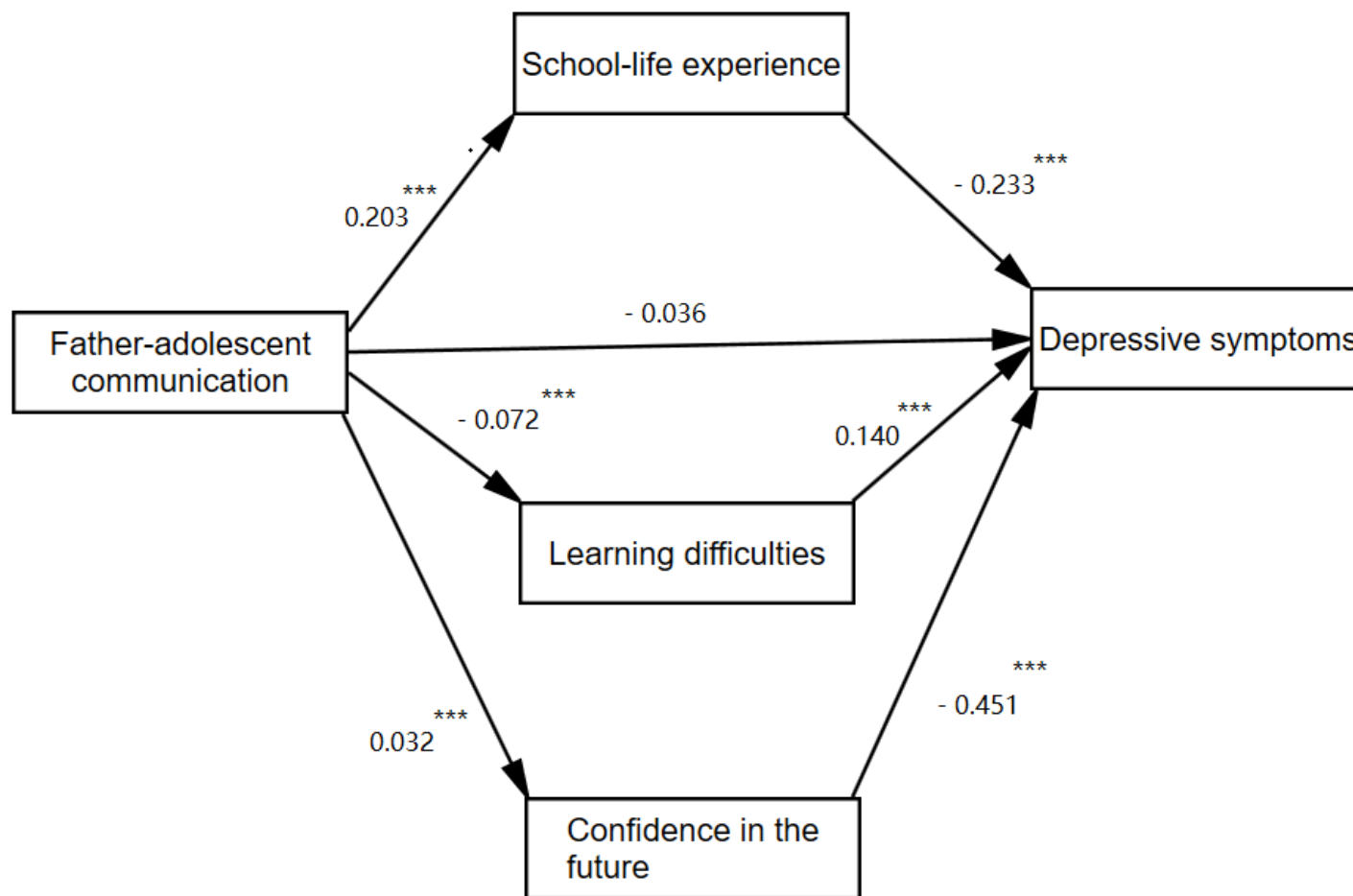


Supplementary Figure 1 Mediation model between mother-adolescent communication and depressive symptoms (**p < 0.001).



Supplementary Figure 2 Mediation model between father-adolescent communication and depressive symptoms (**p < 0.001).

Supplementary Table1 Effects of parents-adolescent communication, school-life experience, learning difficulties and confidence in the future on depression in the mixed effects model

| Factors | All (OR, 95%CI) | P | Boys (OR, 95%CI) | P | Girls (OR, 95%CI) | P |
|--|-------------------|--------|-------------------|--------|-------------------|--------|
| Parents-adolescent communication | | | | | | |
| Q1 (<14) | 1 (reference) | - | 1 (reference) | - | 1 (reference) | - |
| Q2 (14-<16) | 0.94 (0.73,1.21) | 0.632 | 0.80 (0.56, 1.13) | 0.200 | 1.10 (0.76, 1.58) | 0.610 |
| Q3 (16-<20) | 0.87 (0.71, 1.07) | 0.173 | 0.88 (0.67, 1.17) | 0.387 | 0.83 (0.61, 1.11) | 0.203 |
| Q4 (>=20) | 0.88 (0.69, 1.12) | 0.284 | 1.02 (0.73, 1.42) | 0.921 | 0.75 (0.53, 1.06) | 0.102 |
| School-life experiences | | | | | | |
| Q1 (<26) | 1 (reference) | - | 1 (reference) | - | 1 (reference) | - |
| Q2 (26-<29) | 0.49 (0.39, 0.61) | <0.001 | 0.61 (0.46, 0.81) | 0.001 | 0.39 (0.28, 0.54) | <0.001 |
| Q3 (29-<32) | 0.35 (0.28, 0.44) | <0.001 | 0.39 (0.28, 0.53) | <0.001 | 0.32 (0.23, 0.45) | <0.001 |
| Q4 (>=32) | 0.28 (0.22, 0.36) | <0.001 | 0.30 (0.21, 0.43) | <0.001 | 0.27 (0.18, 0.39) | <0.001 |
| Learning difficulties | | | | | | |
| Q1 (<6) | 1 (reference) | - | 1 (reference) | - | 1 (reference) | - |
| Q2 (6-<7) | 0.94 (0.71, 1.25) | 0.660 | 0.93 (0.62, 1.41) | 0.744 | 0.90 (0.61, 1.32) | 0.587 |
| Q3 (7-<9) | 1.04 (0.81, 1.35) | 0.744 | 0.98 (0.67, 1.43) | 0.906 | 1.07 (0.75, 1.51) | 0.714 |
| Q4 (>=9) | 1.40 (1.10, 1.84) | 0.016 | 1.47 (0.99, 2.17) | 0.051 | 1.25 (0.86, 1.83) | 0.242 |
| Confidence in the future | | | | | | |
| “no confidence at all” or “less confident” | 1 (reference) | - | 1 (reference) | - | 1 (reference) | - |
| quite confident | 0.39 (0.30, 0.49) | <0.001 | 0.44 (0.32, 0.62) | <0.001 | 0.35 (0.25, 0.49) | <0.001 |
| very confident | 0.31 (0.24, 0.40) | <0.001 | 0.35 (0.24, 0.51) | <0.001 | 0.27 (0.19, 0.39) | <0.001 |

Notes: Data was from China Education Panel Survey (CEPS) database. The model for all students was adjusted for gender, ethnicity, household economic

status, mother's education level, father's education level and whether mother and father get along well with each other. In gender-stratified analyses, the models were adjusted for the same covariates except gender.

Abbreviations: OR, odds ratio; CI, confidence interval; Q1, quartile 1; Q2, quartile 2; Q3, quartile 3; Q4, quartile 4.