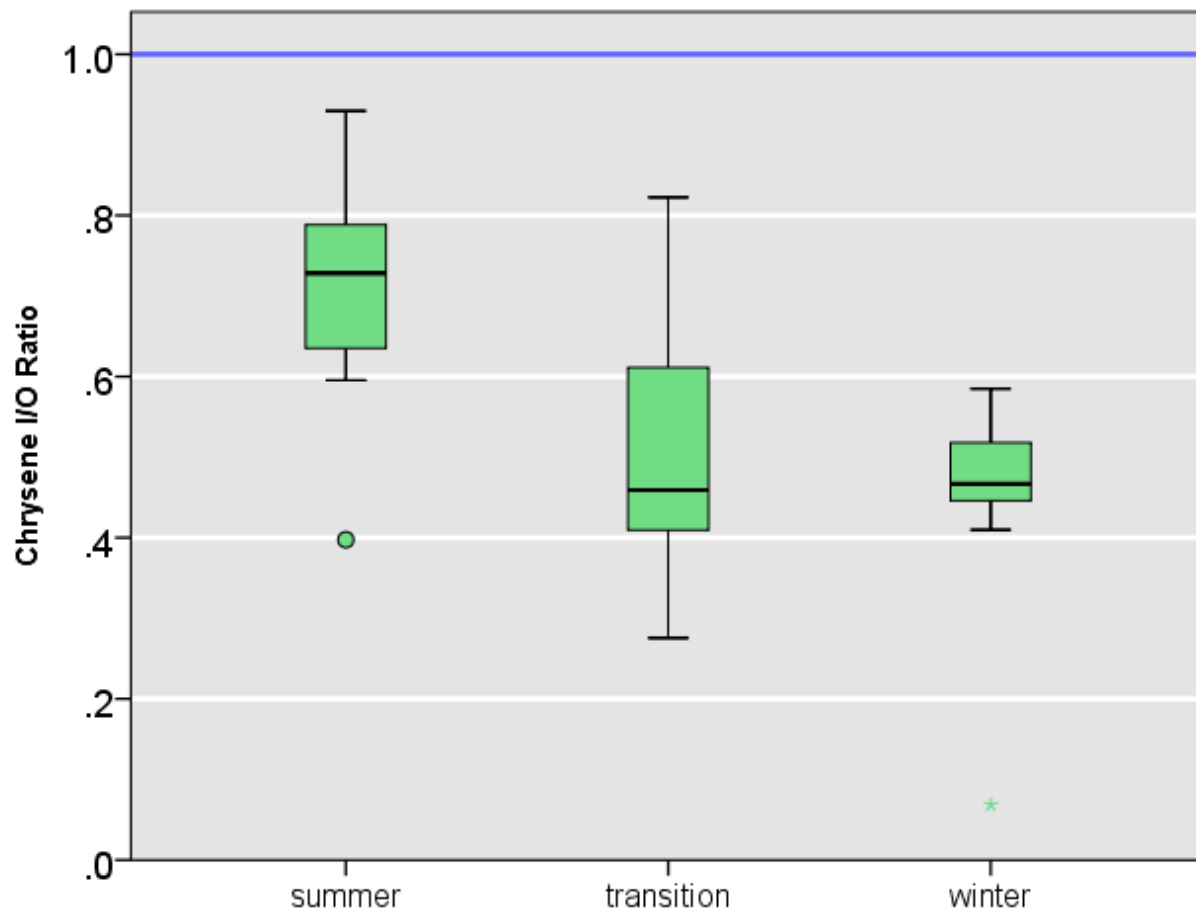


1 **SUPPORTING INFORMATION**

2

3 **Figure S1: Distribution of Chrysene I/O ratios by season among non-smoker households.**

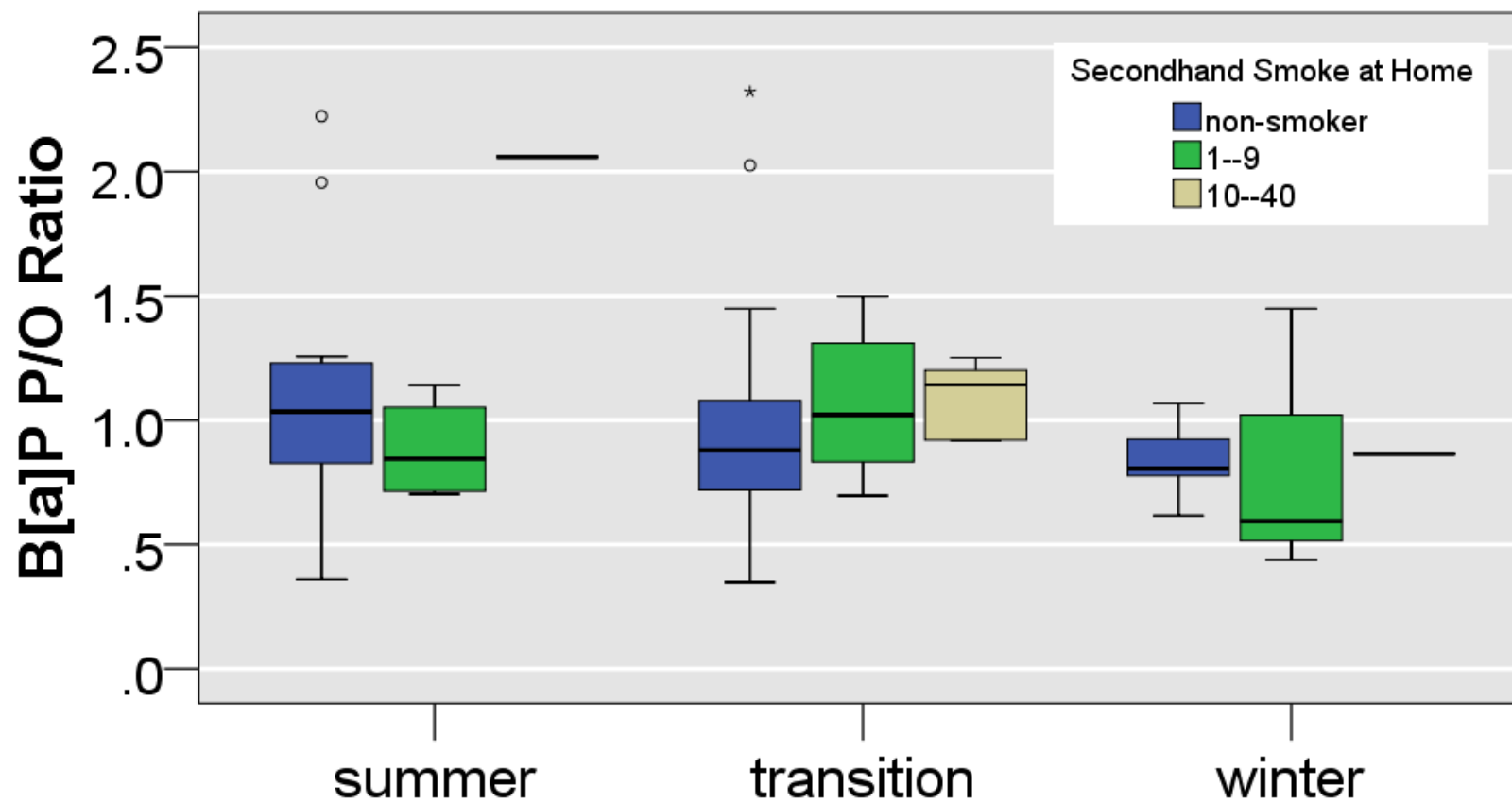
4



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1 Figure S2: Distribution of BaP Personal/Outdoor Ratio, according to season and SHS intensity.

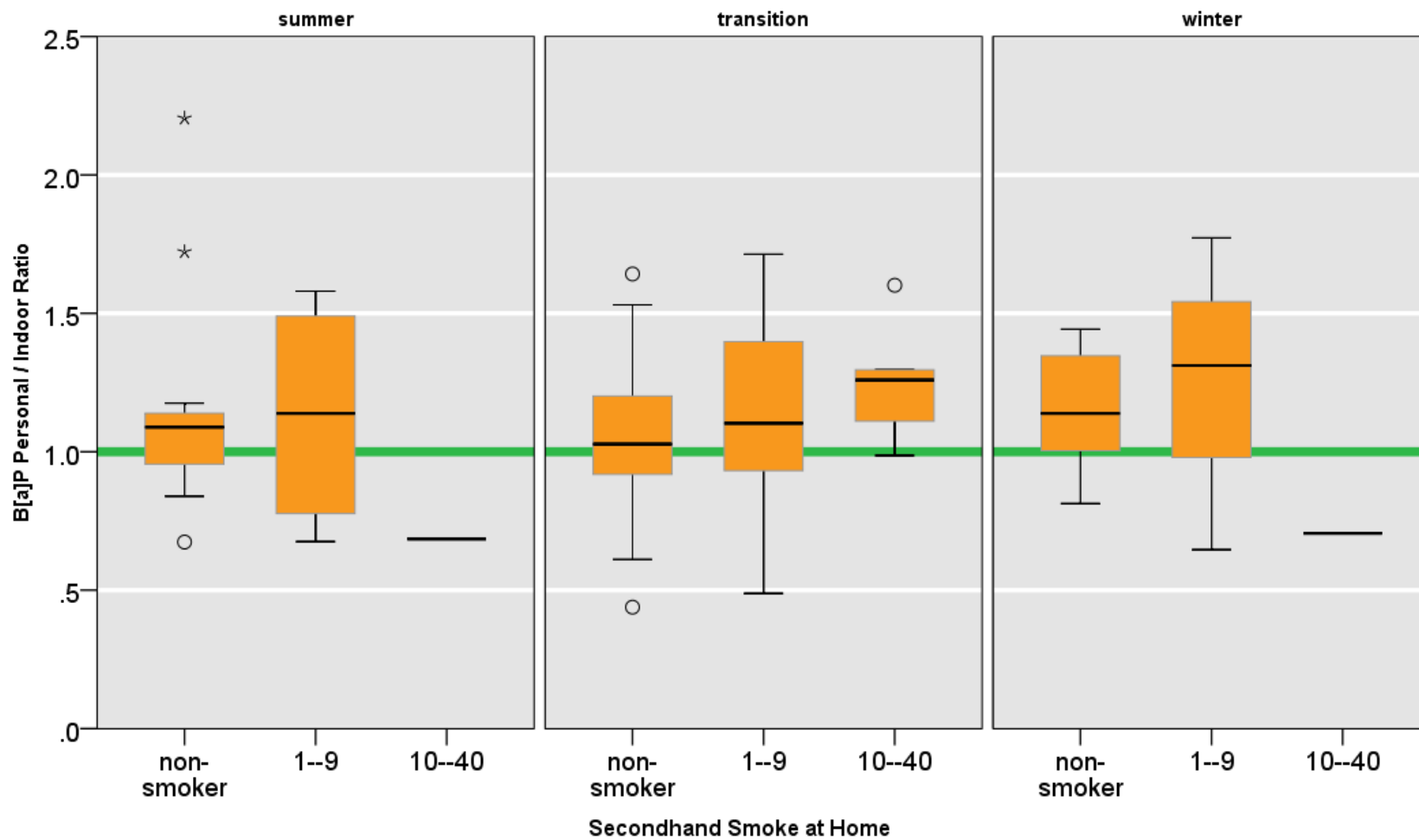
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1 **Figure S3: Distribution of BaP Personal/Indoor Ratio, according to season and SHS intensity.**

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1 **Table S1: Distribution of Chrysene_{IN}/Chrysene_{OUT} According to Possible Indoor Sources.**

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| | <i>N</i> | <i>Mean</i> | <i>SD</i> | <i>Min</i> | <i>Median</i> | <i>Max</i> | <i>N</i> | <i>Mean</i> | <i>SD</i> | <i>Min</i> | <i>Median</i> | <i>Max</i> | <i>N</i> | <i>Mean</i> | <i>SD</i> | <i>Min</i> | <i>Median</i> | <i>Max</i> | |
|-------------------------|-------------------|-------------|-----------|------------|---------------|------------|---------------------------|-------------|-----------|------------|---------------|------------|-----------------------------|-------------|-----------|------------|---------------|------------|------|
| Candle burning | <u>No</u> | | | | | | <u>Yes</u> | | | | | | | | | | | | |
| | summer | 10 | 0.74 | 0.12 | 0.59 | 0.73 | 0.93 | 8 | 0.89 | 0.56 | 0.40 | 0.73 | 2.24 | | | | | | |
| | transition | 17 | 0.57 | 0.21 | 0.30 | 0.51 | 1.19 | 24 | 0.51 | 0.15 | 0.28 | 0.46 | 0.81 | | | | | | |
| winter | 5 | 0.40 | 0.19 | 0.07 | 0.48 | 0.51 | 11 | 0.50 | 0.16 | 0.30 | 0.45 | 0.91 | | | | | | | |
| Incense burning | <u>No</u> | | | | | | <u>Yes</u> | | | | | | | | | | | | |
| | summer | 13 | 0.85 | 0.44 | 0.40 | 0.77 | 2.24 | 5 | 0.68 | 0.07 | 0.59 | 0.67 | 0.76 | | | | | | |
| | transition | 31 | 0.53 | 0.19 | 0.28 | 0.46 | 1.19 | 10 | 0.56 | 0.12 | 0.45 | 0.55 | 0.79 | | | | | | |
| winter | 14 | 0.48 | 0.17 | 0.07 | 0.48 | 0.91 | 2 | 0.38 | 0.11 | 0.30 | 0.38 | 0.45 | | | | | | | |
| Secondhand Smoke | <u>Non-smoker</u> | | | | | | <u>1—9 cigarettes/day</u> | | | | | | <u>10—40 cigarettes/day</u> | | | | | | |
| | summer | 13 | 0.72 | 0.14 | 0.40 | 0.73 | 0.93 | 4 | 0.72 | 0.11 | 0.59 | 0.72 | 0.85 | 1 | 2.24 | | 2.24 | 2.24 | 2.24 |
| | transition | 28 | 0.51 | 0.16 | 0.28 | 0.46 | 0.82 | 8 | 0.60 | 0.25 | 0.40 | 0.54 | 1.19 | 5 | 0.58 | 0.12 | 0.45 | 0.64 | 0.70 |
| winter | 12 | 0.45 | 0.13 | 0.07 | 0.47 | 0.58 | 3 | 0.39 | 0.09 | 0.30 | 0.39 | 0.48 | 1 | 0.91 | | 0.91 | 0.91 | 0.91 | |

3

1 **Table S2: personal/indoor ratios of nine PAHs**

| | B[a]A P/I | B[b]F P/I | B[k]F P/I | B[ghi]P P/I | B[a]P P/I | Chrysene P/I | D[ah]A P/I | IP P/I | pyrene P/I | | |
|------------------------------|------------------------------|-------------------|--------------|----------------|--------------|-----------------|---------------|-----------|---------------|------|----|
| Summer | <u>small home</u> | | | | | | | | | | |
| | N | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| | Mean | 1.10 | 1.03 | 1.00 | 1.13 | 1.15 | 1.11 | 0.98 | 1.08 | 2.58 | |
| | SD | 0.17 | 0.21 | 0.16 | 0.30 | 0.42 | 0.29 | 0.14 | 0.16 | 4.00 | |
| | 50 th | 1.06 | 0.97 | 1.04 | 1.05 | 1.06 | 0.99 | 0.99 | 1.05 | 0.99 | |
| | <u>larger home</u> | | | | | | | | | | |
| | N | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | Mean | 1.21 | 1.02 | 1.01 | 0.92 | 1.18 | 1.20 | 0.81 | 0.91 | 1.04 | |
| | SD | 1.21 | 1.02 | 1.01 | 0.92 | 1.18 | 1.20 | 0.81 | 0.91 | 1.04 | |
| | 50 th | 1.21 | 1.02 | 1.01 | 0.92 | 1.18 | 1.20 | 0.81 | 0.91 | 1.04 | |
| | Median P/I Difference | -14% | -5% | 2% | 12% | -11% | -21% | 18% | 14% | -4% | |
| | Transition | <u>small home</u> | | | | | | | | | |
| | | N | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Mean | | 1.06 | 1.09 | 1.01 | 1.11 | 1.05 | 1.08 | 1.00 | 1.07 | 1.12 | |
| SD | | 0.25 | 0.32 | 0.25 | 0.27 | 0.27 | 0.29 | 0.28 | 0.25 | 0.21 | |
| 50 th | | 1.06 | 1.05 | 0.99 | 1.10 | 1.03 | 1.10 | 1.00 | 1.06 | 1.14 | |
| <u>larger home</u> | | | | | | | | | | | |
| N | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| Mean | | 1.15 | 1.17 | 1.18 | 1.20 | 1.18 | 1.16 | 1.23 | 1.23 | 1.10 | |
| SD | | 0.16 | 0.19 | 0.22 | 0.20 | 0.19 | 0.17 | 0.24 | 0.23 | 0.18 | |
| 50 th | | 1.20 | 1.25 | 1.20 | 1.31 | 1.23 | 1.22 | 1.35 | 1.28 | 1.20 | |
| Median P/I Difference | | -13% | -19% | -22% | -19% | -20% | -10% | -35% | -21% | -5% | |
| Winter | | <u>small home</u> | | | | | | | | | |
| | | N | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| | Mean | 1.67 | 1.74 | 1.75 | 1.76 | 1.88 | 1.70 | 1.97 | 1.76 | 1.64 | |
| | SD | 1.83 | 1.91 | 1.82 | 2.03 | 2.52 | 1.81 | 2.68 | 2.08 | 1.71 | |
| | 50 th | 1.08 | 1.26 | 1.23 | 1.19 | 1.12 | 1.24 | 1.19 | 1.19 | 1.14 | |
| | <u>larger home</u> | | | | | | | | | | |
| | N | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | Mean | 1.41 | 1.15 | 1.18 | 1.08 | 1.16 | 1.34 | 1.15 | 1.09 | 1.27 | |
| | 50 th | 1.41 | 1.15 | 1.18 | 1.08 | 1.16 | 1.34 | 1.15 | 1.09 | 1.27 | |
| | Median P/I Difference | -31% | 8% | 4% | 9% | -3% | -8% | 3% | 9% | -12% | |

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1 **Table S3: Distribution of Chrysene_{IN}/Chrysene_{OUT} According to Common Cooking**
 2 **Behavior.**

| | | | N | Mean | SD | Min | Median | Max | P-value |
|---------------------------|---------|------------|----------|-------------|-----------|------------|---------------|------------|----------------|
| Use electric stove | yes | summer | 3 | 0.77 | 0.11 | 0.67 | 0.76 | 0.88 | 0.54 |
| | | transition | 6 | 0.50 | 0.12 | 0.38 | 0.49 | 0.64 | |
| | | winter | 4 | 0.44 | 0.11 | 0.30 | 0.45 | 0.57 | |
| | no | summer | 15 | 0.81 | 0.42 | 0.40 | 0.73 | 2.24 | |
| | | transition | 35 | 0.54 | 0.18 | 0.28 | 0.48 | 1.19 | |
| | | winter | 12 | 0.48 | 0.19 | 0.07 | 0.48 | 0.91 | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| Use electric oven | yes | summer | 9 | 0.89 | 0.53 | 0.40 | 0.73 | 2.24 | 0.55 |
| | | transition | 17 | 0.52 | 0.14 | 0.30 | 0.46 | 0.82 | |
| | | winter | 7 | 0.46 | 0.09 | 0.30 | 0.45 | 0.58 | |
| | no | summer | 9 | 0.72 | 0.11 | 0.59 | 0.73 | 0.89 | |
| | | transition | 24 | 0.55 | 0.19 | 0.28 | 0.51 | 1.19 | |
| | | winter | 9 | 0.48 | 0.22 | 0.07 | 0.48 | 0.91 | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| Use gas stove | yes | summer | 15 | 0.81 | 0.42 | 0.40 | 0.73 | 2.24 | 0.54 |
| | | transition | 35 | 0.54 | 0.18 | 0.28 | 0.48 | 1.19 | |
| | | winter | 12 | 0.48 | 0.19 | 0.07 | 0.48 | 0.91 | |
| | no | summer | 3 | 0.77 | 0.11 | 0.67 | 0.76 | 0.88 | |
| | | transition | 6 | 0.50 | 0.12 | 0.38 | 0.49 | 0.64 | |
| | | winter | 4 | 0.44 | 0.11 | 0.30 | 0.45 | 0.57 | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| Use gas oven | yes | summer | 6 | 0.74 | 0.11 | 0.60 | 0.75 | 0.89 | 0.72 |
| | | transition | 13 | 0.52 | 0.24 | 0.28 | 0.46 | 1.19 | |
| | | winter | 4 | 0.47 | 0.04 | 0.41 | 0.48 | 0.51 | |
| | no | summer | 12 | 0.84 | 0.46 | 0.40 | 0.72 | 2.24 | |
| | | transition | 28 | 0.54 | 0.14 | 0.30 | 0.50 | 0.82 | |
| | | winter | 12 | 0.47 | 0.20 | 0.07 | 0.45 | 0.91 | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |

| | | | | | | | | | |
|-------------------------------|----------------------|------------|------|------|------|------|------|------|------|
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| Use wood stove | no | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| Use wood oven | no | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| Use coal burning stove | no | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| Use coal burning oven | no | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | |
| use charcoal grill | yes | summer | 5 | 0.66 | 0.17 | 0.40 | 0.67 | 0.85 | 0.73 |
| | | transition | 5 | 0.49 | 0.07 | 0.42 | 0.46 | 0.60 | |
| | | winter | 3 | 0.52 | 0.06 | 0.48 | 0.49 | 0.58 | |
| | no | summer | 13 | 0.86 | 0.43 | 0.59 | 0.73 | 2.24 | |
| transition | | 36 | 0.54 | 0.18 | 0.28 | 0.51 | 1.19 | | |
| winter | | 13 | 0.46 | 0.18 | 0.07 | 0.45 | 0.91 | | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| transition | | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | | |
| winter | | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | | |
| exhaust fan use | Always | summer | 7 | 0.72 | 0.18 | 0.40 | 0.73 | 0.93 | 0.50 |
| | | transition | 11 | 0.60 | 0.23 | 0.40 | 0.54 | 1.19 | |
| | | winter | 3 | 0.43 | 0.03 | 0.39 | 0.45 | 0.45 | |
| | \geq half the time | summer | 2 | 0.68 | 0.07 | 0.64 | 0.68 | 0.73 | |
| transition | | 1 | 0.82 | | 0.82 | 0.82 | 0.82 | | |
| | Sometimes | summer | 1 | 2.24 | | 2.24 | 2.24 | 2.24 | |
| transition | | 4 | 0.49 | 0.13 | 0.38 | 0.47 | 0.65 | | |
| winter | | 3 | 0.41 | 0.10 | 0.30 | 0.45 | 0.48 | | |
| | Rarely or never | summer | 1 | 0.76 | | 0.76 | 0.76 | 0.76 | |
| transition | | 8 | 0.46 | 0.13 | 0.28 | 0.45 | 0.64 | | |
| | N/A | summer | 7 | 0.73 | 0.12 | 0.59 | 0.70 | 0.89 | |
| transition | | 17 | 0.52 | 0.14 | 0.30 | 0.47 | 0.81 | | |
| winter | | 10 | 0.50 | 0.21 | 0.07 | 0.50 | 0.91 | | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | 0.73 | 2.24 | |
| transition | | 41 | 0.54 | 0.17 | 0.28 | 0.48 | 1.19 | | |
| winter | | 16 | 0.47 | 0.17 | 0.07 | 0.47 | 0.91 | | |

| | | | | | | | | | | |
|-----------------------------------------------------|--------------------|------------|------------|------|------|------|-------------|-------------|------|------|
| Is the cooking oven separate from the stove? | yes | summer | 1 | 0.85 | | 0.85 | <i>0.85</i> | 0.85 | 0.98 | |
| | | transition | 1 | 0.71 | | 0.71 | <i>0.71</i> | 0.71 | | |
| | | winter | 2 | 0.39 | 0.13 | 0.30 | <i>0.39</i> | 0.48 | | |
| | no | summer | 17 | 0.80 | 0.39 | 0.40 | <i>0.73</i> | 2.24 | | |
| | | transition | 40 | 0.53 | 0.17 | 0.28 | <i>0.47</i> | 1.19 | | |
| | | winter | 14 | 0.48 | 0.17 | 0.07 | <i>0.47</i> | 0.91 | | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | <i>0.73</i> | 2.24 | | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | <i>0.48</i> | 1.19 | | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | <i>0.47</i> | 0.91 | | |
| Would you say you use the exhaust fan ... | Sometimes | winter | 1 | 0.48 | | 0.48 | <i>0.48</i> | 0.48 | 0.69 | |
| | NA | summer | 18 | 0.81 | 0.38 | 0.40 | <i>0.73</i> | 2.24 | | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | <i>0.48</i> | 1.19 | | |
| | | winter | 15 | 0.47 | 0.17 | 0.07 | <i>0.45</i> | 0.91 | | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | <i>0.73</i> | 2.24 | | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | <i>0.48</i> | 1.19 | | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | <i>0.47</i> | 0.91 | | |
| | Burn Candle | yes | summer | 8 | 0.89 | 0.56 | 0.40 | <i>0.73</i> | 2.24 | 0.83 |
| | | | transition | 24 | 0.51 | 0.15 | 0.28 | <i>0.46</i> | 0.81 | |
| winter | | | 11 | 0.50 | 0.16 | 0.30 | <i>0.45</i> | 0.91 | | |
| no | | summer | 10 | 0.74 | 0.12 | 0.59 | <i>0.73</i> | 0.93 | | |
| | | transition | 17 | 0.57 | 0.21 | 0.30 | <i>0.51</i> | 1.19 | | |
| | | winter | 5 | 0.40 | 0.19 | 0.07 | <i>0.48</i> | 0.51 | | |
| Overall | | summer | 18 | 0.81 | 0.38 | 0.40 | <i>0.73</i> | 2.24 | | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | <i>0.48</i> | 1.19 | | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | <i>0.47</i> | 0.91 | | |
| Burn incense | yes | summer | 5 | 0.68 | 0.07 | 0.59 | <i>0.67</i> | 0.76 | 0.85 | |
| | | transition | 10 | 0.56 | 0.12 | 0.45 | <i>0.55</i> | 0.79 | | |
| | | winter | 2 | 0.38 | 0.11 | 0.30 | <i>0.38</i> | 0.45 | | |
| | no | summer | 13 | 0.85 | 0.44 | 0.40 | <i>0.77</i> | 2.24 | | |
| | | transition | 31 | 0.53 | 0.19 | 0.28 | <i>0.46</i> | 1.19 | | |
| | | winter | 14 | 0.48 | 0.17 | 0.07 | <i>0.48</i> | 0.91 | | |
| | Overall | summer | 18 | 0.81 | 0.38 | 0.40 | <i>0.73</i> | 2.24 | | |
| | | transition | 41 | 0.54 | 0.17 | 0.28 | <i>0.48</i> | 1.19 | | |
| | | winter | 16 | 0.47 | 0.17 | 0.07 | <i>0.47</i> | 0.91 | | |