some patients took a passive role in decision-making as they viewed doctors as figures of authority to make treatment-related decisions on their behalf. Therefore, such instances of paternalistic medicine silenced the voices of patients and promoted unilateral decision-making by providers.

“Even if you give me options, I also don’t know. So, you just tell me this medicine is for that, I just have to obey right? So there is not much choice there. It’s not like a buffet, where you can choose to eat this, you can choose to eat that.”

(IDI 20, Male, 44, Chinese)

8. Healthcare financing
A patient’s financial circumstances and out-of-pocket medical expenditure might affect their perceived affordability of healthcare services which could determine their willingness to seek or continue treatment. This theme of healthcare financing was highlighted by most of our participants and was supported by the two subthemes; 8.1. Eligibility for financial subsidies and 8.2. Importance on educating patients on financial subsidies.

8.1. Eligibility for financial subsidies. Financial assistance for healthcare expenses is subjected to means-testing criteria. Medical social workers assessed the level of government subsidies that a patient was eligible for when utilising selected healthcare services. Stringent means-testing guidelines ensured that the dispersed quantum is calibrated according to the patient’s financial situation. However, financial circumstances are relative, and means-testing thresholds did not accurately capture the true needs of the patient.

“We applied, but we failed the means-testing. I think it is a bit unfair though I did not fight for it. I think that means-testing has some guidelines which disadvantaged me […] guidelines are drawn like this, and unfortunately, I fall through the cracks, hurt my feelings. I did apply, but I didn’t qualify because of means-testing.”

(IDI 14, Male, 77, Chinese)

8.2. Importance on educating patients on financial subsidies. A clear understanding of available subsidy packages was crucial in the care planning process from a financial standpoint so that patients would not miss out on the financial help available to them. Providers, in this case, medical social workers, should be equipped to advise patients regarding subsidy arrangements available to them.

“Then later we asked them [social workers] about the discount [subsidy], but they didn’t explain it clearly […] they didn’t properly answer regarding the 50% discount […] even if we asked them, they were not able to answer very clearly.”

(IDI 32, Female, 71, Chinese)

Discussion
This study has provided preliminary evidence on the dimensions that can be ascribed for the patient experience of patients enrolled in CCPs in the Singapore context. Unlike other patient experience instruments validated for usage in a single care context, our study applied a validated framework (PPE-15) commonly used in hospital settings to study patient experience for CCPs. Our findings ascertained that many of the dimensions were transferrable to the patient experience for CCPs. These dimensions captured elements of care continuity for patients
transitioning from hospital to community with adequate emotional and physical support. One way to achieve that was for ample service coordination between providers across the care spectrum. Patients also required a certain level of knowledge regarding their disease conditions and treatment options to effectively take part in the care planning process. Interestingly, we had discovered that there were differences in certain dimensions due to cultural distinctions between eastern and western developed frameworks, which makes our dimensions more relevant for deployment in the Asian context. The dimensions that had divergences included respect for patient’s preferences, involvement of family and healthcare financing. Hereinafter we will discuss the aforementioned dimensions with particular emphasis on elements salient to CCPs in the Asian context.

We concluded that the patient experience for community-based care programmes was indeed “a sum of all interactions” as explicated in the definition by the Beryl Institute [32]. In this case, reciprocal communication between providers across care venues and with patients, ensured that care was consolidated, and preferences of patients respected both at the hospital and community settings [44]. Perhaps more unique to the Asian context is the difference in patients’ autonomy when planning their transitional care as compared to their western counterparts. Asian patients tend to perceive doctors as figures of authority, consequently ceding power to make decisions to the provider [45]. Thus, the perceived power differentials between patient and doctor and hierarchal structure in Asian societies attributed to the low desire for shared decision making as seen in some of our participants [46, 47]. This contrasts with the desire for more autonomy as seen in Western patients [37].

Cultivating a certain level of patient activation is crucial before patients’ re-entry to the community to ensure that patients manage their emotional sequela and self-efficacy associated with their illness in the absence of a trained healthcare personnel [48, 49]. This can be achieved through provision of self-management knowledge, reinforcing the dimension that patient education should be integrated into transitional care planning [50]. Aside from empowering patients, caregivers such as family members should also be considered within the patient experience. As seen in our participants, family members were often the unofficially appointed caregiver and decision-maker. As a caregiver, family members need to be equipped with the relevant knowledge to execute the discharge instructions and react to medical emergencies especially during the absence of a healthcare provider when the patient has been discharged into the community [51–53]. Regarding decision-making, for Asian patients, family involvement is highly pertinent, especially for patients who hold strong to certain virtues such as Confucian doctrines, where filial piety asserts a strong influence on medical decision-making. Unlike the classical western concept of autonomy, in which decisions are expectantly made in the absence of external influences, the eastern concept of autonomy admits the need for “engagement and interactions in a network of relations with others” [54]. Therefore, decisions regarding the patient’s medical care are made at the familial level, given that such choices could have repercussions for family members [55]. The virtue of filial piety also places an obligatory duty on children to care for their elders throughout their patient journey, driven in part by an appreciation of the care they had previously received [56].

Financing is not a dimension that is reflected in most patient experience instruments. To our knowledge, only the Outpatient Experience Questionnaire (OPEQ) developed by China had captured the dimension of medical expenses [57]. This could be due to cultural factors and differences in configurations of healthcare systems. Both Singapore and China have a healthcare system that necessitates a certain level of out-of-pocket payment for health services utilisation [58–62]. From a cultural perspective, Chinese patients might exercise a more frugal mentality than their Western counterparts when it comes to any form of expenditure and healthcare is no exception [63]. This can be seen in our participants, where medical expenses
are of huge concern. Despite various financial safety measures in place by the Singapore healthcare system, patients suffering from chronic diseases often face high and prolonged medical costs [64]. The inability to secure financial subsidies poses a threat to the patient experience as a patient’s financial situation affects their willingness to receive or continue treatment [65]. We concluded that the dimension of financing is particularly relevant to Asian countries whereby the culture of saving is firmly ingrained in the society due to philosophical underpinnings [66].

**Strengths and limitations**

To our knowledge, this is the first qualitative study conducted which explicitly examines the patient experience for CCPs a multi-ethnic Asian context. We also had a large sample size of 64 participants with different sets of chronic conditions to ensure that the experiences of CCPs for patients with one condition does not differ drastically from another. Additionally, even though a conceptual framework was used to carry out the thematic analysis deductively, we coded for new themes salient to the patient experience so as to fully capture all elements of the patient experience. This allowed themes that were relevant to patient experience for CCPs but not present in the original PPE-15 framework to be elucidated.

Even though the number of participants recruited was representative of the ethnic distribution in Singapore, the sample was predominantly Chinese participants. Thus, our data might not fully capture the patient experiences of the Malay and Indian ethnic groups. A maximum proportion sampling of each ethnic group to explore any cultural differences in patient experience can be applied to future studies. In addition, participants might have recall bias as they were interviewed at different time points during their transitional care journeys. We also acknowledge that there might be a potential variation in the patient experience for patients of different age groups due to differences in various needs such as perceptions and expectations of healthcare interactions and experiences [67, 68]. Lastly, our sample consisted of more males (60.9%) as compared to females (39.1%), as more males in Singapore suffer from chronic conditions [69]. Differences in patient experience between genders and age groups can be explored in future studies.

**Implications**

As most developed countries shift their healthcare services from hospital to community, a safe and seamless transition is central for patients who require chronic care to re-enter the community with a certain level of patient activation. With unique healthcare structures and diasporas distinctly different from the West, the development of a patient experience instrument for the Asian context with the dimensions derived from this study is justified. Based on our study findings, we propose future research to prioritise deriving an operational definition for patient experience of patients enrolled in CCPs and developing a culturally relevant instrument to measure patient experience for such programmes to create a common measure and understanding of patient experience. To achieve this, follow-up works using a Delphi method can be employed, where multiple rounds of controlled opinion feedback can be sought from experts to reach a consensus on the definition of patient experience and to validate the appropriateness of items in a patient experience instrument which employs dimensions earmarked from this study [70].

**Conclusion**

This study explored the dimensions of patient experience associated with CCPs and elucidated the differences in certain areas of patient experience accruing to the cultural nuances between
care contexts. As a result, we ascertained that even though dimensions are largely consistent across care contexts, the design and implementation of CCPs should take into account cultural variations to ensure a positive patient experience.

Supporting information

S1 Table. Summary of community-based care programmes by NUHS.
(DOCX)

S2 Table. Existing patient experience instruments.
(DOCX)

S3 Table. Comparison of dimensions from patient experience instruments against PPE-15.
(DOCX)

S4 Table. COREQ checklist.
(DOCX)

S1 Appendix. Topic guides.
(DOCX)

Acknowledgments

The authors would like to thank all participants who took part in this study for sharing their experiences.

Author Contributions

Conceptualization: Ian Yi Han Ang, Sue-Anne Toh, Farah Shiraz.
Data curation: Chuan De Foo, Yan Lin Tan, Milawaty Nurjono.
Formal analysis: Chuan De Foo, Yan Lin Tan.
Funding acquisition: Sue-Anne Toh.
Investigation: Chuan De Foo, Pami Shrestha, Ian Yi Han Ang, Farah Shiraz.
Methodology: Chuan De Foo, Ian Yi Han Ang, Farah Shiraz.
Project administration: Pami Shrestha, Ke Xin Eh.
Resources: Sue-Anne Toh.
Supervision: Ian Yi Han Ang, Farah Shiraz.
Validation: Chuan De Foo.
Writing – original draft: Chuan De Foo.
Writing – review & editing: Chuan De Foo, Yan Lin Tan, Pami Shrestha, Ke Xin Eh, Ian Yi Han Ang, Milawaty Nurjono, Sue-Anne Toh, Farah Shiraz.

References

1. Marengoni A, Angleman S, Melis R, Mangialasche F, Karp A, Garman A, et al. Aging with multimorbidity: a systematic review of the literature. Ageing Res Rev. 2011 Sep; 10(4):430–9. https://doi.org/10.1016/j.arr.2011.03.003 PMID: 21402178

2. Hajat C, Stein E. The global burden of multiple chronic conditions: A narrative review. Prev Med Rep. 2018 Oct 19; 12:284–93. https://doi.org/10.1016/j.pmedr.2018.10.008 PMID: 30406006
3. Arredondo A, Aviles R. Costs and Epidemiological Changes of Chronic Diseases: Implications and Challenges for Health Systems. PLOS ONE. 2015 Mar 17; 10(3):e0118611. https://doi.org/10.1371/journal.pone.0118611 PMID: 25781625

4. Scott IA. Public hospital bed crisis: too few or too misused? Aust Health Rev. 2010 Aug 25; 34(3):317–24. https://doi.org/10.1071/AH09821 PMID: 20797364

5. NHS hospital bed numbers [Internet]. The King’s Fund. 2017 [cited 2020 Mar 23]. https://www.kingsfund.org.uk/publications/nhs-hospital-bed-numbers

6. Mittmann N, Kuramoto L, Seung SJ, Haddoon JM, Bradley-Kennedy C, Fitzgerald JM. The cost of moderate and severe COPD exacerbations to the Canadian healthcare system. Respir Med. 2008 Mar; 102(3):413–21. https://doi.org/10.1016/j.rmed.2007.10.010 PMID: 18086519

7. Tham LM, Prabhakaran L, Lim YH, Sun B, Neo LP, Abdul Rashid SSF. The outcome of right siting patient to primary care provider by asthma nurses. Clin Transl Allergy. 2015 Mar 23; 5(Suppl 2):P14.

8. Naylor M, Keating SA. Transitional Care: Moving patients from one care setting to another. Am J Nurs. 2008 Sep; 108(9 Suppl):58–63.

9. Wong FKY, Yeung SM. Effects of a 4-week transitional care programme for discharged stroke survivors in Hong Kong: a randomised controlled trial. Health Soc Care Community. 2015; 23(6):619–31. https://doi.org/10.1111/hsc.12177 PMID: 25470529

10. Wong FK, Ho MM, Yeung S, Tam SK, Chow SK. Effects of a health-social-partnership transitional program on hospital readmission: A randomized controlled trial. Soc Sci Med. 2011 Oct 1; 73(7):960–9. https://doi.org/10.1016/j.socscimed.2011.06.036 PMID: 21839564

11. Stamp KD, Machado MA, Allen NA. Transitional Care Programs Improve Outcomes for Heart Failure Patients: An Integrative Review. J Cardiovasc Nurs. 2014; 29(2):140–54. https://doi.org/10.1097/JCN.0b013e31827db560 PMID: 23348223

12. Berish DE, Applebaum R, Straker JK. The Residential Long-Term Care Role in Health Care Transitions. J Appl Gerontol. 2018 Dec 1; 37(12):1472–89. https://doi.org/10.1177/0733464816677188 PMID: 27837055

13. Wong FKY, Chau J, So C, Tam SKF, McGhee S. Cost-effectiveness of a health-social partnership transitional program for post-discharge medical patients. BMC Health Serv Res. 2012 Dec; 12(1):1–8. https://doi.org/10.1186/1472-6963-12-479 PMID: 23259498

14. Peikes D, Lester RS, Gilman B, Brown R. The Effects of Transitional Care Models On Re-Admissions: A Review of the Current Evidence. Gener San Franc. 2012 Winter /2013; 36(4):44–55.

15. Kangovi S, Grande D. Hospital Readmissions—Not Just a Measure of Quality. JAMA. 2011 Oct 26; 306(16):1796–7. https://doi.org/10.1001/jama.2011.1562 PMID: 22028356

16. Zurlo A, Zuliani G. Management of care transition and hospital discharge. Aging Clin Exp Res. 2018 Mar; 30(3):263–70. https://doi.org/10.1007/s40520-017-0885-6 PMID: 2931293

17. Allen J, Hutchinson AM, Brown R, Livingston PM. User Experience and Care Integration in Transitional Care for Older People From Hospital to Home: A Meta-Synthesis. Qual Health Res. 2017 Jan 1; 27(1):24–36. https://doi.org/10.1177/1049732316658267 PMID: 27469975

18. Takahashi PY, Finnie DM, Quigg SM, Borkenhagen LS, Kumbamu A, Kimeu AK, et al. Understanding experiences of patients and family caregivers in the Mayo Clinic Care Transitions program: a qualitative study. Clin Interv Aging. 2019; 14:17–25. https://doi.org/10.2147/CIA.S183893 PMID: 30587950

19. Daaleman TP, Ernecoff NC, Kistler CE, Reid A, Reed D, Hanson LC. The Impact of a Community-Based Serious Illness Care Program on Healthcare Utilization and Patient Care Experience. J Am Geriatr Soc. 2019 Apr 1; 67(4):825–30. https://doi.org/10.1111/jgs.15814 PMID: 30810223

20. Doyle C, Lennox L, Bell D. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. BMJ Open. 2013 Jan 1; 3(1):e001570. https://doi.org/10.1136/bmjopen-2012-001570 PMID: 23293244

21. Prince MJ, Wu F, Guo Y, Gutierrez Robledo LM, O’Donnell M, Sullivan R, et al. The burden of disease in older people and implications for health policy and practice. The Lancet. 2015 Feb 7; 385(9967):549–62. https://doi.org/10.1016/S0140-6736(14)61347-7 PMID: 25468153

22. Picco L, Achilla E, Abdin E, Chong SA, Vaingankar JA, McCrone P, et al. Economic burden of multimorbidity among older adults: impact on healthcare and societal costs. BMC Health Serv Res. 2016 Dec; 16(1):1–12. https://doi.org/10.1186/s12913-016-1421-7 PMID: 27160080

23. Malhotra R, Bautista MAC, Müller AM, Aw S, Koh GCH, Theng Y-L, et al. The Aging of a Young Nation: Population Aging in Singapore. The Gerontologist. 2019 May 17; 59(3):401–10. https://doi.org/10.1093/geront/gny160 PMID: 30517628
24. Ong SE, Tyagi S, Lim JM, Chia KS, Legido-Quigley H. Health systems reforms in Singapore: A qualitative study of key stakeholders. Health Policy. 2018 Apr 1; 122(4):431–43. https://doi.org/10.1016/j.healthpol.2018.02.005 PMID: 29478876
25. A Member of NUHS—NUH | National University Hospital [Internet]. [cited 2020 Feb 27]. https://www.nuh.com.sg/About-NUH/Pages/A-Member-of-NUHS.aspx
26. Lim YW, Ling J, Lim Z, Chia A. Family Medicine Clinic: a case study of a hospital–family medicine practice redesign to improve chronic disease care in the community in Singapore. Fam Pract. 2018 Sep 18; 35(5):612–8. https://doi.org/10.1093/fampra/cmy007 PMID: 29471480
27. Ang IYH, Ng SH-X, Rahman N, Nurjono M, Tham TY, Toh S-A, et al. Right-Site Care Programme with a community-based family medicine clinic in Singapore: secondary data analysis of its impact on mortality and healthcare utilisation. BMJ Open. 2019 31; 9(12):e030718. https://doi.org/10.1136/bmjopen-2019-030718 PMID: 31892645
28. Ang IYH, Tan CS, Nurjono M, Tan XQ, Koh GC-H, Vrijhoef HJM, et al. Retrospective evaluation of healthcare utilisation and mortality of two post-discharge care programmes in Singapore. BMJ Open. 2019 22; 9(5):e027220. https://doi.org/10.1136/bmjopen-2018-027220 PMID: 31122989
29. LaVela S, Gallan A. Evaluation and measurement of patient experience. Patient Exp J. 2014 Apr 30; 1(1):28–36.
30. Delnoij DMJ. Measuring patient experiences in Europe: what can we learn from the experiences in the USA and England? Eur J Public Health. 2009 Aug 1; 19(4):354–6. https://doi.org/10.1093/eurpub/ckp105 PMID: 19620220
31. Wolf JA, Niederhauser V, Marshburn D, LaVela SL. Defining Patient Experience. 2014; 1(1):14.
32. Defining Patient Experience—The Beryl Institute—Improving the Patient Experience [Internet]. [cited 2019 Jun 22]. https://www.theberylinstitute.org/page/DefiningPatientExp
33. Jenkinson C. The Picker Patient Experience Questionnaire: development and validation using data from in-patient surveys in five countries. Int J Qual Health Care. 2002 Oct 1; 14(5):353–8. https://doi.org/10.1093/intqhc/mzr037 PMID: 12389801
34. Wong ELY, Leung MCM, Cheung AWL, Yam CHK, Yeoh EK, Griffiths S. A population-based survey using PPE-15: relationship of care aspects to patient satisfaction in Hong Kong. Int J Qual Health Care. 2011 Aug 1; 23(4):390–6. https://doi.org/10.1093/intqhc/mzr037 PMID: 21715558
35. King-Shie r KM, Singh S, Khan NA, LeBlanc P, Lowe JC, Mather CM, et al. Ethno-Cultural Considerations in Cardiac Patients’ Medication Adherence. Clin Nurs Res. 2017 Oct 1; 26(5):576–91. https://doi.org/10.1177/1054773816646078 PMID: 27121478
36. Jin XW, Slomka J, Blixen CE. Cultural and clinical issues in the care of Asian patients. Cleve Clin J Med. 2002 Jan; 69(1):50, 53–4, 56–58 passim. https://doi.org/10.3949/ccjm.2002.69.1.50 PMID: 11811720
37. Kai J, Beavan J, Faull C. Challenges of mediated communication, disclosure and patient autonomy in cross-cultural cancer care. Br J Cancer. 2011 Sep 27; 105(7):918–24. https://doi.org/10.1038/bjc.2011.318 PMID: 21863029
38. Smullen A, Hong PK. Comparing the Health Care Systems of High-Performing Asian Countries. Asia Pac Policy Stud. 2015; 2(2):347–55.
39. Nurjono M, Shrestha P, Ang IYH, Shiraz F, Yoong JS-Y, Toh S-AES, et al. Implementation fidelity of a strategy to integrate service delivery: learnings from a transitional care program for individuals with complex needs in Singapore. BMC Health Serv Res. 2019 Dec; 19(1):1–14.
40. Nurjono M, Shrestha P, Lee A, Lim XY, Shiraz F, Tan S, et al. Realist evaluation of a complex integrated care programme: protocol for a mixed methods study. BMJ Open. 2018 Mar 1; 8(3):e017111. https://doi.org/10.1136/bmjopen-2017-017111 PMID: 29500199
41. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research [Internet]. BMC Med Res Methodol. 2013 Sep 18; 13:117. https://doi.org/10.1186/1471-2288-13-117 PMID: 24047204
42. What are the racial proportions among Singapore citizens? [Internet]. [cited 2020 Oct 19]. http://www.gov.sg/article/what-are-the-racial-proportions-among-singapore-citizens
43. Population and Population Structure—Latest Data [Internet]. Base. [cited 2020 Oct 19]. http://www.singstat.gov.sg/find-data/search-by-theme/population/population-and-population-structure/latest-data
44. Carroll A, Dowling M. Discharge planning: communication, education and patient participation. Br J Nurs. 2007 Jul 26; 16(14):862–6. https://doi.org/10.12968/bjcn.2007.16.14.23428 PMID: 17851351
45. Clarimarta M, Nugraheni MDF, van Dalen J, van der Vleuten C. Doctor–patient communication in Southeast Asia: a different culture? Adv Health Sci Educ. 2013 Mar 1; 18(1):15–31. https://doi.org/10.1007/s10459-012-9352-5 PMID: 22314942
46. Stevenson FA, Barry CA, Britten N, Barber N, Bradley CP. Doctor–patient communication about drugs: the evidence for shared decision making. Soc Sci Med. 2000 Mar 1; 50(6):829–40. https://doi.org/10.1016/s0277-9536(99)00376-7 PMID: 10695980

47. Claramita M, Dalen JV, Van Der Vleuten CP. Doctors in a Southeast Asian country communicate sub-optimally regardless of patients’ educational background. Patient Educ Couns. 2011 Dec 1; 85(3):e169–74. https://doi.org/10.1016/j.pec.2011.02.002 PMID: 21420821

48. Lorig KR, Sobel DS, Stewart AL, Brown BWJ, Bandura A, Ritter P, et al. Evidence Suggesting That a Chronic Disease Self-Management Program Can Improve Health Status While Reducing Hospitalization: A Randomized Trial. Med Care. 1999 Jan; 37(1):5–14. https://doi.org/10.1097/00005650-199901000-00003 PMID: 10413387

49. Pollack AH, Backonja U, Miller AD, Mishra SR, Khelifi M, Kendall L, et al. Closing the Gap: Supporting Patients’ Transition to Self-Management after Hospitalization. Proc SIGCHI Conf Hum Factors Comput Syst CHI Conf. 2016 May; 2016:5324–36. https://doi.org/10.1145/2858036.2858240 PMID: 27500285

50. Coffey A, Leahy-Warren P, Savage E, Hegarty J, Connally N, Day MR, et al. Interventions to Promote Early Discharge and Avoid Inappropriate Hospital (Re)Admission: A Systematic Review. Int J Environ Res Public Health. 2019 Jan; 16(14):2457. https://doi.org/10.3390/ijerph16142457 PMID: 31295933

51. Tsai DF-C. How should doctors approach patients? A Confucian reflection on personhood. J Med Ethics. 2001 Feb 1; 27(1):44–50. https://doi.org/10.1136/jme.27.1.44 PMID: 11233378

52. Chan HM. Sharing Death and Dying: Advance Directives, Autonomy and the Family. Bioethics. 2004; 18(2):87–103. https://doi.org/10.1111/1467-8519.2004.00383.x PMID: 15146852

53. Jeffs L, Kitto S, Merkley J, Lyons RF, Bell CM. Safety threats and opportunities to improve interfacility care transitions: insights from patients and family members. Patient Prefer Adherence. 2012 Oct 5; 6:711–8. https://doi.org/10.2147/PPA.S36797 PMID: 23055704

54. Storm M, Siemsen IMD, Laugaland K, Dyrstad DN, Aase K. Quality in transitional care of the elderly: Key challenges and relevant improvement measures. Int J Integr Care. 2014 Apr; 14:e013. https://doi.org/10.5334/ijic.1194 PMID: 24868196

55. Slatyer S, Aoun SM, Hill KD, Walsh D, Whitty D, Toye C. Caregivers’ experiences of a home support program after the hospital discharge of an older family member: a qualitative analysis. BMC Health Serv Res. 2019 Dec 19; 19(1):1–10.

56. Ho ZJM, Krishna LKR, Yee CPA. Chinese Familial Tradition and Western Influence: A Case Study in Singapore on Decision Making at the End of Life. J Pain Symptom Manage. 2010 Dec 1; 40(6):932–7. https://doi.org/10.1016/j.jpainsymman.2010.06.010 PMID: 21145471

57. Hu Y, Zhang Z, Xie J, Wang G. The Outpatient Experience Questionnaire of comprehensive public hospital in China: development, validity and reliability. Int J Qual Health Care. 2017 Feb 1; 29(1):40–6. https://doi.org/10.1093/intqhc/mzw133 PMID: 27836998

58. Pan J, Liu D, Ali S. Patient dissatisfaction in China: What matters. Soc Sci Med 1982. 2015 Oct; 143:145–53. https://doi.org/10.1016/j.socscimed.2015.08.051 PMID: 26356826

59. Fu W, Zhao S, Zhang Y, Chai P, Goss J. Research in health policy making in China: out-of-pocket payments in Healthy China 2030. BMJ. 2018 05; 360:k234. https://doi.org/10.1136/bmj.k234 PMID: 29437565

60. Long Q, Xu L, Bekedam H, Tang S. Changes in health expenditures in China in 2000s: has the health system reform improved affordability. Int J Equity Health. 2013 Jun 13; 12(1):40. https://doi.org/10.1186/1475-9276-12-40 PMID: 23764104

61. Graham WCK, Bilger M. Financing Long-Term Services and Supports: Ideas From Singapore. Milbank Q. 2017; 95(2):358–407. https://doi.org/10.1111/1468-0009.12264 PMID: 28589066

62. Lim J. Sustainable Health Care Financing: The Singapore Experience. Glob Policy. 2017; 8(S2):103–9.

63. Wang CL, Lin X. Migration of Chinese Consumption Values: Traditions, Modernization, and Cultural Renaissance. J Bus Ethics. 2009; 88:399–409.

64. Reisman D. Payment for health in Singapore. Int J Soc Econ Bradf. 2006; 33(1/2):132–59.

65. Taber JM, Leyva B, Persoskie A. Why do People Avoid Medical Care? A Qualitative Study Using National Data. J Gen Intern Med. 2015 Mar; 30(3):290–7. https://doi.org/10.1007/s11606-014-3089-1 PMID: 25387439

66. Ye D, Pan S, Lian Y, Ng Y-K. Culture and savings: why do asians save more? Singap Econ Rev. 2019 Oct 10;1–31.

67. DeVoe JE, Wallace LS, Fryer GE. Patient Age Influences Perceptions About Health Care Communication. Fam Med. 2009 Feb; 41(2):126–33. PMID: 19184691

68. Peck BM. Age-Related Differences in Doctor-Patient Interaction and Patient Satisfaction. Curr Gerontol Geriatr Res. 2011; 2011:137492. https://doi.org/10.1155/2011/137492 PMID: 22007206
69. Lim RBT, Zheng H, Yang Q, Cook AR, Chia KS, Lim WY. Ethnic and gender specific life expectancies of the Singapore population, 1965 to 2009—converging, or diverging? BMC Public Health. 2013 Oct 26; 13(1):1012.

70. Okoli C, Pawlowski SD. The Delphi method as a research tool: an example, design considerations and applications. Inf Manage. 2004 Dec 1; 42(1):15–29.