

**Supplementary table 1. The four types of social isolation question and the scoring criteria for the composite social isolation score.**

Items <sup>^</sup>	Questions	Answers	Scoring		
			Score of 0 if:	Score of 1 if:	Score of 2 if
Face-to-face contact with co-inhabitants	How many people do you spend time with on a regular basis (at least once a month; do not include phone/mail conversations; excluding the workplace; including family)?	“≥3people”, “< 3 people” and “Live alone	≥ 3 people	< 3 people	Live alone
Face-to-face contact with non-co-inhabitants	How often do you see any of your friends or relatives (do not include phone/mail conversations; excluding those who lived together)?	“≥1 time/month”, “< 1 time/month” and “No such contact”	≥ 1 time /month	< 1 time/month	No such contact
Non-face-to-face contact (by telephone/mail)	Do you have any relatives or friends you don't often see but keep in contact with by phone or letter? How often do you contact them?	“≥1 time/month”, “< 1 time/month”, and “No such contact”	≥ 1 time /month	< 1 time/month	No such contact
Club/organization contact	How often do you join in activities of the GHHARE or other organizations?	“≥1 time/month” and “< 1 time/month”	≥ 1 time /month	< 1 time/month	NA
Composite score: sum of scores			0~7		

**Supplementary table 2. The Chinese version of four types of social isolation question and the scoring criteria for the composite social isolation score.**

类型	问题	回答	得分		
			0分:	1分:	2分
与同住者面对面接触	与您经常交往的人有多少个?(至少每月一次;不包括电话交谈;不包括工作场所,但包括家人)	“不少于3人”,“少于3人”和“独居”	不少于3人	少于3人	独居
与非共同居住者面对面接触	与您的朋友、亲戚见面的频率(不包括与您同住的人)	“至少每月一次”,“少于每月一次”和“没有接触”	至少每月一次	少于每月一次	没有接触
非面对面接触(通过电话/邮件)	您是否有一些朋友或亲戚,虽然没经常见面,但通过电话和信件保持联系?如果是,您与他们联系的频率是?	“至少每月一次”,“少于每月一次”和“没有接触”	至少每月一次	少于每月一次	没有接触
俱乐部/组织的接触	您是否有加入团体或协会?如果有,您参加他们活动的频率?	“至少每月一次”和“少于每月一次”	至少每月一次	少于每月一次	
总分:					0~7

**Supplementary table 3.** Association of hearing loss with depressive symptoms (GDS-15 score  $\geq 8$ )

Hearing status	Depressive symptoms (GDS-15 scores $\geq 8$ ), OR (95% CI)				
	Number (% cases)	Crude model	Model 1	Model 2	Model 3
<b>Good</b>	2256 (2.53)	Ref (1.00)	Ref (1.00)	Ref (1.00)	Ref (1.00)
<b>Fair</b>	6094 (4.64)	1.88 (1.41, 2.51) <sup>***</sup>	1.74 (1.30, 2.34) <sup>***</sup>	1.57 (1.17, 2.11) <sup>**</sup>	1.54 (1.15, 2.08) <sup>**</sup>
<b>Poor</b>	612 (7.35)	3.06 (2.05, 4.58) <sup>***</sup>	2.40 (1.58, 3.65) <sup>***</sup>	1.78 (1.16, 2.73) <sup>**</sup>	1.70 (1.10, 2.62) <sup>*</sup>

Ref=reference; OR=odds ratio; CI=confidence interval; GDS-15=the 15-item Geriatric Depression Scale

Model 1: adjusted for age, sex, income, education, occupation, smoking, alcohol use

Model 2: additionally adjusted for self-rated health, comorbidities

Model 3: additionally adjusted for social isolation

<sup>\*\*</sup>P<0.05

<sup>\*\*</sup>P<0.01

<sup>\*\*\*</sup>P<0.001

**Supplementary table 4.** Association of hearing loss with depressive symptoms after excluding participants with hearing aids (n=20)

Hearing status	Depressive symptoms, OR (95% CI)		
	Crude model	Model 1	Model 2
<b>Good</b>	Ref (1.00)	Ref (1.00)	Ref (1.00)
<b>Fair</b>	1.90 (1.42, 2.55) <sup>***</sup>	1.77 (1.32, 2.38) <sup>***</sup>	1.60 (1.19, 2.16) <sup>**</sup>
<b>Poor</b>	3.21 (2.14, 4.80) <sup>***</sup>	2.52 (1.65, 3.84) <sup>***</sup>	1.88 (1.22, 2.89) <sup>**</sup>

Ref=reference; OR=odds ratio; CI=confidence interval

Model 1: adjusted for age, sex, income, education, occupation, smoking, alcohol use

Model 2: additionally adjusted for self-rated health, comorbidities

<sup>\*\*</sup>P<0.01

<sup>\*\*\*</sup>P<0.001