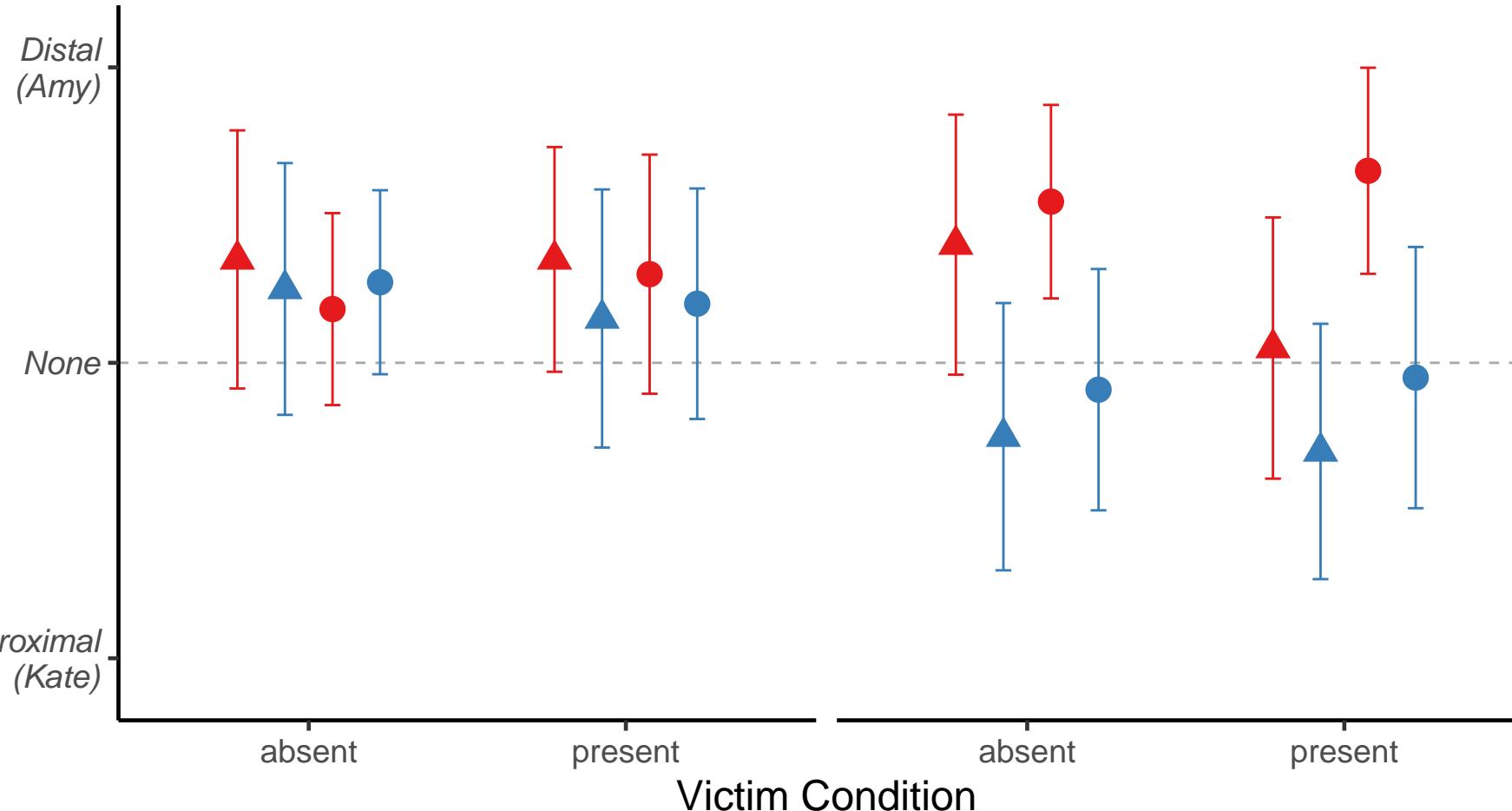Hand coded