*Study Design and Participants*

Data were obtained from the latest round of the Shandong Rural Elderly Health Cohort (SREHC). SREHC is an ongoing population-based longitudinal study in Shandong rural areas since 2019 (approval number, 20181228). SREHC aims to collect socio-demographics, lifestyles, physical and psychological health data, and community-level information among rural older adults every one or two years. SREHC employed a multistage stratified cluster design for sampling, and more details can be found in our previous publication(Wang et al., 2021). There were 3,243 participants in the baseline survey, with a response rate of 90.05%. Among them, a total of 2,395 respondents participated in the latest round of survey in 2022. After excluding missing data on the main variables, 2,204 Chinese rural older adults aged ≥ 60 years were included in the analysis.

*Measures*

*Suicidal ideation*

Suicidal ideation was evaluated by a single item: “Have you ever seriously considered committing suicide?” This single-item question has been shown to be valid and feasible in large-scale surveys due to its simplicity and efficiency.

*Intimate partner violence*

IPV is categorized into physical IPV and emotional IPV. Physical IPV was assessed with a question: “Has your partner ever intentionally hit, shoved, held down or used some other physical force against you?” Emotional IPV refers to participants being asked: “Has your partner ever humiliated, threatened or insulted you, making you feel worthless?”

*Social support reciprocity*

Social support reciprocity is a combination of participants receiving and providing different levels of social support: “high receipt/high provision,” “high receipt/low provision,” “low receipt/high provision,” and “low receipt/low provision.” Receiving social support includes instrumental support (support with shopping, cleaning and cooking, and running errands) and receipt of emotional support (reassurance and being taken care of). Provision of support to others (volunteering or charity, housework, unpaid help, taking care of grandchildren). We divided the categories of high and low levels based on the median score for each type of social support received or provided (Mizuno et al., 2019).

*Covariates*

Covariates were selected based on previous literature on IPV and suicidal ideation: age (years), sex (1= male, 2= female), marital status (0= unmarried/ divorced/ widowed , 1= married), education (0= illiteracy, 1= primary school, 2= middle school or higher), household income per capita (RMB), smoking status (0= never/past, 1= current), alcohol consumption (0= never/past, 1= current), chronic disease (0= no chronic condition, 1= one chronic condition, 2= multimorbidity), activity engagement, physical disability (Activity of Daily Living Scale) and psychological distress (Kessler Psychological Distress Scale).

*Statistical analyses*

All statistical analyses were performed using Stata MP version 17.0 (Stata Corp LLC, College Station, TX, USA). We used descriptive analyses to describe the sociodemographics. Student’s t test and the χ2test were used to compare suicidal ideation between different subgroups among older males and females. Logistic regression models were used to examine associations between IPV and suicidal ideation, as well as the moderating role of social support reciprocity. The reported confidence intervals were calculated at the 95% level, and2-sided*P-*values < 0.05 were considered statistically significant.

**References**

Wang, Y., Fu, P., Li, J., Jing, Z., Wang, Q., Zhao, D., Zhou, C., 2021. Changes in psychological distress before and during the COVID-19 pandemic among older adults: the contribution of frailty transitions and multimorbidity. Age and Ageing. 50 (4), 1011-1018.