**Appendix C: Expert elicitation**

*For the specifications of the Bayesian model, we would like to receive your input one more time. Could you help us by answering the following questions about the expected increase/decrease over time. A simple yes/no is sufficient, but if you want to elaborate your question this would be very useful.*

* *Do you expect the trajectory of the****resilient****trajectory to have a non-significant slope (implying there is no significant increase or decrease over time in PTSD-severity)?*
* *Do you expect the trajectory of the****chronic****trajectory to have a non-significant slope?*
* *Do you expect the individuals in the****recovering****group to be decreasing (on average) in PTSD-severity around 6 months after trauma? In this scenario, the decrease could have started before, but not after 6 months. For technical reasons, we need to define one specific moment in time where we expect the decrease to show up in the data. We hypothesized that chances to observe this start in decrease is roughly 6 months after trauma. Do you agree?*
* *Do you expect the individuals in the****elevating, or delayed worsening,****group to be increasing (on average) in PTSD-severity around 6 months after trauma? Of course, an increase in PTSD-severity caused by secondary trauma can occur at any moment, but here we refer to an increase in PTSD-severity if it would have been ‘caused’ by the initial trauma. In this scenario, the increase could have started before, but not after 6 months (thereby excluding secondary trauma). Again, for technical reasons, we need to specify one specific moment in time where we expect the increase to show up in the data. We hypothesized that chances to observe this start in increase is roughly 6 months after trauma. Do you agree?*

**Findings**

Here, we will summarize the reactions we received to these four statements. In total, we received responses from 20 of the original experts. Furthermore, one expert actually shared our message with two more experts in het network, who also responded to our e-mail. Therefore, we have reactions from 22 experts.

1. *Do you expect the trajectory of the* ***resilient trajectory*** *to have a non-significant slope (implying there is no significant increase or decrease over time in PTSD-severity)?*

In short, 19 of 22 experts agreed with this statement (86.4%). The three experts who explicitly disagreed with this statement gave the following reasons: (1) a resilient trajectory may also start with medium levels of PTSD symptoms, and then decrease over time to very low levels, (2) in our conception of resilience, some increase in symptoms right after the traumatic event would be expected that then quickly decline, and (3) resilient is not the right term to describe the people who have no initial reaction to trauma.

Moreover, some of the experts who agreed with our statement added the caveat that it depends on whether you would filter out people who are “resistant“ to trauma, who don’t display any PTSD symptoms even directly after trauma. Other experts mention that it probably also depends on the sample size of the dataset, in the sense that the resilient group is often the largest group, making even slight deviations from 0 significant. Furthermore, one expert also mentions that it depends on the time of first measurement. If the first measurement point is within days after trauma, this expert would expect a significant decrease over time.

1. *Do you expect the trajectory of the* ***chronic trajectory*** *to have a non-significant slope?*

Sixteen of 22 experts agreed with this statement (72.7%). The five experts who explicitly disagreed with this statement gave the following reasons: (1) It is possible that the chronic trajectory further increases or decreases, but stays above some clinical cut off at all times, (2) the chronic trajectory would show a rapid increase in symptoms within one year after trauma (in a deployment context) and would level off 1 year post-deployment, (3) the slope will be significant within the initial 0-6 months (no indication of positive or negative slope), (4) those that develop symptoms above the cutoff will show a greater between person variability, with some scoring very high, which might pull the slope to a significant level, (5) no further reasoning given.

Moreover, some of the experts who agreed with our statement added the caveat that they have seen some increases or decreases post trauma, which could depend on the time lags between measurement waves. Furthermore, an expert mentioned that we should take into account ongoing trauma and the type of therapy offered after trauma. Another expert says that our statement might only be true after three months have passed since trauma.

1. *Do you expect the individuals in the* ***recovering group*** *to be decreasing (on average) in PTSD-severity around 6 months after trauma? In this scenario, the decrease could have started before, but not after 6 months. For technical reasons, we need to define one specific moment in time where we expect the decrease to show up in the data. We hypothesized that chances to observe this start in decrease is roughly 6 months after trauma. Do you agree?*

This statement elicited more disagreement between experts. Only 15 experts agreed with the statement (68.2%). The experts that didn’t agree with the statement gave the following reasons: (1) three months would be a more logical time point to chose for differentiating recovering from chronic PTSD individuals. In the DSM someone needs to have stable, high, symptoms for three months before he/she gets the label chronic (more than one expert named this as an alternative). (2) In the deployment context, about a year post trauma would be more realistic, (3) this is a completely arbitrarily chosen time point, which is understandable for technical reasons, but should be made clear that it is not based on science (more than one expert wrote this), (4) recovery may occur at any time, and only for a specific study can it be decided whether six months is a realistic estimate of the relative time point for recovery. Moreover, even those who agreed with our statement were careful in their wording choosing phrases such as “this is a tough call“, “it is reasonable”, “might be accurate”.

1. *Do you expect the individuals in the elevating, or delayed worsening, group to be increasing (on average) in PTSD-severity around 6 months after trauma? Of course, an increase in PTSD-severity caused by secondary trauma can occur at any moment, but here we refer to an increase in PTSD-severity if it would have been ‘caused’ by the initial trauma. In this scenario, the increase could have started before, but not after 6 months (thereby excluding secondary trauma). Again, for technical reasons, we need to specify one specific moment in time where we expect the increase to show up in the data. We hypothesized that chances to observe this start in increase is roughly 6 months after trauma. Do you agree?*

This final statement also elicited more disagreement between experts. Again, only 13 experts agreed with the statement (59.1%). The expert that didn’t agree with the statement gave the following reasons: (1) there is no scientific basis on which to base this statement, perhaps look into delayed onset PTSD review papers (more than one expert wrote this), (2) delayed PTSD has been reported much later than 6 months, (3) the delayed expression (DSM-5 term) version of PTSD has been shown to occur up to decades after a traumatic event, it is not justified to classify any delayed worsening beyond six months as due to secondary trauma, (4) the worsening would be expected to start immediately, not from a certain point onwards. Theoretically, symptoms should increase from the time individuals are confronted with normal routine (after 2-6 weeks for injury survivors). After six months one could argue that having to deal with any physical ‘end states‘ that are not optimal could result in a renewed worsening of PTSD symptoms. (5) The symptom increase will start earlier, much closer to the traumatic event (6).