## **Supplement 2**

► Base model: RII + survey year

► Model 1: Base + material factors

► Model 2: Base + behavioral factors

► Model 3: Base + psychological factors

► Model 4: Base + social-relational factors

► Model 5: Base + behavioral, psychological, social-relational factors

► Model 6: Base + material, psychological, and social-relational factors

► Model 7: Base + material, behavioral, and social-relational factors

► Model 8: Base + material, behavioral, psychological factors

► Model 9: Base + material, behavioral, psychological, and social-relational factors

The percent reduction in the RII was used to calculate the **mediation proportion** (attenuation) for each adjustment using the following **Equation**:

(RII base$ – $RII model with the intermediary factor) / (RII base)$ × $100 %

* The direct contribution was assessed by subtracting the percentage reduction in the RII of a model including all factors except for the given factor, from a model including all factors; this indicates the percentage of contribution that is attributable to the given factor alone.
* The indirect contribution was subsequently calculated by subtracting the direct contribution (of the given factor) from the total contribution of the given factor.

**Examples**

**1.** The percent reduction in the RII when material factors are adjusted for (i.e. total contribution of material factors in explaining health disparities) is calculated as:

(RII base$ – $RII model 1) / (RII base)$ × $100 % ‧ ‧ ‧ ‧ (am)

The direct contribution of material factors is calculated as:

[(RII base$ – $RII model 9) / (RII base) $× $100 %]$ – $**[**(RII base$ – $RII model 5) / (RII base) $× $100 %]‧ ‧ ‧ ‧ (bm)

Consequently, the indirect contribution of material factors is calculated as:

(am) – (bm)

**2.** The percent reduction in the RII when behavioral factors are adjusted for (i.e. total contribution of behavioral factors in explaining health disparities) is calculated as:

(RII base$ – $RII model 2) / (RII base)$ × $100 % ‧ ‧ ‧ ‧ (ab)

The direct contribution of behavioral factors is calculated as:

[(RII base$ – $RII model 9) / (RII base) $× $100 %]$ – $**[**(RII base$ – $RII model 6) / (RII base) $× $100 %]‧ ‧ ‧ ‧ (bb)

Consequently, the indirect contribution of behavioral factors is calculated as:

(ab) – (bb)

**3.** The percent reduction in the RII when psychological factors are adjusted for (i.e. total contribution of psychological factors in explaining health disparities) is calculated as:

(RII base$ – $RII model 3) / (RII base)$ × $100 % ‧ ‧ ‧ ‧ (ap)

The direct contribution of psychological factors is calculated as:

[(RII base$ – $RII model 9) / (RII base) $× $100 %]$ – $**[**(RII base$ – $RII model 7) / (RII base) $× $100 %]‧ ‧ ‧ ‧ (bp)

Consequently, the indirect contribution of psychological factors is calculated as:

(ap) – (bp)

**4.** The percent reduction in the RII when social-relational factors are adjusted for (i.e. total contribution of social-relational factors in explaining health disparities) is calculated as:

(RII base$ – $RII model 4) / (RII base)$ × $100 % ‧ ‧ ‧ ‧ (as)

The direct contribution of social-relational factors is calculated as:

[(RII base$ – $RII model 9) / (RII base) $× $100 %]$ – $**[**(RII base$ – $RII model 8) / (RII base) $× $100 %]‧ ‧ ‧ ‧ (bs)

Consequently, the indirect contribution of social-relational factors is calculated as:

(as) – (bs)