



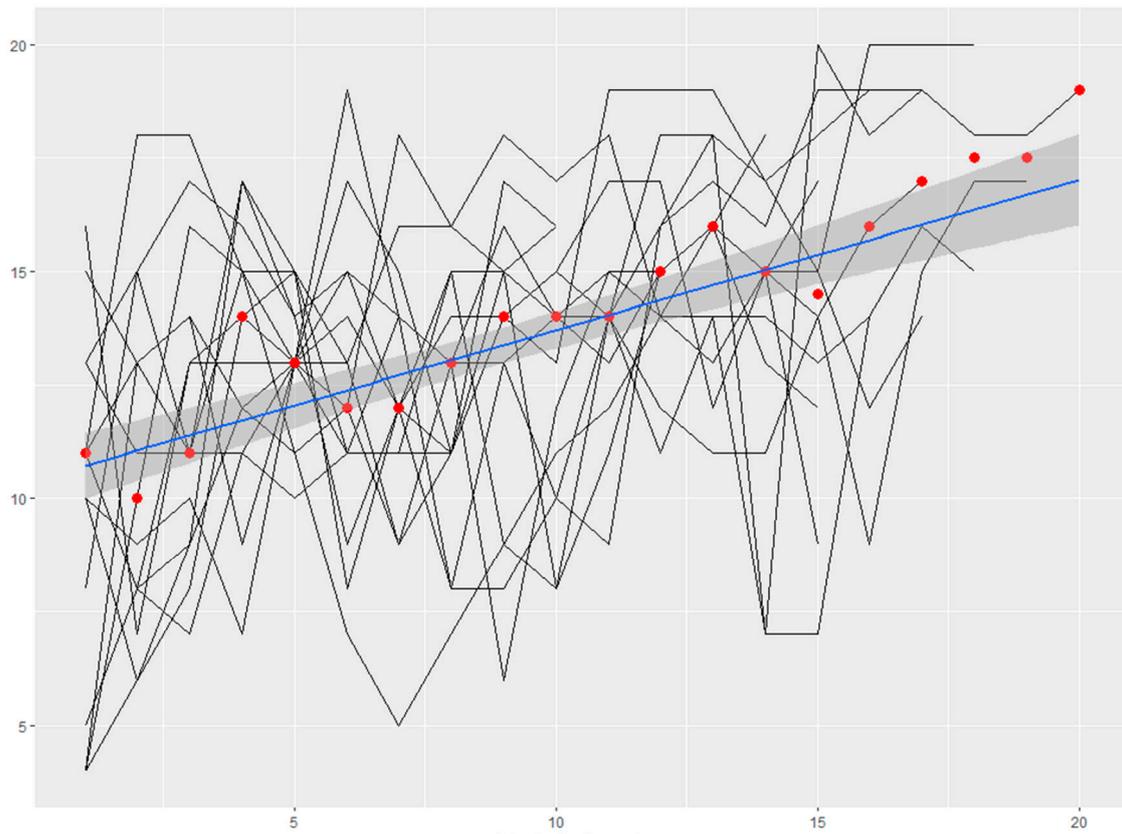
Supplementary Table S1.. Equine-assisted activities and therapies (EAAT).

| | |
|-------------------|--|
| | Interaction with the horse; spontaneous reciprocity; verbalization of parts of the horse; grooming activity with linear and circular movements, with one or two hands, then in opposite linear and circular directions |
| | Driving the horse on the ground with a lead shank along geometric paths, the same activity then proposed again riding the horse |
| | Get on the horse; field activities; riding figures |
| | Long reins with buttonhole in the halter - reins with carabiner hooked to the opening rein |
| | Lateral (raising right hand and right knee synchronously and vice versa) and cross-lateral exercises (raising right hand and left knee synchronously and vice versa) |
| | Lead the horse independently to the two operators placed on opposite sides of the field |
| | With four circles positioned at the corners of the field, the child directs the horse from one circle to another |
| | Synchronicity exercises (clapping following the rhythm of the horse's movement – with a bottom-up movement, based on the horse's gait – undulatory, jolting, rocking) |
| | Routes in autonomy (leading the horse independently, doing the slalom with the horse and interacting with it) |
| Balance exercises | Open arms ("do the airplane") |
| | Standing (in the stirrups) |
| | Reverse saddling up |
| | Hold a stick (horizontal / vertical) and then change hands |
| | Riding the horse without stirrups |
| | Spatial Games (going inside / outside of a drawn geometric figure) |
| | Riding bareback; hugged to the horse; lying on the horse |
| | Games with letters, images, and numbers; recognize / verbalize and connect |
| | Attribution of emotional states (looking at people and pictures of horses with similar emotional expressions) |
| | Grabbing or playing with objects while riding the horse |
| | Basketball - tennis on the horse: the child holds the horse with one hand and throws the ball with the other |
| | Throwing the ball with one hand and then switch hands |
| | Horses in pairs and two children hand in hand |
| | Individual reinforcement activities: balance-tonicity-synchrony-conduction |

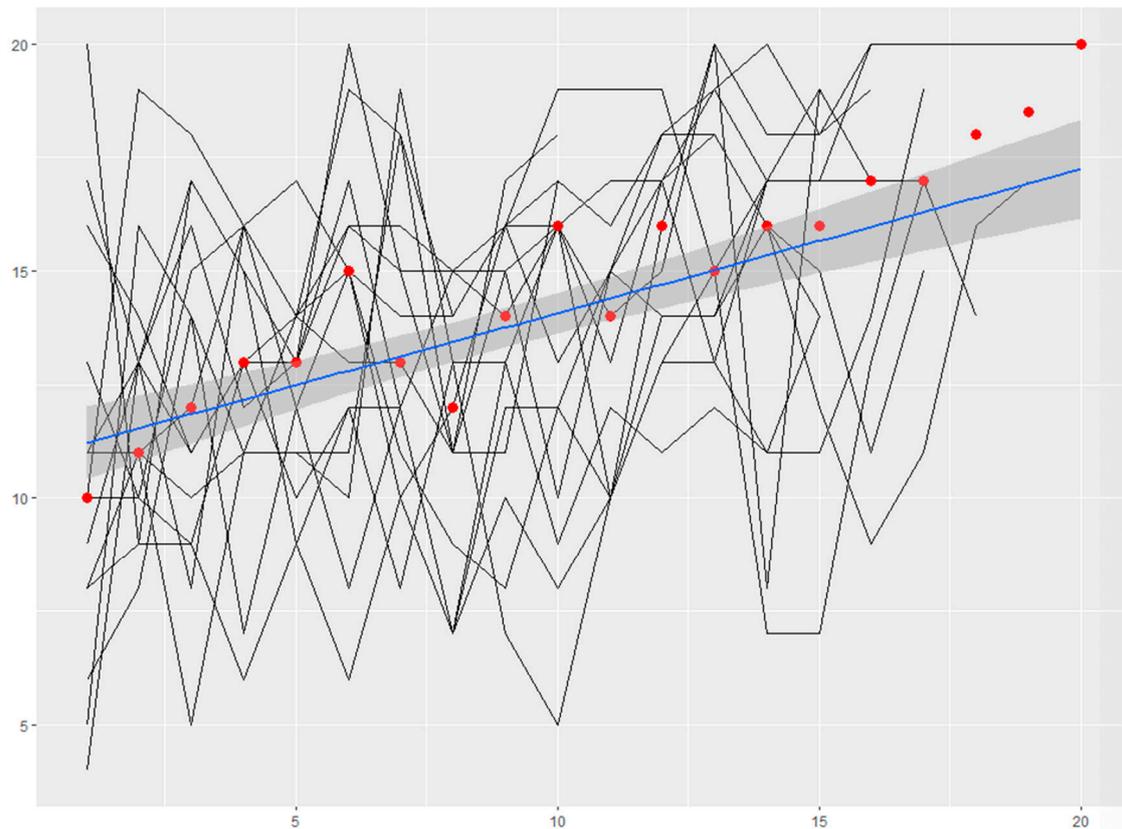
Supplementary Table S2. The Interaction Emotions Motor Skills (IEMS).

| | | 1 | 2 | 3 | 4 | 5 |
|----|---|---|---|---|---|---|
| 1 | In the interaction with the adults, the boy / girl feels at ease | | | | | |
| 2 | In the interaction with the horse, the boy / girl shows signs of relax | | | | | |
| 3 | The boy's / girl interacts appropriately with respect to the situation | | | | | |
| 4 | The boy / girl experiences himself/ herself by taking initiative | | | | | |
| 5 | The boy / girl shows his/ her emotions through body language | | | | | |
| 6 | The boy / girl provides emotional feedback to the requests | | | | | |
| 7 | The boy / girl tolerates frustrations | | | | | |
| 8 | The boy / girl recognizes the playful dimension of the equestrian experience | | | | | |
| 9 | The boy / girl knows how to identify possible risks and dangers | | | | | |
| 10 | The boy / girl does not show consoling behaviors or stereotypies | | | | | |
| 11 | The boy / girl shows flexible and proportionate tone of voice | | | | | |
| 12 | The boy / girl has a space-time perception appropriate to the situation in terms of reckless behaviors, risk assessment, and experience of the flow of time | | | | | |
| 13 | The boy / girl has body movement patterns appropriate to the context | | | | | |
| 14 | The boy / girl controls naturally ipsilateral and contralateral skills | | | | | |
| 15 | The boy / girl can stay in dynamic balance on the horse in motion | | | | | |
| 16 | The boy / girl has a symmetrical and safe postural control | | | | | |
| 17 | The boy / girl uses correctly eye-manual coordination | | | | | |
| 18 | The boy / girl uses the reins according to the requests | | | | | |
| 19 | The boy / girl is able to grasp objects adequately according to the work environment | | | | | |
| 20 | The boy / girl is able to organize precision movements | | | | | |

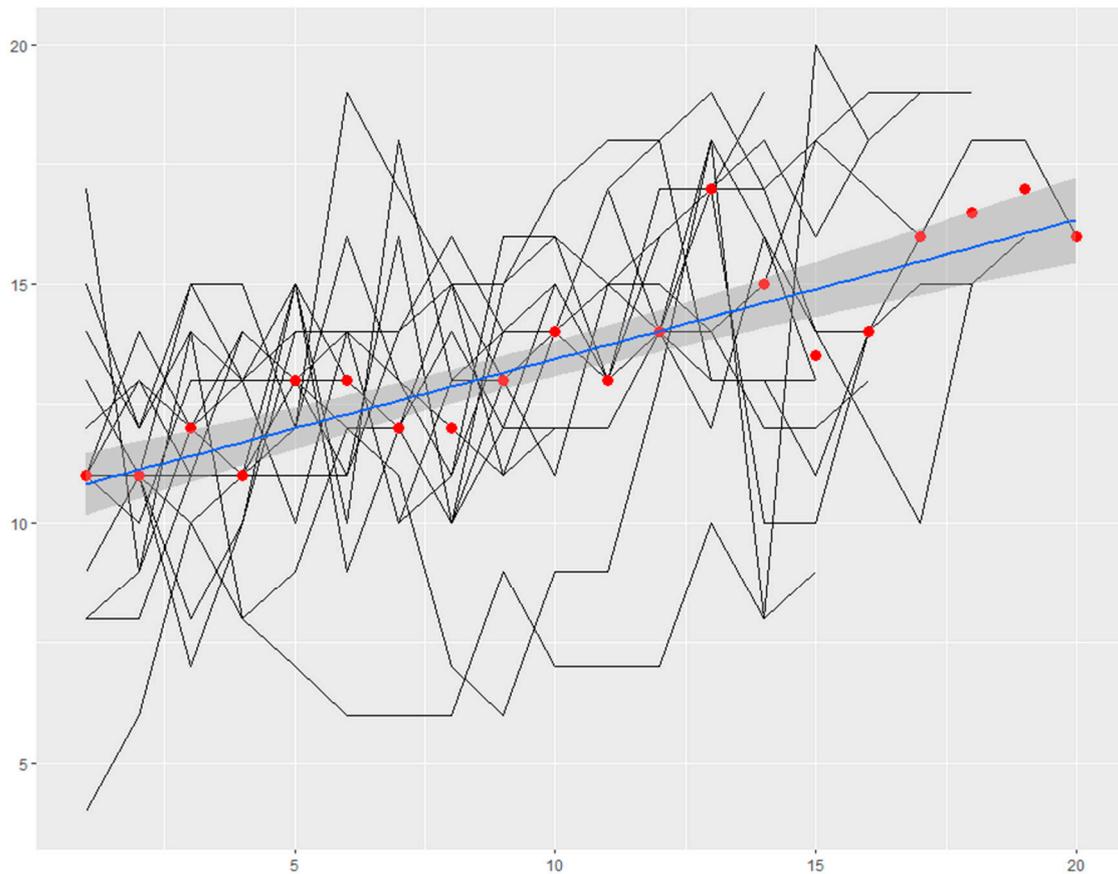
1 = never; 2 = rarely; 3 = occasionally; 4 = often; 5 = always; Social interaction: items 1-4; Emotions-relation: items 5-8; Behavior: items 9-12; Gross motor skills: items 13-16; Fine motor skills: items 17-20; sub-domain score range: 4-20; total score range: 20-100



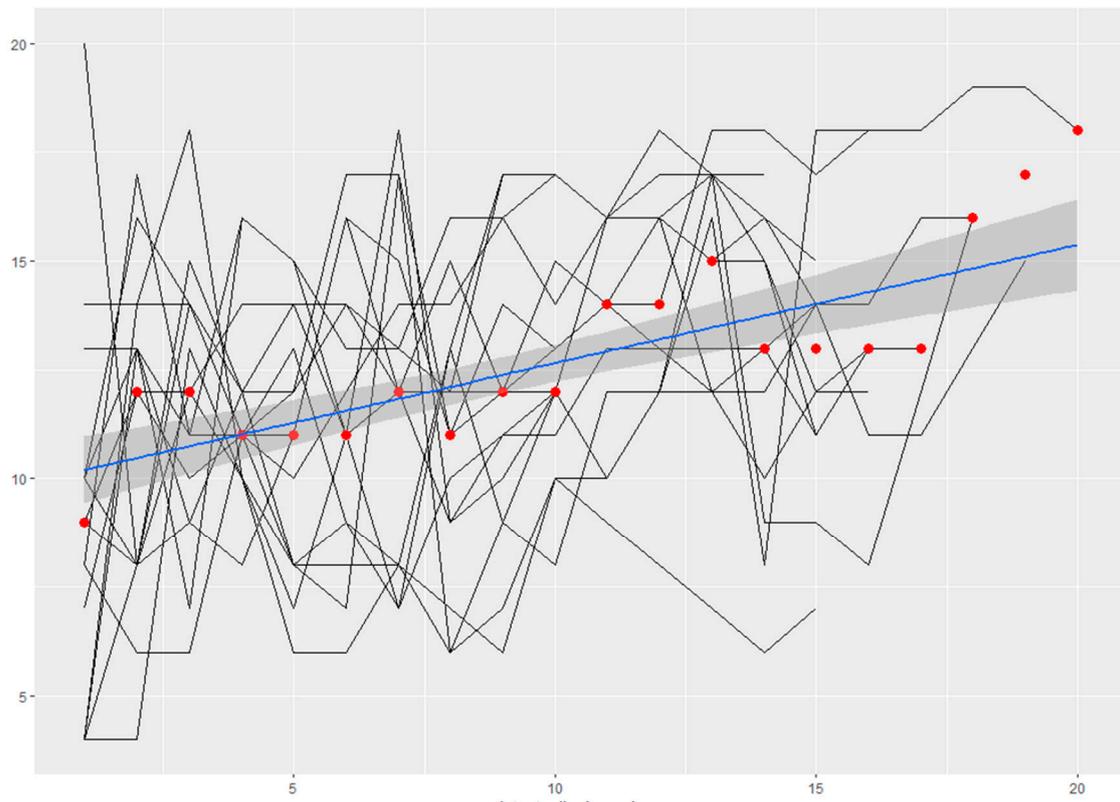
Supplementary Figure S1. The figure shows the Interaction Emotions Motor Skills (IEMS) “Social interaction” sub-domain (Y-axis) across the 20 individual sessions of equine-assisted activities and therapies (EAAT; X-axis); red circle markers show medians for every measurement; the blue line shows the regression.



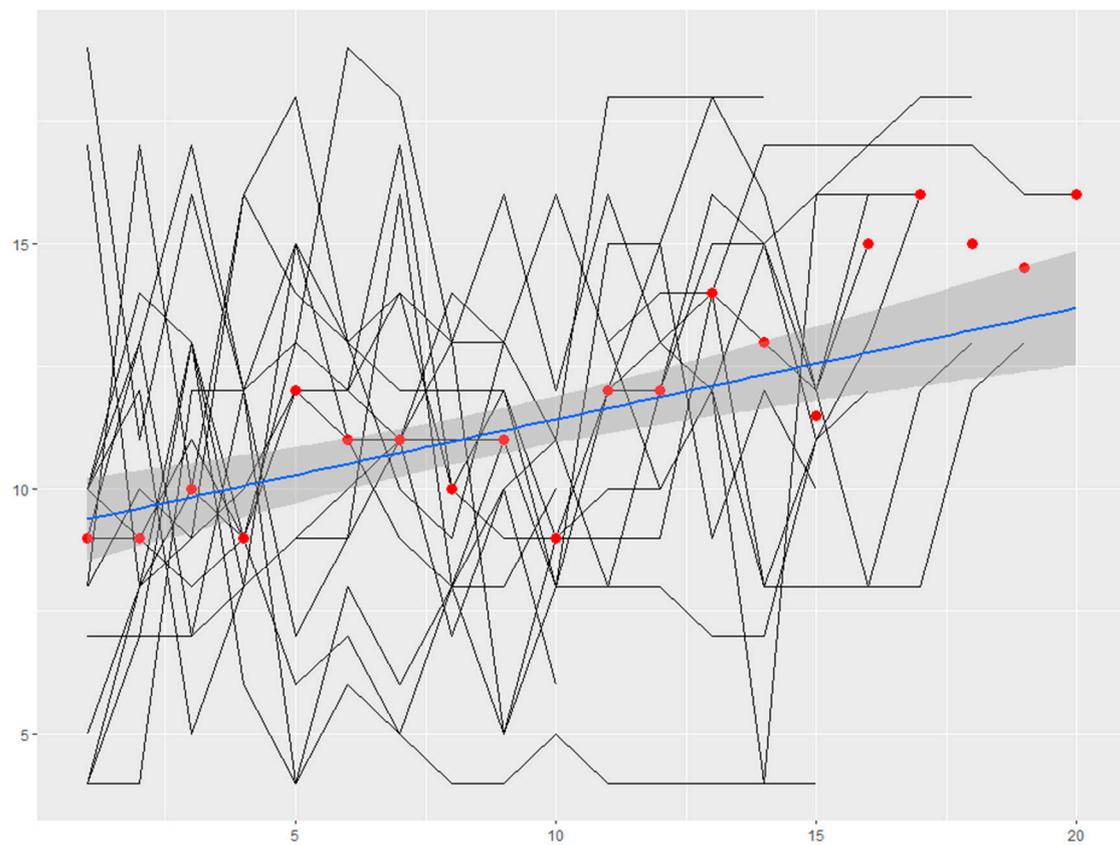
Supplementary Figure S2. The figure shows the Interaction Emotions Motor Skills (IEMS) “Emotions-relation” sub-domain (Y-axis) across the 20 individual sessions of equine-assisted activities and therapies (EAAT; X-axis); red circle markers show medians for every measurement; the blue line shows the regression.



Supplementary Figure S3. The figure shows the Interaction Emotions Motor Skills (IEMS) “Behavior” sub-domain (Y-axis) across the 20 individual sessions of equine-assisted activities and therapies (EAAT; X-axis); red circle markers show medians for every measurement; the blue line shows the regression.



Supplementary Figure S4. The figure shows the Interaction Emotions Motor Skills (IEMS) “Gross motor skills” sub-domain (Y-axis) across the 20 individual sessions of equine-assisted activities and therapies (EAAT; X-axis); red circle markers show medians for every measurement; the blue line shows the regression.



Supplementary Figure S5. The figure shows the Interaction Emotions Motor Skills (IEMS) “Fine motor skills” sub-domain (Y-axis) across the 20 individual sessions of equine-assisted activities and therapies (EAAT; X-axis); red circle markers show medians for every measurement; the blue line shows the regression.