**Supplementary Material**

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# Table 1. Symptom×age interactions associated with time to onset of first-episode psychosis

| **Symptom** | **Interaction coefficient (95% CI)** | **SE** | **t** | **p-value** |
| --- | --- | --- | --- | --- |
| hallucinations | -0.01 (-0.21, 0.19) | 0.10 | -0.07 | .941 |
| odd/bizarre ideas | 0.02 (-0.08, 0.11) | 0.05 | 0.32 | .745 |
| odd/eccentric behaviors | 0.22 (0.02, 0.43) | 0.11 | 2.13 | .033 |
| suspiciousness | 0.00 (-0.05, 0.06) | 0.03 | 0.18 | .859 |
| ***any STPS*** | -0.00 (-0.04, 0.03) | 0.02 | -0.19 | .851 |
| anxiety | 0.02 (-0.03, 0.07) | 0.03 | 0.70 | .482 |
| decreased energy | -0.06 (-0.34, 0.22) | 0.14 | -0.42 | .678 |
| depression | -0.01 (-0.05, 0.03) | 0.02 | -0.53 | .595 |
| elated mood | 0.12 (-0.02, 0.26) | 0.07 | 1.62 | .106 |
| impaired concentration | -0.02 (-0.23, 0.19) | 0.11 | -0.18 | .860 |
| impaired role functioning | -0.09 (-0.18, -0.01) | 0.04 | -2.23 | .026 |
| irritability | -0.00 (-0.11, 0.11) | 0.06 | -0.01 | .989 |
| self-harm | 0.01 (-0.20, 0.21) | 0.10 | 0.08 | .938 |
| sleep disturbance | -0.07 (-0.18, 0.04) | 0.06 | -1.22 | .224 |
| social withdrawal | 0.11 (0.00, 0.22) | 0.06 | 2.00 | .046 |
| ***any NPS*** | 0.00 (-0.03, 0.04) | 0.02 | 0.19 | .851 |

Cox proportional hazards models of time to onset of first-episode psychosis (i.e., time between age of onset of first identifiable symptom and age of onset of first-episode psychosis) predicted by first identifiable symptom–by–age of symptom onset interactions. Only symptoms with ≥5 cases were examined separately. CI: confidence interval. NPS: non-psychotic symptoms. SE: standard error. STPS: subthreshold psychotic symptoms.

# Table 2. Association of first identifiable symptom with subsequent symptom incidence rate

| **Symptom** | **Symptom incidence rate (95% CI)** | **Symptom IRR (95% CI)** |
| --- | --- | --- |
| hallucinations | 1.52 (1.26, 1.82) | 0.25 (0.08, 1.17) |
| odd/bizarre ideas | 2.20 (1.85, 2.60) | 1.05 (0.37, 3.89) |
| odd/eccentric behaviors | 1.78 (1.37, 2.28) | 1.17 (0.33, 7.28) |
| suspiciousness | 3.03 (2.65, 3.45) | 3.20 (1.55, 7.28) |
| ***any STPS*** | 2.04 (1.88, 2.21) | 1.92 (1.10, 3.48) |
| anxiety | 0.95 (0.85, 1.05) | 0.51 (0.27, 1.03) |
| decreased energy | 2.62 (2.14, 3.18) | 1.24 (0.34, 6.82) |
| depression | 1.33 (1.26, 1.41) | 0.42 (0.27, 0.68) |
| elated mood | 2.83 (2.23, 3.55) | 2.99 (0.72, 17.87) |
| impaired concentration | 1.52 (1.17, 1.94) | 0.63 (0.15, 4.16) |
| impaired role functioning | 1.98 (1.70, 2.28) | 0.71 (0.31, 1.84) |
| irritability | 1.48 (1.29, 1.70) | 0.41 (0.18, 1.12) |
| self-harm | 0.46 (0.31, 0.66) | 0.06 (0.01, 0.73) |
| sleep disturbance | 1.56 (1.22, 1.96) | 3.21 (0.69, 22.26) |
| social withdrawal | 1.69 (1.48, 1.93) | 0.96 (0.43, 2.46) |
| ***any NPS*** | 1.37 (1.32, 1.42) | 0.36 (0.20, 0.63) |

Symptom incidence rate: rate of new symptoms emerging after the first identifiable symptom and before the onset of first-episode psychosis (symptoms/person-year). Only symptoms with ≥5 cases were examined separately. Bonferroni corrections were applied to confidence intervals (k=16). IRR: incidence rate ratio (i.e., the ratio of symptom incidence rates in participants with vs. without a given first symptom). NPS: non-psychotic symptoms. STPS: subthreshold psychotic symptoms.

# Table 3. Symptom×age interactions associated with symptom incidence rates

| **Symptom** | **Interaction coefficients**  **(95% CI)** | **SE** | **t** | **p-value** |
| --- | --- | --- | --- | --- |
| hallucinations | -0.19 (-0.40, 0.03) | 0.12 | -1.68 | .094 |
| odd/bizarre ideas | -0.12 (-0.31, 0.03) | 0.06 | -2.03 | .042 |
| odd/eccentric behaviors | 0.20 (-0.05, 0.40) | 0.12 | 1.72 | .085 |
| suspiciousness | -0.11 (-0.20, -0.03) | 0.04 | -3.26 | .001 |
| ***any STPS*** | -0.07 (-0.13, -0.01) | 0.02 | -2.94 | .003 |
| anxiety | 0.04 (-0.04, 0.12) | 0.03 | 1.21 | .227 |
| decreased energy | 0.14 (-0.23, 0.50) | 0.16 | 0.89 | .372 |
| depression | -0.01 (-0.07, 0.04) | 0.02 | -0.58 | .562 |
| elated mood | -0.12 (-0.29, 0.07) | 0.07 | -1.59 | .111 |
| impaired concentration | 0.06 (-0.17, 0.25) | 0.12 | 0.47 | .638 |
| impaired role functioning | -0.25 (-0.41, -0.06) | 0.06 | -4.39 | <.001 |
| irritability | 0.03 (-0.11, 0.18) | 0.06 | 0.50 | .619 |
| self-harm | -0.16 (-0.48, 0.07) | 0.13 | -1.25 | .213 |
| sleep disturbance | 0.12 (-0.10, 0.29) | 0.09 | 1.39 | .165 |
| social withdrawal | 0.14 (0.00, 0.27) | 0.06 | 2.21 | .027 |
| ***any NPS*** | 0.06 (0.00, 0.12) | 0.02 | 2.55 | .011 |

Negative binomial regression of symptom incidence on first identifiable symptom–by–age of onset interaction. Only symptoms with ≥5 cases were examined separately. CI: confidence interval. NPS: non-psychotic symptoms. SE: standard error. STPS: subthreshold psychotic symptoms.

# Figure 1. Association of first identifiable symptom with time to onset of first-episode psychosis (after Bonferroni corrections)

A picture containing chart

Description automatically generated

Hazard ratio for psychosis onset associated with one first symptom compared to other first symptoms. Only symptoms with ≥5 cases were examined separately. Bonferroni corrections (k=16) were applied to confidence intervals. STPS: subthreshold psychotic symptoms. NPS: non-psychotic symptoms.

# Figure 2. Association of first identifiable symptom with time to onset of first-episode psychosis (adjusted for demographics)

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Hazard ratio for psychosis onset associated with one first symptom compared to other first symptoms. Cox proportional hazards models adjusted for gender, visible minority status and socioeconomic status. Only symptoms with ≥5 cases were examined separately. Bonferroni corrections (k=16) were applied to confidence intervals. STPS: subthreshold psychotic symptoms. NPS: non-psychotic symptoms.

# Figure 3. Association of first identifiable symptom with time to onset of first-episode psychosis (adjusted for age at first symptom)

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Hazard ratio for psychosis onset associated with one first symptom compared to other first symptoms. Cox proportional hazards models adjusted for age at onset of the first identifiable symptom. Only symptoms with ≥5 cases were examined separately. Bonferroni corrections (k=16) were applied to confidence intervals. STPS: subthreshold psychotic symptoms. NPS: non-psychotic symptoms.

# Figure 4. Symptom×age interactions associated with rapidity of illness progression



Association between first identifiable symptoms and rapidity of illness progression, conditional on age at onset of the symptom (symptom-by-age interactions). Outcome in upper row: onset of first-episode psychosis; in lower row: symptom incidence rate. All these interactions are significant at p<.05. CI: confidence interval. HR: hazard ratios for psychosis onset associated with a given first symptom (in bold) vs. other symptoms. IRR: symptom incidence rate ratio, i.e., symptom/person-year in participants who had a given first symptom (in bold) vs. those who did not. STPS: subthreshold psychotic symptoms.

# Figure 5. Association of first identifiable symptom with symptom incidence (after Bonferroni corrections)

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Incidence rate ratio following one first symptom compared to other first symptoms. Only symptoms with ≥5 cases were examined separately. Bonferroni corrections (k=16) were applied to confidence intervals. STPS: subthreshold psychotic symptoms. NPS: non-psychotic symptoms.

# Figure 6. Association of first identifiable symptom with symptom incidence (adjusted for demographics)

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Incidence rate ratio are the ratio of symptom incidence rates (symptoms/person-year), i.e., the rates of new symptoms developed after the onset of the first symptom and before the onset of first-episode psychosis. Negative binomial regressions adjusted for gender, visible minority status and socioeconomic status. Only symptoms with ≥5 cases were examined separately. Bonferroni corrections were applied to confidence intervals. STPS: subthreshold psychotic symptoms. NPS: non-psychotic symptoms.

# Figure 7. Association of first identifiable symptom with symptom incidence (adjusted for age at first symptom)

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Incidence rate ratio are the ratio of symptom incidence rates (symptoms/person-year), i.e., the rates of new symptoms developed after the onset of the first symptom and before the onset of first-episode psychosis. Negative binomial regressions adjusted for age at first identifiable symptom. Only symptoms with ≥5 cases were examined separately. Bonferroni corrections for multiple testing were applied to confidence intervals. STPS: subthreshold psychotic symptoms. NPS: non-psychotic symptoms.