**Associations between apparent temperatures and emergency ambulance calls in Wuxi, China:** **a time series analysis**

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Table S1. RR values between different extreme AT and non-accidental EACs with reference of optimum AT

|  |  |  |
| --- | --- | --- |
| Percentile(%) | AT( °C) | RR(95% CI) |
| Total | Male | Female | 0~65 years | 65~years |
| 2.5 | -1.27 | **1.23 (1.07, 1.41)** | **1.31 (1.09, 1.57)** | 1.13 (0.93, 1.38) | **1.29 (1.03, 1.60)** | **1.21 (1.05, 1.39)** |
| 5 | 0.34 | **1.21 (1.06, 1.38)** | **1.28 (1.08, 1.53)** | 1.13 (0.94, 1.36) | **1.30 (1.05, 1.61)** | **1.18 (1.03, 1.34)** |
| 7.5 | 1.41 | **1.20 (1.06, 1.37)** | **1.27 (1.07, 1.50)** | 1.12 (0.94, 1.35) | **1.31 (1.06, 1.61)** | **1.15 (1.02, 1.31)** |
| 10 | 2.53 | **1.19 (1.05, 1.35)** | **1.25 (1.06, 1.47)** | 1.12 (0.94, 1.34) | **1.31 (1.07, 1.61)** | **1.14 (1.01, 1.28)** |
| 90 | 31.77 | **1.08 (1.03, 1.13)** | **1.08 (1.02, 1.15)** | **1.08 (1.01, 1.15)** | **1.08 (1.02, 1.14)** | 1.10 (0.99, 1.21) |
| 92.5 | 32.98 | **1.10 (1.04, 1.16)** | **1.10 (1.03, 1.19)** | **1.10 (1.02, 1.19)** | **1.11 (1.04, 1.19)** | 1.11 (1.00, 1.24) |
| 95 | 34.18 | **1.13 (1.06, 1.20)** | **1.13 (1.04, 1.23)** | **1.12 (1.03, 1.23)** | **1.14 (1.06, 1.24)** | **1.13 (1.01, 1.26)** |
| 97.5 | 35.98 | **1.17 (1.08, 1.26)** | **1.17 (1.06, 1.29)** | **1.16 (1.04, 1.29)** | **1.20 (1.09, 1.32)** | **1.16 (1.02, 1.31)** |

Note: Abbreviations: RR, relative risk; AT, apparent temperature; EACs, emergency ambulance calls.

Table S2. RR values between different extreme AT and respiratory EACs with reference of optimum AT

|  |  |  |
| --- | --- | --- |
| Percentile(%) | AT( °C) | RR (95% CI) |
| Total | Male | Female | 0~65 years | 65~years |
| 2.5 | -1.27 | **1.36 (1.21, 1.48)** | **1.80 (1.45, 2.25)** | 1.30 (0.88, 1.92) | 1.23 (0.97, 1.55) | **1.47 (1.17, 1.86)** |
| 5 | 0.34 | **1.31 (1.18, 1.41)** | **1.79 (1.44, 2.22)** | 1.26 (0.87, 1.83) | 1.18 (0.96, 1.44) | **1.44 (1.15, 1.80)** |
| 7.5 | 1.41 | **1.25 (1.14, 1.34)** | **1.78 (1.44, 2.19)** | 1.24 (0.87, 1.77) | 1.15 (0.96, 1.37) | **1.41 (1.13, 1.77)** |
| 10 | 2.53 | **1.21 (1.11, 1.28)** | **1.76 (1.43, 2.16)** | 1.21 (0.86, 1.72) | 1.12 (0.95, 1.31) | **1.39 (1.12, 1.73)** |
| 90 | 31.77 | **1.12 (1.03, 1.21)** | **1.14 (1.08, 1.20)** | 1.14 (0.92, 1.42) | 1.36 (0.95, 1.94) | **1.13 (1.06, 1.21)** |
| 92.5 | 32.98 | **1.13 (1.04, 1.24)** | **1.19 (1.12, 1.27)** | 1.18 (0.93, 1.49) | 1.39 (0.96, 2.01) | **1.17 (1.08, 1.26)** |
| 95 | 34.18 | **1.15 (1.05, 1.26)** | **1.26 (1.17, 1.35)** | 1.21 (0.94, 1.56) | 1.43 (0.98, 2.08) | **1.21 (1.11, 1.32)** |
| 97.5 | 35.98 | **1.18 (1.06, 1.31)** | **1.36 (1.24, 1.49)** | 1.27 (0.95, 1.69) | 1.48 (1.00, 2.19) | **1.28 (1.16, 1.42)** |

Note: Abbreviations: RR, relative risk; AT, apparent temperature; EACs, emergency ambulance calls.

Table S3. RR values between different extreme AT and cardiovascular EACs with reference of optimum AT

|  |  |  |
| --- | --- | --- |
| Percentile(%) | AT( °C) | RR (95% CI) |
| Total | Male | Female | 0~65 years | 65~years |
| 2.5 | -1.27 | **1.46 (1.35, 1.68)** | **1.23 (1.06, 1.44)** | 1.32 (0.94, 1.85) | 1.20 (0.72, 2.01) | **1.63 (1.20, 2.20)** |
| 5 | 0.34 | **1.33 (1.26, 1.40)** | **1.20 (1.04, 1.39)** | 1.31 (0.94, 1.82) | 1.22 (0.74, 2.00) | **1.56 (1.16, 2.09)** |
| 7.5 | 1.41 | **1.27 (1.21, 1.34)** | **1.18 (1.03, 1.36)** | 1.30 (0.94, 1.80) | 1.22 (0.75, 1.99) | **1.52 (1.14, 2.03)** |
| 10 | 2.53 | **1.24 (1.18, 1.31)** | **1.16 (1.02, 1.33)** | 1.29 (0.94, 1.77) | 1.23 (0.76, 1.98) | **1.48 (1.11, 1.96)** |
| 90 | 31.77 | **1.26 (1.19, 1.36)** | **1.13 (1.04, 1.23)** | **1.14 (1.04, 1.26)** | **1.26 (1.06, 1.48)** | **1.12 (1.02, 1.23)** |
| 92.5 | 32.98 | **1.35 (1.25, 1.50)** | **1.16 (1.06, 1.27)** | **1.19 (1.06, 1.33)** | **1.33 (1.10, 1.60)** | **1.16 (1.04, 1.28)** |
| 95 | 34.18 | **1.49 (1.29, 1.62)** | **1.19 (1.08, 1.31)** | **1.23 (1.09, 1.40)** | **1.41 (1.14, 1.74)** | **1.19 (1.06, 1.34)** |
| 97.5 | 35.98 | **1.61 (1.46, 1.78)** | **1.24 (1.12, 1.37)** | **1.31 (1.13, 1.52)** | **1.55 (1.20, 2.00)** | **1.26 (1.10, 1.44)** |

Note: Abbreviations: RR, relative risk; AT, apparent temperature; EACs, emergency ambulance call.

Table S4. The single day lag effects(RR with 95% CI) of cold (-1.27℃) and heat (35.98℃ ) at different lag day(s) in non-accidental, cardiovascular and respiratory EACs.

|  |  |  |  |
| --- | --- | --- | --- |
| Lag Days | Non-accidental EACs | Cardiovascular EACs | Respiratory EACs |
| -1.27℃ vs 22.54℃ | 35.98℃ vs 22.54℃ | -1.27℃ vs 17.12℃ | 35.98℃ vs 17.12℃ | -1.27℃ vs 12.74℃ | 35.98℃ vs 12.74℃ |
| lag0 | 1.007 (0.977, 1.038) | **1.065 (1.036, 1.095)** | 1.031 (0.992, 1.073) | **1.05 (1.012, 1.089)** | 0.989 (0.953, 1.027) | **1.05 (1.013, 1.088)** |
| lag1 | 1.008 (0.988, 1.029) | **1.05 (1.032, 1.068)** | **1.031 (1.004, 1.059)** | **1.038 (1.015, 1.062)** | 0.999 (0.974, 1.024) | **1.036 (1.014, 1.06)** |
| lag2 | 1.01 (0.995, 1.024) | **1.036 (1.025, 1.047)** | **1.03 (1.011, 1.05)** | **1.028 (1.013, 1.042)** | 1.008 (0.99, 1.026) | **1.024 (1.01, 1.038)** |
| lag3 | 1.011 (0.997, 1.026) | **1.023 (1.011, 1.035)** | **1.029 (1.01, 1.048)** | **1.018 (1.003, 1.034)** | 1.015 (0.997, 1.033) | 1.013 (0.998, 1.029) |
| lag4 | 1.012 (0.996, 1.029) | 1.013 (0.998, 1.028) | **1.026 (1.004, 1.048)** | 1.011 (0.991, 1.03) | 1.02 (0.999, 1.041) | 1.006 (0.987, 1.025) |
| lag5 | 1.014 (0.997, 1.03) | 1.006 (0.991, 1.021) | 1.021 (0.999, 1.043) | 1.006 (0.986, 1.025) | **1.022 (1.002, 1.044)** | 1.002 (0.983, 1.021) |
| lag6 | **1.015 (1, 1.029)** | 1.002 (0.989, 1.014) | 1.014 (0.996, 1.034) | 1.003 (0.987, 1.019) | **1.022 (1.003, 1.04)** | 1.001 (0.986, 1.017) |
| lag7 | **1.016 (1.003, 1.028)** | 0.999 (0.989, 1.01) | 1.008 (0.991, 1.025) | 1.002 (0.989, 1.016) | **1.019 (1.003, 1.035)** | 1.003 (0.99, 1.017) |
| lag8 | **1.016 (1.002, 1.031)** | 0.998 (0.986, 1.011) | 1.002 (0.984, 1.021) | 1.002 (0.986, 1.018) | 1.015 (0.997, 1.033) | 1.005 (0.99, 1.021) |
| lag9 | **1.017 (1.001, 1.033)** | 0.998 (0.983, 1.013) | 1 (0.979, 1.021) | 1.003 (0.983, 1.022) | 1.012 (0.991, 1.032) | 1.007 (0.988, 1.027) |
| lag10 | **1.017 (1.001, 1.033)** | 0.997 (0.982, 1.012) | 1.001 (0.98, 1.022) | 1.003 (0.983, 1.022) | 1.01 (0.99, 1.03) | 1.007 (0.988, 1.026) |
| lag11 | **1.017 (1.003, 1.031)** | 0.996 (0.984, 1.007) | 1.006 (0.988, 1.025) | 1.002 (0.986, 1.017) | 1.01 (0.992, 1.028) | 1.004 (0.989, 1.019) |
| lag12 | **1.017 (1.003, 1.031)** | 0.994 (0.984, 1.004) | 1.014 (0.996, 1.033) | 1 (0.987, 1.014) | 1.011 (0.994, 1.029) | 0.999 (0.986, 1.012) |
| lag13 | 1.016 (0.997, 1.036) | 0.992 (0.976, 1.008) | 1.024 (0.999, 1.051) | 0.998 (0.978, 1.02) | 1.013 (0.989, 1.038) | 0.993 (0.973, 1.014) |
| lag14 | 1.016 (0.987, 1.045) | 0.989 (0.964, 1.016) | 1.036 (0.998, 1.075) | 0.996 (0.963, 1.031) | 1.015 (0.98, 1.052) | 0.987 (0.954, 1.021) |

Note: Abbreviations: RR, relative risk; AT, apparent temperature; EACs, emergency ambulance calls.





Figure S1. Time-series plots for daily EACs, meteorological variables, O3 and PM2.5 in Wuxi, China during 2014–2019. Abbreviations: AT, apparent temperature; PM2.5, particulate matter (with aerodynamic diameter) less than 2.5 micrometers; O3, Ozone.



Figure S2. The result of correlation analysis of meteorological factors and air pollutants. \* P value＜0.05；Abbreviations: AT, apparent temperature; PM2.5, particulate matter (with aerodynamic diameter) less than 2.5 micrometers; O3, Ozone.