PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Is neighborhood social cohesion associated with subjective well-being for older Chinese people? The neighborhood social cohesion study
AUTHORS	Yu, Ruby; Cheung, Osbert; Leung, Jason; Tong, Cecilia; Lau, Kevin; Cheung, Johnny; Woo, J

VERSION 1 - REVIEW

REVIEWER	Jennifer Williams Robinette University of Southern California United States
REVIEW RETURNED	01-May-2018

GENERAL COMMENTS	Abstract: The design, setting, and participants sections should include much more detail. The authors may want to define their lifestyle and perceived neighborhood environments covariates. The final statement in the conclusion suggest that neighborhood based initiatives may be more beneficial for older adults, but their results indicated that neighborhood social cohesion was more strongly associated with subjective well-being among young-old adults. Introduction: The second paragraph of the introduction is difficult to follow. In the first sentence, it is unclear what is being define, subjective or objective psychological well-being. The second sentence which states, "numerous studies have examined the associations between subjective well-being," is difficult to understand. Are the authors referring to associations between determinants, or associations between (unnamed) determinants and well-being? In the third sentence, it is not clear which determinants are less associated with well-being when compared to socioeconomic status and health conditions. If the authors are mapping out which determinants differentially associate with various aspects of well-being, it may be helpful to state that from the outset. The last sentence of the third paragraph of the introduction might be broken up into two separate sentences. The authors may want to consider siding some work demonstrating links between neighborhood social cohesion and physiological well-being, as physiological well-being may have implications for life satisfaction. The authors may want to elaborate on the first sentence of the fourth paragraph of the introduction when they introduce links

between cohesion, well-being, and mental health. Furthermore, the following sentence introduces the concept of neighborhood resilience, which is not only seemingly unrelated to the sentence that precedes it, but should also be further defined. Additionally, the authors may want to elaborate on how cohesion buffers against the adverse affects of living in deprive neighborhoods. Are they referring to mental health outcomes or physical health outcomes?

I believe there are also some typos in the following sentence which should read, "… and have not focused on older people… "

If one of the primary contributions of this paper is a comparison of findings between Western and eastern countries, the authors may want to elaborate on their rationale for making this comparison. Findings would be strengthened if they were situated with stronger theoretical rationale, rather than a statement suggesting that western but not eastern countries have been examined.

Again, the third sentence of the fourth paragraph of the introduction should be broken up into two separate paragraphs.

I'm not sure the term "Caucasians quoteis appropriate here, given that many neighborhood cohesion and health studies conducted in Western countries and compass more than "Caucasians."

The authors may want to elaborate on why potential eastern versus western body physiology would play a role in an analysis of links between neighborhood cohesion and psychological well-being.

The others may also want to cite studies in the aging literature showing that life satisfaction increases with age until very old age. This may be useful for the present study, particularly since there may be western versus eastern differences in life expectancy.

The authors state they will take into account personal factors in the neighborhood conditions simultaneously, but it is unclear how the authors envision personal factors a neighborhood conditions may con found links between social cohesion and subjective well-being. The authors may want to cite some of the neighborhoods and health literature, particularly those that discussed neighborhood selection, and elaborate on this section.

In general, the introduction could use some careful editing.

Methods:
The fourth sentence in the paragraph on translation contains typos that make interpretation of the sentence difficult.

The authors note that Urban residence in the present study share similar socioeconomic and cultural identities. The authors may want to state whether or not any residents live in a rural areas.

The authors also state that the two districts were chosen because they have mixed neighborhood types. Did the authors want to examine whether neighborhood type moderates links between cohesion and well-being?
Methods:

| | Somewhere in the measures section it would be helpful to have some information indicating which of the variables are the primary neighborhood predictors. The abstract and introduction set up the reader to believe there will be a neighborhood cohesion Instrument, but the social cohesion scale and the brief sense of community scale are later included in the measures section. It is difficult to follow what the primary neighborhood predictor will be. If the additional cohesion and belongingness skills will be used for construct validity, the author should say such earlier in the manuscript.

The authors state that they use doctor-diagnosed health conditions as a covariate. However, given that the authors do not state how they pro cure these data, the reader is left to believe these are actually self reported chronic health conditions.

The authors also indicate their inclusion of perceived neighborhood friendliness as a covariate. The authors may want to visit the literature indicating friendliness is at times included and measures of neighborhood cohesion. The authors should make some sort of statement regarding how they decided to use neighborhood friendliness as a covariate rather than in conjunction with their measures of neighborhood cohesion.

On a related note, the authors indicate including perceived neighborhood friendliness as a covariate, but define it with items that are seemingly unrelated to neighborhood friendliness, including outdoor spaces and buildings among others. If the authors are actually referring to age friendliness of the neighborhood, they should call it such, and elaborate more on the literature of age friendly neighborhoods.

It isn't clear why age friendliness of the neighborhood would be included as a covariate. The others may want to consider alternative models. For instance, perhaps older adults living in neighborhoods with low levels of age friendliness would benefit most from higher levels of social cohesion. In general, the authors should include a stronger theoretical rationale for the role they expect their selected variables to play.

The authors provide a test-retest reliability of the neighborhood cohesion instrument, but also indicate that this is a cross-sectional design with presumably only one assessment of neighborhood cohesion using this scale.

The authors should describe reliability, validity, and regression models in separate sections of the statistical analysis section of the methods.

Linear regression models are inappropriate in the present study given that participants are clustered within two districts.

If the authors wish to state that neighborhood social cohesion is related to subjective well-being independent of individual level factors, they may wish to further adjust for levels of perceived social support from friends, families, and spouses.

Results: |

	The opening paragraph of the results would benefit from a discussion of overall levels of subjective well-being across domains.
	It is unclear why the authors correlated neighborhood cohesion instrument scores with number of neighbors.
	It is unclear why the authors are working with a subset of the data when adjusting for neighborhood (age) friendliness.
	Instead of stating that neighborhood social position was significantly associated, results should be stated with direction of effects.
	The authors found that social cohesion was associated with two aspects of well-being, but not with feelings of happiness. Feelings of happiness differ substantially from the other two members of subjective well-being. It is a fleeting emotional state, and purchase pens were asked how happy they felt the day before. Purpose in life and life satisfaction, on the other hand, are much more global or in during aspects of well-being. The authors may want to describe these differences in the discussion.
	It would be helpful to provide a rationale for age and sex stratification in the introduction section.
	The majority of information presented in the third paragraph of the discussion would be much more useful in the introduction, providing a rationale for the study.
	As noted in the review of the results section, it is possible the authors did not find a significant association between neighborhood cohesion levels of happiness given that happiness was assessed with a question asking about happiness the day before.
	In the fifth paragraph, the authors state that being acquainted with neighbors is not a common practice in Hong Kong. This sentence needs a citation.
	The authors provide one possible explanation for the finding that cohesion was more associated with subjective well-being among young old and a women relative to old old and men. Namely, the authors state that these groups may participate more in locally organize groups. However, the authors also state that older adults depend more on neighborhood resources as they age. These sentiments are seemingly contradicting one another.
	It seems on warranted to list inclusion of individual levelcon founders as a strength of the study, given that this is common practice in neighborhoods and health research.

REVIEWER	Zhigang Li
	Wuhan Univ
REVIEW RETURNED	20-Aug-2018

GENERAL COMMENTS	This is a solid case examining the dynamics of wellbeing against a new context of HK and older population. It is a systematic case, presenting the results in a way of direct and clear. I put the followings suggestions. 1 Given that it is highlighted that the context of HK should be put into concerns, I suggest the authors to further interrogate the concepts of neighborhood or community, and its situations such as facilities and socio-economic conditions in HK. Also pls further articulate your findings within the conclusion section when link them with the gaps it targeted. 2 Social cohesion has been taken as a key of this models and study, I suggest the authors to further explain this concept and put it into your research framework. 3 Some more information the selected communities, and explain why they are appropriate to this study.

VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name: Jennifer Williams Robinette

Institution and Country: University of Southern California, United States

 Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

Abstract:

The design, setting, and participants sections should include much more detail.

The authors may want to define their lifestyle and perceived neighborhood environments covariates.

The final statement in the conclusion suggest that neighborhood based initiatives may be more beneficial for older adults, but their results indicated that neighborhood social cohesion was more strongly associated with subjective well-being among young-old adults.

 Thank you for your comments. The abstract has been revised accordingly. Please refer to the relevant quotes as shown below.

Objectives: We aimed to adapt the Neighborhood Cohesion Instrument (NCI) to a Hong Kong version (HK-NCI) that is linguistically valid for older Chinese, to evaluate the psychometric properties of HK-NCI, and to examine whether neighborhood social cohesion as measured using HK-NCI would be associated with three aspects of subjective wellbeing, including evaluative wellbeing (life satisfaction), hedonic wellbeing (feelings of happiness), and eudemonic wellbeing (sense of purpose and meaning in life).

Design: A validation analysis followed by a cross-sectional analysis

Setting: Communities in two districts (Sha Tin and Tai Po) in Hong Kong

Participants: We recruited 301 community-dwelling Chinese men and women aged 60 years and older normally residing in Sha Tin or Tai Po for not less than six consecutive months at the time of participation in the study.

Outcome measures and covariates: Neighborhood social cohesion was measured using the 15-item HK-NCI (with two sub-scales measuring social cohesion (HK-NCI-SC) and neighborhood belonging (HK-NCI-NB). The Social Cohesion Scale (SCS) and the Brief sense of community scale (BSCS) were administered for assessing the validity of the HK-NCI. Three aspects of subjective wellbeing including evaluative wellbeing (life satisfaction), hedonic wellbeing (feelings of happiness), and eudemonic wellbeing (sense of purpose and meaning in life) were measured. Sociodemographic characteristics, lifestyle and health behaviors, and medical history were collected as covariates.

Results: For homogeneity, internal reliabilities of HK-NCI ($\alpha = 0.813$), HK-NCI-SC ($\alpha = 0.763$), HK-NCI-NB ($\alpha = 0.715$) were good. For stability (test-retest reliability), the averages of mean scores of the 15 items suggested an acceptable repeatability with an ICC = 0.701 (n = 38, 95% CI = 0.497, 0.832). There were positive correlations of total and sub-scores of HK-NCI with total score of SCS (P <0.001, r = 0.515 to 0.635) and total score of BSCS (P <0.001, r = 0.500 to 0.612). Neighborhood social cohesion as measured by the HK-NCI was positively associated with life satisfaction, feelings of happiness, and sense of purpose and meaning in life (all P <0.05), independent of sociodemographic characteristics, lifestyle and health behaviors, and medical history. Stratified analyses indicated that neighborhood social cohesion was more strongly associated with sense of purpose and meaning in life in in women.

Conclusions: The HK-NCI has adequate levels of internal consistency and test-retest reliability and can be used in studies of neighborhood social cohesion in older Chinese people. In addition, neighborhood social cohesion is linked to three aspects of subjective wellbeing amongst the elderly, demonstrating the importance of neighborhood social cohesion for wellbeing among community-dwelling older people, and suggesting that neighborhood social cohesion may be a beneficial target for intervention.

Introduction:

The second paragraph of the introduction is difficult to follow. In the first sentence, it is unclear what is being define, subjective or objective psychological well-being. The second sentence which states, "numerous studies have examined the associations between subjective well-being," is difficult to understand. Are the authors referring to associations between determinants, or associations between (unnamed) determinants and well-being? In the third sentence, it is not clear which determinants are less associated with well-being when compared to socioeconomic status and health conditions. If the authors are mapping out which determinants differentially associate with various aspects of well-being, it may be helpful to state that from the outset.

☐ Thank you for your comments. The original second paragraph has been removed. The introduction section has been revised. The outline of the current version is listed for your reference:

1. The importance of studying wellbeing in older people

2. The rationale for the study of the association between neighborhood social cohesion and wellbeing

3. The links between neighborhood social cohesion, health, and wellbeing

4. The possible mechanisms responsible for the associations between neighborhood social cohesion and positive wellbeing

5. The rationale for the validation study to adapt the Neighborhood Cohesion Inventory (NCI) to a Hong Kong version (HK-NCI) and to evaluate the psychometric properties of HK-NCI

6. The objectives of the study

The last sentence of the third paragraph of the introduction might be broken up into two separate sentences.

☐ Thanks for the comments. The last sentence has been broken up into a few sentences in the revised version. Please refer to the relevant quotes as shown below.

…Distinguished from individual level social network, neighborhood social cohesion characterizes the entire community and exerts impacts on the whole neighborhood. There is no consensus regarding the definition of neighborhood social cohesion. However, neighborhood social cohesion can be understood as patterns of social interaction among neighbors and the associated process of building shared values; or a state of affairs concerning both the vertical and the horizontal interactions among members of society as characterized by a set of attitudes and norms that includes trust, a sense of belonging and the willingness to participate and help, as well as their behavioral manifestations…

The authors may want to consider siding some work demonstrating links between neighborhood social cohesion and physiological well-being, as physiological well-being may have implications for life satisfaction.

The authors may want to elaborate on the first sentence of the fourth paragraph of the introduction when they introduce links between cohesion, well-being, and mental health. Furthermore, the following sentence introduces the concept of neighborhood resilience, which is not only seemingly unrelated to the sentence that precedes it, but should also be further defined. Additionally, the authors may want to elaborate on how cohesion buffers against the adverse affects of living in deprive neighborhoods. Are they referring to mental health outcomes or physical health outcomes?

☐ Thank you for your comments. The introduction section has been revised. Research studies demonstrating links between neighborhood social cohesion and wellbeing have been added. The possible underlying mechanisms responsible for the associations between neighborhood social cohesion and positive wellbeing have been described. Explanation on how cohesion buffers against the adverse effects of living in deprive neighborhoods has been included. Please refer to the relevant quotes as shown below.

…Furthermore, neighborhood social cohesion has been associated with mental health and wellbeing,15-20 with low levels of neighborhood social cohesion associated with increased depression, stress, and anxiety, whereas high levels of neighborhood social cohesion associated with improved wellbeing, independent of individual-level characteristics. These findings suggest that positive wellbeing is attributable to neighborhood social cohesion and not to the absence of diseases.

Although the exact mechanisms responsible for the associations between neighborhood social cohesion and positive wellbeing are unknown, there are several pathways that may link neighborhood social cohesion to positive wellbeing. For example, perceived neighborhood social cohesion, particularly relationships with neighbors could be viewed as a type of social support, which might affect health outcomes and wellbeing by facilitating access to health information and services.21 Neighborhood social cohesion might also influence wellbeing through the enhancement of mutual trust and emotional support.22 23 A number of qualitative studies have indicated that neighbors can serve as a central source of support and meaning in adults' lives,24 in particular people who experience a sense of loss.25 Furthermore, neighborhood social cohesion plausibly can offset the negative effects of stressors on mental health by facilitating access to networks and services that influence health, social and emotional support. For example, in a Japanese prospective study, high neighborhood cohesion partially reduced the deleterious effect of anticipated daily stressors on older residents' depressive mood.26 Evidence from a British longitudinal cohort study has also suggested that the adverse effect of neighborhood deprivation on mental health was significantly reduced in high

social cohesion neighborhoods.6 27 However, the majority of the studies examining the link between neighborhood social cohesion and wellbeing have not focused on older people, who usually spend more time in their neighborhoods, as dependence on neighborhood resources increases with age.28 29…

I believe there are also some typos in the following sentence which should read, "… and have not focused on older people… "

☐ Thanks for pointing out the typos. Please refer to the relevant quotes for the revision as shown below.

…However, these studies have not focused on older people, who usually spend more time in their neighborhoods, as dependence on neighborhood resources increases with age…

If one of the primary contributions of this paper is a comparison of findings between Western and eastern countries, the authors may want to elaborate on their rationale for making this comparison. Findings would be strengthened if they were situated with stronger theoretical rationale, rather than a statement suggesting that western but not eastern countries have been examined.

☐ Thank you for the comments. This study aims to examine whether neighborhood social cohesion has any role in promoting psychological wellbeing in older Chinese people but not to compare the role of neighborhood social cohesion on subjective well-being between western and eastern countries. As such, the introduction has been modified. Instead, the concepts of neighborhood and its situations in Hong Kong have been added as suggested by another reviewer. As such, a short paragraph describing the situation in Hong Kong (in terms of life expectancy, possible reasons for the increase in life expectancy (medical system and elderly welfare), and levels of wellbeing of older people) has been added in the introduction section of the revised manuscript. Please refer to the relevant quotes for the revised results as shown below.

…Compared to other countries, Hong Kong has the longest life expectancy. The lengthening of life is partially contributed by Hong Kong's medical system and elderly welfare. However, levels of wellbeing (as measured by a sense of purpose and meaning in life) of older people in Hong Kong were relatively low, based on a comparative analysis of a multi-dimensional index assessing the social and economic wellbeing of elderly populations in over 90 countries.30 The low level of wellbeing could possibly be explained by the low level of neighborhood social cohesion. As such, examining the levels of perceived neighborhood social cohesion and their relationships with psychological wellbeing, taking into account of personal factors and neighborhood conditions simultaneously, will provide insight into what neighborhood attributes contributes to wellbeing among older people…

Again, the third sentence of the fourth paragraph of the introduction should be broken up into two separate paragraphs.

☐ Thanks for the comments. The third sentence of the fourth paragraph of the original introduction "Furthermore, neighborhood social cohesion could promote neighborhood resilience, and hence has been suggested to act as buffer against the adverse effects of living in deprived neighborhoods" has been removed in the revised version. In the revised version, the sentence has been replaced by "…Furthermore, neighborhood social cohesion plausibly can offset the negative effects of stressors on mental health by facilitating access to networks and services that influence health, social and emotional support. For example, in a Japanese prospective study, high neighborhood cohesion partially reduced the deleterious effect of anticipated daily stressors on older residents' depressive mood.26 Evidence from a British longitudinal cohort study has also suggested that the adverse effect of neighborhood deprivation on mental health was significantly reduced in high social cohesion neighborhoods.6 27…"

I'm not sure the term "Caucasians quoteis appropriate here, given that many neighborhood cohesion and health studies conducted in Western countries and compass more than "Caucasians."

The authors may want to elaborate on why potential eastern versus western body physiology would play a role in an analysis of links between neighborhood cohesion and psychological well-being.

☐ Thanks for the comments. This study aims to examine whether neighborhood social cohesion has any role in promoting psychological wellbeing in older Chinese people but not to compare the role of neighborhood social cohesion on subjective well-being between western and eastern countries. As such, the introduction has been modified. Instead, the concepts of neighborhood and its situations in Hong Kong have been added as suggested by another reviewer. As such, a short paragraph describing the situation in Hong Kong (in terms of life expectancy, possible reasons for the increase in life expectancy (medical system and elderly welfare), and levels of wellbeing of older people) has been added in the introduction section of the revised manuscript. Please refer to the relevant quotes for the revised results as shown below.

…Compared to other countries, Hong Kong has the longest life expectancy. The lengthening of life is partially contributed by Hong Kong's medical system and elderly welfare. However, levels of wellbeing (as measured by a sense of purpose and meaning in life) of older people in Hong Kong were relatively low, based on a comparative analysis of a multi-dimensional index assessing the social and economic wellbeing of elderly populations in over 90 countries.30 The low level of wellbeing could possibly be explained by the low level of neighborhood social cohesion. As such, examining the levels of perceived neighborhood social cohesion and their relationships with psychological wellbeing, taking into account of personal factors and neighborhood conditions simultaneously, will provide insight into what neighborhood attributes contributes to wellbeing among older people…

The others may also want to cite studies in the aging literature showing that life satisfaction increases with age until very old age. This may be useful for the present study, particularly since there may be western versus eastern differences in life expectancy.

☐ Thanks for the comments. The sentence has been revised. Reference papers showing that life satisfaction increases with age until very old age have been added. Please refer to the relevant quotes as shown below.

…This is because previous studies have indicated that wellbeing does not necessarily decrease with age.33 For example, a review of cross-sectional data from 63 countries revealed that life satisfaction is relatively stable across age groups in most societies.34 Similarly, a study of 60 countries finds a U-shaped relationship between life satisfaction and age.35…

The authors state they will take into account personal factors in the neighborhood conditions simultaneously, but it is unclear how the authors envision personal factors a neighborhood conditions may con found links between social cohesion and subjective well-being. The authors may want to cite some of the neighborhoods and health literature, particularly those that discussed neighborhood selection, and elaborate on this section.

☐ Thank you for the comments. We have removed "Perceived neighborhood friendliness" from the list of covariates. Therefore, in the current version, the analyses were adjusted for sociodemographic characteristics, lifestyle and health behaviors, and medical history. Nevertheless, we have cited some of the neighborhoods and health literature. Apologies for the confusion. Please refer to the relevant quotes as shown below.

…Furthermore, neighborhood social cohesion plausibly can offset the negative effects of stressors on mental health by facilitating access to networks and services that influence health, social and emotional support. For example, in a Japanese prospective study, high neighborhood cohesion partially reduced the deleterious effect of anticipated daily stressors on older residents' depressive

mood.26 Evidence from a British longitudinal cohort study has also suggested that the adverse effect of neighborhood deprivation on mental health was significantly reduced in high social cohesion neighborhoods.6 27…

In general, the introduction could use some careful editing.

◻ Thank you for your comments. The introduction section has been revised.

Methods:

The fourth sentence in the paragraph on translation contains typos that make interpretation of the sentence difficult.

◻ Thanks for pointing this out. The sentence has been revised. Please refer to the relevant quotes as shown below.

…The original English version and the back translated version were examined by a group of bilingual experts examined resolve discrepancies in the meaning of the scale items…

The authors note that Urban residence in the present study share similar socioeconomic and cultural identities. The authors may want to state whether or not any residents live in a rural areas.

◻ Thank you for your comments. Approximately 10% of the participants lived in rural areas. This information has been added in the revised manuscript (2.1 Sampling; 3 Results). Please refer to the relevant quotes as shown below.

…Hence, the study population would include older people living in both urban and rural areas with different socioeconomic profiles...

…In terms of type of housing, most participants (89.4%) lived in urban areas while only 10.6% lived in rural areas (village housing)….

The authors also state that the two districts were chosen because they have mixed neighborhood types. Did the authors want to examine whether neighborhood type moderates links between cohesion and well-being?

◻ Thanks for the comments. No, we did not intend to examine whether neighborhood type moderates links between cohesion and well-being at this stage. We recruited participants in two districts with mixed neighborhood types aiming to include participants from urban as well as rural areas with different socioeconomic profiles. Please refer to the relevant quotes as shown below.

…Hence, the study population would include older people living in both urban and rural areas with different socioeconomic profiles...

Methods:

Somewhere in the measures section it would be helpful to have some information indicating which of the variables are the primary neighborhood predictors. The abstract and introduction set up the reader to believe there will be a neighborhood cohesion Instrument, but the social cohesion scale and the brief sense of community scale are later included in the measures section. It is difficult to follow what the primary neighborhood predictor will be. If the additional cohesion and belongingness skills will be used for construct validity, the author should say such earlier in the manuscript.

◻ Thank you for your advice. The manuscript has been re-structured accordingly. In this revised version, we described the three objectives in the introduction section. Please refer to the relevant quotes as shown below.

…Therefore, the objectives of the present study were: 1) to adapt the NCI to a Hong Kong version (HK-NCI) that is linguistically valid for older Chinese and to evaluate the psychometric properties of HK-NCI, 2) to examine whether neighborhood social cohesion (including its two domains: social cohesion and neighborhood belonging) as measured using HK-NCI would be associated with three aspects of subjective wellbeing, including evaluative wellbeing (life satisfaction), hedonic wellbeing (feelings of happiness), and eudemonic wellbeing (sense of purpose and meaning in life), even after adjusting for individual-level factors such as sociodemographic characteristics, lifestyle and health behaviors, and medical history and 3) to examine whether the association between neighborhood social cohesion and subjective wellbeing varied by age and sex…

☐ Furthermore, we separated the methods into the following sub-sections including 2.1) Sampling, 2.2) Participants, 2.3) Adaptation of the neighborhood cohesion inventory, 2.4) Measures of subjective wellbeing, 5) Covariates, and 6) Data analysis. As suggested, we described the use of the two scales (i.e., the social cohesion scale and the brief sense of community scale) in section 2.3 as the two scales were used to examine the construct validity of the Hong Kong version –Neighborhood Cohesion Instrument.

The authors state that they use doctor-diagnosed health conditions as a covariate. However, given that the authors do not state how they pro cure these data, the reader is left to believe these are actually self reported chronic health conditions.

☐ Thanks for the comments. The term has been revised accordingly. Please refer to the relevant quotes as shown below.

…Sociodemographics characteristics (age, sex, marital status, education, employment status, income financial difficulties, type of housing, and length of residence), lifestyle and health behaviors (physical activity, smoking, and alcohol intake), and medical history (number of self-reported chronic health conditions) were collected…

The authors also indicate their inclusion of perceived neighborhood friendliness as a covariate. The authors may want to visit the literature indicating friendliness is at times included and measures of neighborhood cohesion. The authors should make some sort of statement regarding how they decided to use neighborhood friendliness as a covariate rather than in conjunction with their measures of neighborhood cohesion.

On a related note, the authors indicate including perceived neighborhood friendliness as a covariate, but define it with items that are seemingly unrelated to neighborhood friendliness, including outdoor spaces and buildings among others. If the authors are actually referring to age friendliness of the neighborhood, they should call it such, and elaborate more on the literature of age friendly neighborhoods.

It isn't clear why age friendliness of the neighborhood would be included as a covariate. The others may want to consider alternative models. For instance, perhaps older adults living in neighborhoods with low levels of age friendliness would benefit most from higher levels of social cohesion. In general, the authors should include a stronger theoretical rationale for the role they expect their selected variables to play.

☐ Thank you for the comments. As responded in the previous section, we have removed "Perceived neighborhood friendliness" from the list of covariates. Therefore, in the current version, the analyses were adjusted only for sociodemographic characteristics, lifestyle and health behaviors, and medical history. Nevertheless, we have cited some of the neighborhoods and health literature. Apologies for the confusion. Please refer to the relevant quotes as shown below.

…Furthermore, neighborhood social cohesion plausibly can offset the negative effects of stressors on mental health by facilitating access to networks and services that influence health, social and

emotional support. For example, in a Japanese prospective study, high neighborhood cohesion partially reduced the deleterious effect of anticipated daily stressors on older residents' depressive mood.26 Evidence from a British longitudinal cohort study has also suggested that the adverse effect of neighborhood deprivation on mental health was significantly reduced in high social cohesion neighborhoods.6 27…

The authors provide a test-retest reliability of the neighborhood cohesion instrument, but also indicate that this is a cross-sectional design with presumably only one assessment of neighborhood cohesion using this scale.

□ Sorry for the confusions. Further information on the test-retest reliability has been added in the revised manuscript (the last sentence of section 2.3). Please refer to the relevant quotes as shown below.

…Furthermore, a random sub-sample of 38 participants was re-interviewed over the telephone for a reliability test with a 4-week interval….

The authors should describe reliability, validity, and regression models in separate sections of the statistical analysis section of the methods.

□ Thank you for the comments. Since one of the study objectives was to evaluate the psychometric properties of the HK-NCI, information regarding reliability and validity of the scale are described in the Result section.

Linear regression models are inappropriate in the present study given that participants are clustered within two districts.

□ Thank you for the comments. Although participants were recruited in two selected districts, seven neighborhoods in the two districts were chosen according to the neighborhood types (ranging from mixed-use town centers to areas covering traditional villages) and the predominant type of housing (ranging from private housing to public housing) therein as proxy of socioeconomic status. As such, participants would represent views from a wide spectrum of local residents, including those with different socioeconomic profiles. Further information on the selection of the communities has been included in the methods section of the revised manuscript. Please refer to the relevant quotes as shown below.

…Considering the geographical heterogeneity in terms of socioeconomic characteristics, seven neighborhoods in the two districts were chosen according to the neighborhood types (ranging from mixed-use town centers to areas covering traditional villages) and the predominant type of housing (ranging from private housing to public housing) therein as proxy of socioeconomic status. The seven neighborhoods were Sha Tin Town Centre, Lek Yuen & Wo Che, Ma On Shan Town Centre, Yee Fu & Kwong Fuk, Tai Po Centre, Tai Po Hui & Old Market, and Lam Tsuen Valley, which are represented by a range of typical housing types in different settings (private/subsided/public housing in town centers, tenement housing in old urban core, village house in low-to mid-density areas). For example, Sha Tin Town Centre, Ma On Shan, Town Centre, and Tai Po Centre are areas which accommodate private, subsided, and public housing, supplemented with commercial and open space to form a mixed-use development pattern. Lek Yuen & Wo Che and Yee Fu & Kwong Fuk are areas which accommodate predominantly public rental housing supported by essential infrastructure and community facilities. Tai Po Hui & Old Market are clustered around tenement housing. Lam Tsuen Valley is situated in the west of Tai Po, an area covering both traditional villages and new residential housing. Hence, the study population would include older people living in both urban and rural areas with different socioeconomic profiles…

On the other hand, as responded in the previous section, we have removed "Perceived neighborhood friendliness" from the list of covariates. Therefore, in the current version, the analyses were adjusted

only for individual-level variables including sociodemographic characteristics, lifestyle and health behaviors, and medical history. Therefore, multiple linear regressions were used to examine whether neighborhood social cohesion was associated with subjective wellbeing.

If the authors wish to state that neighborhood social cohesion is related to subjective well-being independent of individual level factors, they may wish to further adjust for levels of perceived social support from friends, families, and spouses.

☐ Thank you for your advice. We agree that levels of perceived social support from friends, families, and spouses would be a relevant covariate. Unfortunately we did not collect this information in the study. We have discussed this in the limitation section. Please refer to the relevant quotes as shown below.

…Finally, information on levels of perceived social support (such as patterns of contact among friends, families, and spouses) that may affect wellbeing at older ages was not available…

Results:

The opening paragraph of the results would benefit from a discussion of overall levels of subjective well-being across domains.

☐ Thank you for the comments. The overall levels of subjective wellbeing across domains have been included in the opening paragraph of the results of the revised manuscript. Please refer to the relevant quotes as shown below.

…The mean scores of life satisfaction, feelings of happiness, and sense of purpose and meaning in life were 7.4, 7.8, and 7.9, respectively…

It is unclear why the authors correlated neighborhood cohesion instrument scores with number of neighbors.

☐ Thank you for pointing this out. This finding has been removed in the revised manuscript.

It is unclear why the authors are working with a subset of the data when adjusting for neighborhood (age) friendliness.

☐ Thank you for the comments. As responded in the previous section, we have removed "Perceived neighborhood friendliness" from the list of covariates. Therefore, in the current version, the analyses were adjusted only for sociodemographic characteristics, lifestyle and health behaviors, and medical history. Nevertheless, we have cited some of the neighborhoods and health literature. Apologies for the confusion.

Instead of stating that neighborhood social position was significantly associated, results should be stated with direction of effects.

☐ Thank you for the comments. The sentence has been revised accordingly. Please refer to the relevant quotes as shown below.

…In Model 1 (crude model), neighborhood social cohesion (total score) was significantly and positively associated with all measures of subjective wellbeing…

The authors found that social cohesion was associated with two aspects of well-being, but not with feelings of happiness. Feelings of happiness differ substantially from the other two members of subjective well-being. It is a fleeting emotional state, and purchase pens were asked how happy they felt the day before. Purpose in life and life satisfaction, on the other hand, are much more global or in during aspects of well-being. The authors may want to describe these differences in the discussion.

☐ Thank you very much for the comments. Since we have removed "Perceived neighborhood friendliness" from the list of covariates, the results of this study have been revised. Please refer to the relevant quotes for the revised results as shown below.

…In Model 1 (crude model), neighborhood social cohesion (total score) was significantly and positively associated with all measures of subjective wellbeing. Adjustment for sociodemographic characteristics (Model 2) did not alter the results. Controlling for the additional covariates of lifestyle and health behaviors, and medical history did not attenuate the associations of cohesion with measures of subjective well-being (Table 4)….

Since neighborhood social cohesion was associated with all measures of subjective wellbeing, the possible explanations as suggested have not been added in the revised manuscript.

It would be helpful to provide a rationale for age and sex stratification in the introduction section.

☐ Thank you very much for the comments. A rational for age and sex stratification has been described in the introduction section. Please refer to the relevant quotes as shown below.

…and 3) to examine whether the association between neighborhood social cohesion and subjective wellbeing varied by age and sex. This is because previous studies have indicated that wellbeing does not necessarily decrease with age.30 For example, a review of cross-sectional data from 63 countries revealed that life satisfaction is relatively stable across age groups in most societies. Similarly, a study of 60 countries finds a U-shaped relationship between life satisfaction and age. Furthermore, older men and women differ with respect to subjective wellbeing,31 possibly because older women are older and more likely to be widowed…

The majority of information presented in the third paragraph of the discussion would be much more useful in the introduction, providing a rationale for the study.

☐ Thank you for the comments. Part of the information has been moved to the section describing the underlying mechanisms responsible for the associations between neighborhood social cohesion and positive wellbeing in the introduction. Please refer to the relevant quotes as shown below.

…Although the exact mechanisms responsible for the associations between neighborhood social cohesion and positive wellbeing are unknown, there are several pathways that may link neighborhood social cohesion to positive wellbeing. For example, perceived neighborhood social cohesion, particularly relationships with neighbors could be viewed as a type of social support, which might affect health outcomes and wellbeing by facilitating access to health information and services.21 Neighborhood social cohesion might also influence wellbeing through the enhancement of mutual trust and emotional support.22 23 A number of qualitative studies have indicated that neighbors can serve as a central source of support and meaning in adults' lives,24 in particular people who experience a sense of loss.25…

As noted in the review of the results section, it is possible the authors did not find a significant association between neighborhood cohesion levels of happiness given that happiness was assessed with a question asking about happiness the day before.

☐ Thank you very much for the comments. As discussed, we have removed "Perceived neighborhood friendliness" from the list of covariates; therefore, the results of this study have been revised. Please refer to the relevant quotes for the revised results as shown below.

…In Model 1 (crude model), neighborhood social cohesion (total score) was significantly and positively associated with all measures of subjective wellbeing. Adjustment for sociodemographic characteristics (Model 2) did not alter the results. Controlling for the additional covariates of lifestyle

and health behaviors, and medical history did not attenuate the associations of cohesion with measures of subjective well-being (Table 4)….

Since neighborhood social cohesion was associated with all measures of subjective wellbeing, the possible explanations as suggested have not been added in the revised manuscript.

In the fifth paragraph, the authors state that being acquainted with neighbors is not a common practice in Hong Kong. This sentence needs a citation.

☐ Thank you for the comments. A citation could not be found. Therefore, the sentence has been removed. Sorry for the confusion.

The authors provide one possible explanation for the finding that cohesion was more associated with subjective well-being among young old and a women relative to old old and men. Namely, the authors state that these groups may participate more in locally organize groups. However, the authors also state that older adults depend more on neighborhood resources as they age. These sentiments are seemingly contradicting one another.

☐ Thank you for pointing this out. As discussed, the results of this revised version have been changed. In the age-stratified analysis, the association between neighborhood social cohesion and measures of wellbeing remained significant in both young-old and old-old. Please refer to the relevant quotes for the revised results as shown below.

…In the age-stratified analysis, the association between neighborhood social cohesion and measures of wellbeing remained significant in both young-old and old-old (all P <0.05). In the sex-stratified analysis, the associations of neighborhood social cohesion with life satisfaction and feelings of happiness remained significant in both men and women (P <0.05). However, the association between neighborhood social cohesion and sense of purpose and meaning in life remained significant in women (P <0.01), but not in men (Table 5)….

We have also revised the discussion. Please refer to the relevant quotes for the revised results as shown below.

…Previous studies suggest the wellbeing paradox but this phenomenon was not observed in the study. No correlation was found between age and wellbeing (data not shown). Results from the age-stratified analyses also reveal that there were no significant age difference in the association between neighborhood social cohesion and the measures of subjective wellbeing…

It seems on warranted to list inclusion of individual levelcon founders as a strength of the study, given that this is common practice in neighborhoods and health research.

☐ Thank you for your comments. This has been added in the revised manuscript. Please refer to the relevant quotes for the revised results as shown below.

…A further strength of this study is the availability of a variety of potential individual-level confounders including sociodemographic characteristics, lifestyle and health behaviors, and medical history…

Reviewer: 2

Reviewer Name: Zhigang Li

Institution and Country: Wuhan Univ

Please state any competing interests or state 'None declared': None

Please leave your comments for the authors below

This is a solid case examining the dynamics of wellbeing against a new context of HK and older population. It is a systematic case, presenting the results in a way of direct and clear. I put the followings suggestions.

1 Given that it is highlighted that the context of HK should be put into concerns, I suggest the authors to further interrogate the concepts of neighborhood or community, and its situations such as facilities and socio-economic conditions in HK. Also pls further articulate your findings within the conclusion section when link them with the gaps it targeted.

☐ Thank you for your advice. A short paragraph describing the situation in Hong Kong (in terms of life expectancy, possible reasons for the increase in life expectancy (medical system and elderly welfare), and levels of wellbeing of older people) has been added in the introduction section of the revised manuscript. In addition, findings of the present study and future directions have been included within the conclusion section of the revised manuscript. Please refer to the relevant quotes for the revised results as shown below.

(Introduction)…Compared to other countries, Hong Kong has the longest life expectancy. The lengthening of life is partially contributed by Hong Kong's medical system and elderly welfare. However, levels of wellbeing (as measured by a sense of purpose and meaning in life) of older people in Hong Kong were relatively low, based on a comparative analysis of a multi-dimensional index assessing the social and economic wellbeing of elderly populations in over 90 countries.30 The low level of wellbeing could possibly be explained by the low level of neighborhood social cohesion…

(Conclusion)…In conclusion, our findings suggested that the HK-NCI has adequate levels of internal consistency and test-retest reliability and can be used in studies of neighborhood social cohesion in older Chinese people. The results of our study have also shown that neighborhood social cohesion is linked to three aspects of subjective wellbeing amongst the elderly, demonstrating the importance of neighborhood social cohesion for wellbeing among community-dwelling older people, and suggesting that neighborhood social cohesion may be a beneficial target for intervention. Hence our findings could have important implications towards improving psychological wellbeing of the increasing ageing population in Hong Kong. In addition, our findings indicate a gender difference in the association between a neighborhood social cohesion and eudemonic wellbeing, with the association found in women only. This observation certainly warrants further research but our findings suggest that gender should be considered as a factor important to wellbeing promotion. Finally, while the cross-sectional analyses do not provide direct insights into the mechanisms underlying the results of the present study, the results lay a path for further research to examine the potential pathways by which perceived neighborhood social cohesion may enhance subjective wellbeing, which would promote positive ageing, reduce the growing burden on health and community services and help older people remain in their communities.

2 Social cohesion has been taken as a key of this models and study, I suggest the authors to further explain this concept and put it into your research framework.

☐ Thank you for your comments. A short paragraph describing the concept pf social cohesion has been added in the introduction section of the revised manuscript. Please refer to the relevant quotes for the revised results as shown below.

…Distinguished from individual level social network, neighborhood social cohesion characterizes the entire community and exerts impacts on the whole neighborhood. There is no consensus regarding the definition of neighborhood social cohesion. However, neighborhood social cohesion can be understood as patterns of social interaction among neighbors and the associated process of building shared values;6 7 or a state of affairs concerning both the vertical and the horizontal interactions

among members of society as characterized by a set of attitudes and norms that includes trust, a sense of belonging and the willingness to participate and help, as well as their behavioral manifestations.8 Hence, neighborhoods with high levels of social cohesion are expected to generate values such as interpersonal trust and norms of reciprocity,6 which may be beneficial to the health and wellbeing of older people of the neighborhoods…

3 Some more information the selected communities, and explain why they are appropriate to this study.

☐ Thank you for your comments. Further information on the selection of the communities has been included in the methods section of the revised manuscript. Please refer to the relevant quotes for the revised results as shown below.

…Considering the geographical heterogeneity in terms of socioeconomic characteristics, seven neighborhoods in the two districts were chosen according to the neighborhood types (ranging from mixed-use town centers to areas covering traditional villages) and the predominant type of housing (ranging from private housing to public housing) therein as proxy of socioeconomic status. The seven neighborhoods were Sha Tin Town Centre, Lek Yuen & Wo Che, Ma On Shan Town Centre, Yee Fu & Kwong Fuk, Tai Po Centre, Tai Po Hui & Old Market, and Lam Tsuen Valley, which are represented by a range of typical housing types in different settings (private/subsided/public housing in town centers, tenement housing in old urban core, village house in low-to mid-density areas). For example, Sha Tin Town Centre, Ma On Shan, Town Centre, and Tai Po Centre are areas which accommodate private, subsided, and public housing, supplemented with commercial and open space to form a mixed-use development pattern. Lek Yuen & Wo Che and Yee Fu & Kwong Fuk are areas which accommodate predominantly public rental housing supported by essential infrastructure and community facilities. Tai Po Hui & Old Market are clustered around tenement housing. Lam Tsuen Valley is situated in the west of Tai Po, an area covering both traditional villages and new residential housing. Hence, the study population would include older people living in both urban and rural areas with different socioeconomic profiles…

VERSION 2 – REVIEW

REVIEWER	Jennifer Williams Robinette
	University of Southern California
REVIEW RETURNED	05-Nov-2018

GENERAL COMMENTS	The authors were highly responsive to all of my comments. The revised manuscript is much-improved. I have a few remaining comments that the authors may want to consider.
	I believe well-being and individual-level are generally a hyphenated words.
	On the first page of the introduction, please make sure the word factor is pluralized: '... contextual and environmental factors...'
	I would suggest avoiding causal language such as, '... social cohesion characterizes the entire community and exerts impacts on the whole neighborhood.' Perhaps replace this with, 'has relationships with the well-being of residents...'
	Since this is the only time these terms are ever used, I would recommend defining what is meant by ' vertical and horizontal interactions among members of society...'

In the first paragraph of Page 2, I believe this sentence is missing the word 'are': '... whereas high levels of neighborhood social cohesion are associated with improve well-being…' The final sentence of this paragraph seems unrelated to what is discussed in the introduction: ' these findings suggest that positive well-being is attributable to neighborhood social cohesion and not the absence of diseases.' This is the first time the reader has heard anything about the absence of diseases. Consider rewording the sentence.

On Page 6 line 22, the final sentence of this paragraph states that, 'the low level of well-being could possibly be explained by the low level of neighborhood social cohesion.' The way this sentence is worded suggests to the reader that there is an established low level of social cohesion in Hong Kong. If that is the case, the sentence requires a citation. If, on the other hand, the authors wish to investigate whether levels of neighborhood social cohesion are one factor contributing to low levels of well-being among Hong Kong elderly, then this sentence should perhaps be reworded.

The conclusion of the paragraph on page 7 is where authors report their rationale for looking at analyses stratified by age and sex. The authors report that well-being may vary by age or gender, but that does not explain why they might want to assess age or gender differences in relationships between neighborhood social cohesion and well-being. I don't disagree with the authors in their interest in stratifying analyses by age and gender. Rather, I believe the wording of their rationale for stratifying analyses could be strengthened. I leave this up to the authors to consider.

The authors may also want to avoid saying, 'possibly because older women are older,' as this is obvious and redundant.

When describing the sampling method on page 8, I would consider rewording the following sentence, 'Considering the geographical heterogeneity in terms of socioeconomic characteristics...' to 'Considering the socioeconomic heterogeneity across these geographic regions…'

In my original review of this manuscript, I had suggested that linear regression models are inappropriate given that participants are clustered within two districts. I now understand that participants are clustered in seven neighborhoods. However, my original concern remains. Namely, the authors explicitly state that participants are clustered within neighborhoods that share similar socioeconomic and cultural identities. Therefore, the participants living in the same neighborhood may be more alike on measures of neighborhood social cohesion and measures of well-being. There may be within-neighborhood similarity, and between neighborhood differences. As such, linear regressions may be inappropriate for these data. The authors may want to indicate how many participants live in each of the neighborhoods, how large the neighborhoods are either in terms of geographic size or number of total residents, and conduct a sensitivity analysis in which models are adjusted for potential neighborhood-level dependency in the data.

The sentence on page 10 from lines 17 to 22 is difficult to follow. It is clear the original English version and the back-translated version were examined by a group of bilingual experts. However,

	the remainder of the sentence does not make sense in its current form.
	The sentence on page 16, from lines 50 to 54 has a typo. I believe the sentence should state, 'therefore, we speculate that when older people in a neighborhood have a strong sense that their neighborhoods are...'
	On page 17, the sentence that begins on line 3 also has a typo. I believe it should read, 'Supplementary analyses of our data also revealed that participants with higher scores...'
	On page 18, the authors state on line 21 that previous studies suggest a well-being paradox but this phenomenon was not observed in the study. This is the first time we have ever heard about something referred to as a well-being paradox. This needs to be defined so readers understand what is being discussed.

| **REVIEWER** | Zhigang Li
Wuhan University, China |
| **REVIEW RETURNED** | 05-Nov-2018 |

| **GENERAL COMMENTS** | The author has already answered my comments.
However, in order to further enhance the paper, the article still needs to be modified as follows:
1. Add the literature published in the last 5 years;
2. Why do older men participate in community activities less often? Is this related to mental state or behavioral ability? (in the discussion section) |

VERSION 2 – AUTHOR RESPONSE

Reviewer: 2

Reviewer Name: Zhigang Li

Institution and Country: Wuhan University, China

The author has already answered my comments.

However, in order to further enhance the paper, the article still needs to be modified as follows:

1. Add the literature published in the last 5 years;

☐ Thanks for your comments. Reference papers published in the last 5 years have been included in the introduction and the discussion sections. Please refer to the relevant citations (published in 2013-2018) as shown below.

8. Schiefer D, van der Noll J. The Essentials of Social Cohesion: A Literature Review. Soc Indic Res 2017;132(2):579-603.

9. Bjornstrom EE, Ralston ML, Kuhl DC. Social cohesion and self-rated health: The moderating effect of neighborhood physical disorder. American journal of community psychology 2013;52(3-4):302-12.

10. Cramm JM, Nieboer AP. Relationships between frailty, neighborhood security, social cohesion and sense of belonging among community-dwelling older people. Geriatr Gerontol Int 2013;13(3):759-63.

11. Kim ES, Hawes AM, Smith J. Perceived neighborhood social cohesion and myocardial infarction. J Epidemiol Community Health 2014;68(11):1020-26.

12. Kim ES, Park N, Peterson C. Perceived neighborhood social cohesion and stroke. Soc Sci Med 2013;97:49-55.

13. Inoue S, Yorifuji T, Takao S, Doi H, Kawachi I. Social cohesion and mortality: a survival analysis of older adults in Japan. Am J Public Health 2013;103(12):e60-6.

15. Jones R, Heim D, Hunter S, Ellaway A. The relative influence of neighbourhood incivilities, cognitive social capital, club membership and individual characteristics on positive mental health. Health Place 2014;28:187-93.

16. Cramm JM, van Dijk HM, Nieboer AP. The importance of neighborhood social cohesion and social capital for the well being of older adults in the community. Gerontologist 2013;53(1):142-52.

17. Robinette JW, Charles ST, Mogle JA, Almeida DM. Neighborhood cohesion and daily well-being: results from a diary study. Soc Sci Med 2013;96:174-82.

18. Elliott J, Gale CR, Parsons S, Kuh D, Team HAS. Neighbourhood cohesion and mental wellbeing among older adults: a mixed methods approach. Soc Sci Med 2014;107:44-51.

19. Cramm JM, Nieboer AP. Social cohesion and belonging predict the well-being of community-dwelling older people. BMC geriatrics 2015;15:30.

20. Delhey J, Dragolov G. Happier together. Social cohesion and subjective well-being in Europe. International journal of psychology : Journal international de psychologie 2016;51(3):163-76.

21. Kim ES, Kawachi I. Perceived Neighborhood Social Cohesion and Preventive Healthcare Use. Am J Prev Med 2017;53(2):e35-e40.

22. Momtaz YA, Haron SA, Ibrahim R, Hamid TA. Social embeddedness as a mechanism for linking social cohesion to well-being among older adults: moderating effect of gender. Clin Interv Aging 2014;9:863-70.

25. Murayama H, Nishi M, Nofuji Y, Matsuo E, Taniguchi Y, Amano H, et al. Longitudinal association between neighborhood cohesion and depressive mood in old age: A Japanese prospective study. Health & Place 2015;34:270-78.

26. Fone D, White J, Farewell D, Kelly M, John G, Lloyd K, et al. Effect of neighbourhood deprivation and social cohesion on mental health inequality: a multilevel population-based longitudinal study. Psychol Med 2014;44(11):2449-60.

29. Steptoe A, Deaton A, Stone AA. Subjective wellbeing, health, and ageing. Lancet 2015;385(9968):640-48.

30. Woo J, Wong H, Yu R, Chau A. Report on AgeWatch Index for Hong Kong 2014, 2016.

33. Smith J, Fisher G, Ryan L, Clarke P, House J, Weir D, et al. Psychosocial and lifestyle questionnaire 2006 - 2010. Survey Research Center, Institute for Social Research 2013.

34. Tomioka K, Kurumatani N, Hosoi H. Age and gender differences in the association between social participation and instrumental activities of daily living among community-dwelling elderly. BMC geriatrics 2017;17(1):99.

35. Census and Statistics Department. Hong Kong 2016 Population By-census - Summary Results. Hong Kong Special Adminstrative Region,, 2017.

39. Huang YN, Wong H. Impacts of Sense of Community and Satisfaction with Governmental Recovery on Psychological Status of the Wenchuan Earthquake Survivors. Soc Indic Res 2014;117(2):421-36.

40. The Organisation for Economic Co-operation and Development (OECD). OECD guidelines on measuring subjective well-being. OECD publishing 2013.

42. Yu R, Wong M, Woo J. Perceptions of Neighborhood Environment, Sense of Community, and Self-Rated Health: an Age-Friendly City Project in Hong Kong. Journal of urban health : bulletin of the New York Academy of Medicine 2018.

44. Jockey Club Institute of Ageing of the Chinese University of Hong Kong. Jockey Club Age-friendly City Project baseline assessment report - Sha Tin. https://www.jcafc.hk/images/baseline_findings/Sha_Tin_Baseline_Assessment_Report.pdf 2016.

45. Jockey Club Institute of Ageing of the Chinese University of Hong Kong. Jockey Club Age-friendly City Project baseline assessment report - Tai Po. https://www.jcafc.hk/images/baseline_findings/Tai_Po_Baseline_Assessment_Report.pdf 2016.

2. Why do older men participate in community activities less often? Is this related to mental state or behavioral ability? (in the discussion section)

□ Thanks for your comments. In Hong Kong, older men are more reluctant to participate in community activities because they considered that the activities tend to be more appealing to women. Please refer to the relevant quotes as shown below.

…Qualitative data regarding older people's perspectives on social participation also revealed that older men are more reluctant to participate in community activities because they considered that the activities tend to be more appealing to women (unpublished data). Therefore, strategies to promote neighborhood social cohesion among older people should take the potential age and gender differences into consideration…

Reviewer: 1

Reviewer Name: Jennifer Williams Robinette

Institution and Country: University of Southern California

The authors were highly responsive to all of my comments. The revised manuscript is much-improved. I have a few remaining comments that the authors may want to consider.

I believe well-being and individual-level are generally a hyphenated words.

□ Thanks for your comments. The words have been updated accordingly.

On the first page of the introduction, please make sure the word factor is pluralized: '... contextual and environmental factors...'

☐ Thanks for pointing this out. The word "factor" has been updated. Please refer to the relevant quotes as shown below.

…However, the role of social contextual factors, such as neighborhood social cohesion, remains understudied…

I would suggest avoiding causal language such as, '… social cohesion characterizes the entire community and exerts impacts on the whole neighborhood.' Perhaps replace this with, 'has relationships with the wellbeing of residents…'

☐ Thank you very much for your advice. However, the introduction section has been modified and the sentence "social cohesion characterizes the entire community and exerts impacts on the whole neighborhood" has been removed.

Since this is the only time these terms are ever used, I would recommend defining what is meant by 'vertical and horizontal interactions among members of society…'

☐ Thanks for your comments. The definitions have been added. Please refer to the relevant quotes as shown below.

…Nevertheless, social cohesion can be understood as 'the extent of connectedness and solidarity among groups in society'.6 In an extensive review, social cohesion has been redefined as 'a state of affairs concerning both the vertical (the relationship between the state and society) and the horizontal (the interactions among different individuals and groups in society) interactions among members of society as characterized by a set of attitudes and norms that includes trust, a sense of belonging and the willingness to participate and help, as well as their behavioral manifestations'.7

In the first paragraph of Page 2, I believe this sentence is missing the word 'are': '… whereas high levels of neighborhood social cohesion are associated with improve well-being…'

☐ Thanks for your comments. The sentence has been revised accordingly. Please refer to the relevant quotes as shown below.

…whereas high levels of neighborhood social cohesion are associated with better well-being.16-20…

The final sentence of this paragraph seems unrelated to what is discussed in the introduction: ' these findings suggest that positive well-being is attributable to neighborhood social cohesion and not the absence of diseases.' This is the first time the reader has heard anything about the absence of diseases. Consider rewording the sentence.

☐ Thanks for your comments. We agree that the sentences are irrelevant. Therefore, we have removed the sentence in the manuscript.

On Page 6 line 22, the final sentence of this paragraph states that, 'the low level of well-being could possibly be explained by the low level of neighborhood social cohesion.' The way this sentence is worded suggests to the reader that there is an established low level of social cohesion in Hong Kong. If that is the case, the sentence requires a citation. If, on the other hand, the authors wish to investigate whether levels of neighborhood social cohesion are one factor contributing to low levels of well-being among Hong Kong elderly, then this sentence should perhaps be reworded.

☐ Thanks for your comments and sorry for the confusion. In this study, we would like to examine whether levels of neighborhood social cohesion are one factor contributing to low levels of well-being among Hong Kong elderly. Therefore, the sentence has been reworded accordingly. Please refer to the relevant quotes as shown below.

…Therefore, it is important to examine whether levels of neighborhood social cohesion are one factor contributing to low levels of well-being among older people living in Hong Kong…

The conclusion of the paragraph on page 7 is where authors report their rationale for looking at analyses stratified by age and sex. The authors report that well-being may vary by age or gender, but that does not explain why they might want to assess age or gender differences in relationships between neighborhood social cohesion and well-being. I don't disagree with the authors in their interest in stratifying analyses by age and gender. Rather, I believe the wording of their rationale for stratifying analyses could be strengthened. I leave this up to the authors to consider.

☐ Thanks for your comments. The wording of the rationale for stratifying analyses has been revised. Please refer to the relevant quotes as shown below.

…Furthermore, it has been suggested that age and gender differences exist in the association between social participation and health,34 both of which are factors associated with neighborhood social cohesion and subjective well-being. Therefore, it is plausible that age and gender differences may also exist in the association between neighborhood social cohesion and subjective well-being. Hence, we also examined whether the association between neighborhood social cohesion and subjective well-being varied by age and gender…

The authors may also want to avoid saying, 'possibly because older women are older,' as this is obvious and redundant.

☐ Thanks for your comments and sorry for the confusion. The sentence has been removed accordingly.

When describing the sampling method on page 8, I would consider rewording the following sentence, 'Considering the geographical heterogeneity in terms of socioeconomic characteristics...' to 'Considering the socioeconomic heterogeneity across these geographic regions…'

☐ Thanks for your comments. The sentence has been revised accordingly. Please refer to the relevant quotes as shown below.

…Considering the socioeconomic heterogeneity across these geographic regions,…

In my original review of this manuscript, I had suggested that linear regression models are inappropriate given that participants are clustered within two districts. I now understand that participants are clustered in seven neighborhoods. However, my original concern remains. Namely, the authors explicitly state that participants are clustered within neighborhoods that share similar socioeconomic and cultural identities. Therefore, the participants living in the same neighborhood may be more alike on measures of neighborhood social cohesion and measures of well-being. There may be within-neighborhood similarity, and between neighborhood differences. As such, linear regressions may be inappropriate for these data. The authors may want to indicate how many participants live in each of the neighborhoods, how large the neighborhoods are either in terms of geographic size or number of total residents, and conduct a sensitivity analysis in which models are adjusted for potential neighborhood-level dependency in the data.

☐ Thanks for your comments. The analyses have been updated. Two-level hierarchical linear regressions of individual subjects at level 1 and 7 neighborhoods at level 2 were performed. An additional model (model 4) was added, with further adjustments for neighborhood characteristics including geographic size, number of older people, and number of elderly centres. Please refer to the relevant quotes as shown below.

.. two-level hierarchical linear regressions of individual subjects at level 1 and 7 neighborhoods at level 2 were performed, with model 1 being the crude model, model 2 adjusting for socio-demographic

characteristics (age, gender, marital status, education, employment status, income financial difficulties, type of housing, and length of residence), model 3 adjusting for the covariates included in model 2 with additional adjustments for lifestyle and health behaviors (physical activity, smoking, and alcohol intake), and medical history (number of self-reported chronic health conditions), and model 4 further adjusting for neighborhood characteristics (geographic size, number of older persons, and number of elderly centres in each of the selected neighborhoods). Unstandardized regression coefficients and p-values were calculated by using mixed-effect model, putting neighborhood as random effect…

The sentence on page 10 from lines 17 to 22 is difficult to follow. It is clear the original English version and the back-translated version were examined by a group of bilingual experts. However, the remainder of the sentence does not make sense in its current form.

☐ Thanks for your comments. The sentence has been revised. Please refer to the relevant quotes as shown below.

…The original English version and the back translated version were examined by a group of bilingual experts whom examined resolve discrepancies in the meaning of the scale items…

The sentence on page 16, from lines 50 to 54 has a typo. I believe the sentence should state, 'therefore, we speculate that when older people in a neighborhood have a strong sense that their neighborhoods are...'

☐ Thanks very much for pointing this out. However, the paragraph has been modified and the sentence has been removed.

On page 17, the sentence that begins on line 3 also has a typo. I believe it should read, 'Supplementary analyses of our data also revealed that participants with higher scores...'

☐ Thanks for pointing this out. However, the paragraph has been modified and the sentence has been removed. Please refer to the relevant quotes for the modified paragraphs as shown below.

…Consistent with previous studies that found associations between neighborhood social cohesion and well-being,16-20 the results of this study reinforce the importance of neighborhood social cohesion, a social contextual factor, in enhancing subjective well-being in older people. When we examined the associations of neighborhood social cohesion with each of the dimension of subjective well-being, we found that the impact of neighborhood social cohesion on life satisfaction and feelings of happiness was stronger than that on sense of purpose and meaning in life. These findings, however, are in contrast to the findings of a recent European study suggesting that physiological functioning is more strongly influenced by cohesion than life satisfaction and feelings of happiness.20 The differences between the results could be related to the cross-cultural differences in social participation, psychological beliefs, and subjective well-being of the study populations. Nevertheless, our findings and those in the literature emphasize the importance of considering cross-cultural differences in the role of neighborhood social cohesion on subjective well-being in older people….

…When we examined the associations of the two domains of neighborhood social cohesion (i.e., social cohesion and neighborhood belonging) and the three dimensions of subjective well-being, we found that both domains of neighborhood social cohesion were associated with subjective well-being. Furthermore, the association between neighborhood belonging (compared to social cohesion) and subjective well-being was stronger. It has been suggested that feelings of belonging would influence individual's identity and the extent to which they feel accepted, valued, respected, socially included, and able to take on a role in society, which have been suggested as important predictors of overall health and well-being for older people.41 In a recent study examining the relationship between the perceived 'age-friendliness' with the eight age-friendly environment domains and self-rated health, 'respect and social inclusion' was the social domain most strongly associated with self-rated health in

older people in Hong Kong.42 Therefore, interventions that promote sense of belonging, respect, and inclusion for older people have the potential to significantly improve older people's well-being…

On page 18, the authors state on line 21 that previous studies suggest a well-being paradox but this phenomenon was not observed in the study. This is the first time we have ever heard about something referred to as a well-being paradox. This needs to be defined so readers understand what is being discussed.

☐ Thanks for pointing this out. However, the paragraph has been modified and the sentence has been removed. Please refer to the relevant quotes for the modified paragraphs as shown below.

…Another important finding is that consistent associations of neighborhood social cohesion and subjective well-being were found in both 'young-old' and 'old-old' sub-groups and in both men and women. In other words, neighborhood social cohesion is beneficial to all sub-groups, be it 'young-old' or 'old-old', men or women. However, some differences in the magnitude of the associations were found between the sub-groups. The 'young-old' sub-group benefited more from higher levels of neighborhood social cohesion than the 'old-old' sub-group in all dimensions of subjective well-being. On the other hand, women benefited more from higher levels of neighborhood social cohesion than men in eudemonia well-being. A possible explanation for these findings could be that 'young-old' persons and women are more likely than 'old-old' persons (particularly those who are frail) and men to participate in community activities, which can bring numerous benefits (e.g., enhancing social network and sense of competence and control, providing opportunities to learn new things),43 and thereby resulting in greater socially cohesive attitudes and subjective well-being. Statistics from a baseline assessment of the age-friendliness of Sha Tin and Tai Po districts with over 700 respondents aged 60 and above revealed that women were found to be more likely to attend elderly community centers than men (52.8% vs. 28.4%).44 45 Qualitative data regarding older people's perspectives on social participation also revealed that older men are more reluctant to participate in community activities because they considered that the activities tend to be more appealing to women (unpublished data). Therefore, strategies to promote neighborhood social cohesion among older people should take the potential age and gender differences into consideration…

VERSION 3 - REVIEW

REVIEWER	Jennifer Williams Robinette
	University of Southern California United States
REVIEW RETURNED	01-Feb-2019

GENERAL COMMENTS	This is a very nice paper. There are just a few remaining typos and one remaining suggestion.
	Typos:
	On Page 5, Line 28: 'A number of qualitative studies have indicated that neighbors can serve as a central source of support and meaning in adults' lives, in particular for people who have experienced a sense of loss.'
	One Page 6, Line 33: 'However, these inventories or scales have not been adapted for an older Chinese population.'
	On Page 10, Line 40: 'To assess the construct validity of the HK-NCI, the Social Cohesion Scale (SCS)32 and the Brief sense of community scale (BSCS) were administered to each participant during the same interview.'

	On Page 10, Line 45: 'Participants were asked how strongly they agreed with the following statements:'
	Suggestion:
	The authors reported an age difference, with a stronger relationship among young-old. This is consistent with results reported in at least one of the cited studies, e.g., Robinette et al., 2013. The discussion might be strengthened by pointing out the consistency of this age difference across international samples.