

論文の内容の要旨

論文題目： Psychological impact of rural-to-urban migration on those left behind in rural Fujian, China.
(中国福建省農村部における出稼ぎ労働者家族の心理ストレス)

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Introduction:

In recent decades an increasing number of people have migrated both between and within countries, and this trend will continue in the coming years especially in developing countries. Although there have been a series of studies which have investigated the health impact of migration on migrants, little attention has been paid to the health of the people left behind (e.g., the spouse or parents of migrants) in the sending communities.

As migratory work is adopted as a family strategy to diversify and maximize its income, there is a positive effect of migratory work on the family left behind. At the same time, however, the physical and psychological burdens associated with migration might also have a negative impact on the health of those who remain in the sending communities. In particular, out-migration may diminish social support which can produce positive emotional and social benefits, while the shortage of household labor that can result from outmigration can also be a stressor among the people left behind. To date, previous studies have reported inconsistent findings concerning the impact of family members' migration on the health of adults left behind.

China is one of the countries which has experienced the most rapid increase in the number of rural-to-urban migrants. In this context, rural residents, among whom there is a predominance of relatively older people taking care of their grandchildren on behalf of their migrating adult children, might be especially susceptible to the negative effects of outmigration on psychological well-being. Given this, it is important to investigate the impact of outmigration of family members on the psychological health of people left behind in this setting.

Furthermore, it is important to identify factors which might help buffer against the psychological impact of being left behind. In this study, the effect of social capital, which is the resources that are accessed by individuals as a result of their membership of a network or a group, was also examined. Prior research has indicated that social capital measures can have an effect on

many types of health outcomes.

The aims of this study were to therefore to test the hypothesis that people left behind experience greater psychological stress by using biomarker data, and to test the buffering effect of individual- and community-level social capital on psychological stress in rural Fujian, China.

Methods:

A cross-sectional survey was conducted in seven rural communities in Fujian in 2015. Questionnaire data and dried blood spot samples for the measurement of Epstein-Barr virus (EBV) antibody titer, a biomarker for psychological stress, were collected from 797 local residents. Information on socio-demographic variables such as age, sex, marital status, educational attainment, household income, household size, as well as on family migration and social capital was obtained through the use of a questionnaire. EBV antibody titer was analyzed by enzyme-linked immunosorbent assay.

People left behind were defined as those community members with a household member who had lived outside of their community for at least 6 continuous months. Social capital variables included structural and cognitive social capital; structural social capital was measured by the frequency of eating together with people from other households and participating in wedding ceremonies or funerals in the previous year while cognitive social capital was assessed in terms of trust, reciprocity and attachment to community members. These variables were measured both at the individual- and community-level; community-level social capital was calculated as the mean value of individual-level social capital responses from the same community members.

After excluding people with missing values, 734 participants were included in the analysis. A mixed effects regression analysis with a random effects model to account for multiple individuals in each community was conducted to investigate the associations between log-transformed EBV antibody titer, being left behind and the social capital variables.

Results:

Among the 734 participants, 280 (38.1%) were categorized as being left behind. Compared to their not-left-behind counterparts, people left behind were older (62.4 vs. 56.7, $p < 0.001$), comprised more male participants (43.6% vs. 35.7%, $p = 0.033$) and fewer non-married persons (1.4% vs. 5.3%), had lower overall educational attainment (e.g., illiteracy was more prevalent among the left behind [42.1% vs. 33.9%]) and a larger household size (5 persons vs. 4 persons at the median, $p < 0.001$). The other factors did not differ between people left behind and

their not-left-behind counterparts (i.e., household income, social capital variables and C-reactive protein concentration).

Psychological stress was significantly higher among people left behind compared to people who were not left behind (coefficient = 0.14, 95% confidence interval [CI] = 0.01 – 0.27). While none of the social capital indicators significantly attenuated this association, community-level structural social capital was independently and inversely associated with psychological stress (coefficient = -1.20, 95% CI = -2.40 – -0.00) while individual-level structural social capital was positively associated with psychological stress (coefficient = 0.21, 95% CI = 0.06 – 0.36). In contrast, neither individual- nor community-level cognitive social capital was associated with psychological stress.

Discussion:

This study showed that in rural Fujian, China, people left behind by family members who had migrated to other locations had a higher level of psychological stress when using EBV antibody titer, a biomarker for psychological stress, as an assessment tool. Moreover, as the participants in this study did not differ in terms of the effects of remittance, which has been shown to be an important protective factor against psychological ill health among people left behind, then it is possible that the overall effect of family members' migration may have been detrimental with its negative impact outweighing its positive impact. Migration can be detrimental as it results in family separation, which can induce loneliness, isolation, and the loss of basic family support in the sending community.

Structural social capital was also found to be associated with psychological stress among the study participants. More specifically, community-level structural social capital was inversely associated with psychological stress, whereas individual-level structural social capital was positively associated with psychological stress. This indicates that in rural Fujian, China, community-level structural social capital protects people from psychological distress whereas individual-level structural social capital is rather linked with psychological stressors. Although the specific mechanisms underlying these conflicting results are unclear, it can be speculated that communities with higher levels of active social interaction may also have greater social support which can act to reduce psychological stress among residents. On the other hand, the greater psychological stress observed among participants with higher structural social capital may indicate that at the individual level social interaction in the form of strongly bonded relationships can be a source of psychological stress due to the potential demands and obligations that can be associated with it.

The effects of structural social capital were observed among the study population as a whole irrespective of the family's specific migration status; in other words, social capital was not shown to function as a buffer against psychological stress due to family separation among people left behind in this research location. Family separation and social capital seem therefore to be important, but independent determinants of psychological health in rural China.

Conclusion:

This study found that in rural Fujian, China people left behind by family members who had migrated to other locations had a significantly higher level of psychological stress than people who were not left behind, as reflected in increased EBV antibody titer. Thus, in this setting, the positive impact which has been associated with family members' migratory work in some previous studies was not evident in terms of psychological stress, but rather, migratory work was associated with psychological strain among those people left behind. Its negative impact thus seemingly outweighs its positive impact.

Although it did not buffer against the psychological stress of being left behind, structural social capital was nonetheless a determinant of psychological stress among all participants. Specifically, results indicated that while living in a community with active social interaction may benefit the residents psychologically, possibly through mechanisms such as increased social support, at the individual level social interaction in the form of strongly bonded relationships may be a source of psychological stress due to the potential demands and obligations that can be associated with it.

Given that population aging and the outflow of the younger generation will continue to increase in the coming decades in rural communities in developing countries, future research should examine which factors might be protective against the effects of psychological stress associated with family members' outmigration. It is also important to identify factors that can act to maintain or increase community-level social capital while at the same time minimizing the burden on individual members.