**Social capital, social health insurance, and** **health-related quality of life among people living with chronic diseases: Cultural and ideational perspectives**

**Supplementary Material I**

# *Further information on use of control variables in various analyses*

We used different techniques for the data analyses to enable us to provide appropriate estimates/results for each research objective. For instance, we could conduct the analysis of the relationship between factors associated with HRQoL and social capital without taking into account health insurance enrolment. Such approach provides extra information on the strength of the association between HRQoL and social capital. In this case, the results of the structural equation model (SEM), which is consistent with that of those in Table 4, serves as robustness check for our study.

In the SEM, the control variables comprised all those that showed correlation with the mediator, NHIS (which is also a dependent variable as some point in the SEM analyses) and HRQoL to make the model more robust. Therefore, the following variables were controlled: region of residence, age, No. of chronic disease(s), region of residence, and sex. We included sex (and age) in all models as they are two biological factors that can affect health-related outcomes and have also been noted to play significant role in how people enrol health insurance schemes due to sociocultural reasons (Kusi et al., 2015; Salari et al., 2019). Furthermore, the practical measures to reduce the number of control factors was also to increase the degree of freedoms and to avoid overfitting of the model as some error terms were covaried as part of the model fitting.

For Table 4 (the relationship between social capital and health insurance enrolment), we used all control variables selected through the literature as evidence shows that the NHIS enrolment varies depending on demographic, socioeconomic and geographical factors (Fenenga et al., 2015; Kotoh et al., 2018; Kusi et al., 2015; Salari et al., 2019; Wiredu et al., 2021). Without any concern for multicollinearity, we decided to include all the available control variables to provide a more robust analysis. Indeed, this is partly the reason why we used a different approach to generate results for the relationship between social capital and health insurance as it could enable us to present a potentially different kind of analysis and results.

For table 3, it was a combination of correlates of HRQoL in our data and other variables (sex and marital status) that were considered as theoretically critical. We stated above that we added sex and age to all the analyses due to biological association between these two factors and health-related outcomes. In this analysis, we added marital status due to implicit theoretical connection with some of the elements of social capital such as bonding social capital, which focuses on resources from close social ties (Szreter & Woolcock, 2004). Indeed, the correlation analysis (Table 2) shows that marital status is correlated with bonding social capital and trust—but not strongly correlated to cause multicollinearity. Therefore, to ensure that the findings from this study were more robust and demonstrated effects on HRQoL beyond specific sources of social capital such as marital status, we included it as control variable. Given that the findings from all the analyses (the SEM, those from Table 3 and the robustness analysis in Appendix 1, Table 2) are consistent, it shows that inclusion of marital status makes the analyses of relationship between social capital and HRQoL more robust.

# Supplementary Material II

# Table 1

## Association between social capital and NHIS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Model 1** | | | | |
| **Variable** | **B** | **S.E.** | **OR** | **95% CI for OR** | |
|  |  |  | Lower | Upper |
| Bonding SC | .157 | .120 | 1.170 | .925 | 1.480 |
| Bridging SC | .374\*\* | .134 | 1.453 | 1.117 | 1.890 |
| Linking SC | -.134 | .109 | .875 | .706 | 1.084 |
| Trust in neighbours | .603\* | .254 | 1.828 | 1.112 | 3.005 |
| Nagelkerke R2 | 0.074 | | | | |

# Table 2

## Association between social capital and HRQoL

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Model 1** | | |
| **B (95% CI)** | **Std. Error** | **β** |
| Bonding SC | .137 (.062, .213)\*\*\* | .038 | .247 |
| Bridging SC | -.054 (-.137, .029) | .042 | -.085 |
| Linking SC | -.034 (-.102, .035) | .035 | -.066 |
| Trust in neighbours | .135 (-.020, .290) | .079 | .097 |
| R-square | 0.047 | | |

**References**

Fenenga, C., Nketiah-Amponsah, E., Ogink, A., et al. (2015). Social capital and active membership in the Ghana National Health Insurance Scheme - a mixed method study. *International Journal for Equity in Health*, *14*(1), 118.

Kotoh, A. M., Aryeetey, G. C., & Van der Geest, S. (2018). Factors That Influence Enrolment and Retention in Ghana’ National Health Insurance Scheme. *International Journal of Health Policy and Management*, *7*(5), 443-454. <https://doi.org/10.15171/ijhpm.2017.117>

Kusi, A., Enemark, U., Hansen, K., & Asante, F. (2015). Refusal to enrol in Ghana's National Health Insurance Scheme: is affordability the problem? *International Journal for Equity in Health*, *14*(1), 2.

Salari, P., Akweongo, P., Aikins, M., & Tediosi, F. (2019). Determinants of health insurance enrolment in Ghana: evidence from three national household surveys. *health Policy and Planning*, *34*(8), 582-594. <https://doi.org/10.1093/heapol/czz079>

Szreter, S., & Woolcock, M. (2004). Health by association? Social capital, social theory, and the political economy of public health. *Int J Epidemiol*, *33*(4), 650-667. <https://doi.org/10.1093/ije/dyh013>

Wiredu, D. N. A., Peprah, C., & Agyemang-Duah, W. (2021). Prevalence of health insurance enrolment and associated factors among persons with disabilities in Ghana. *Cogent Medicine*, *8*(1), 1901379. <https://doi.org/10.1080/2331205X.2021.1901379>