risk (HR/LR) individuals (15–58 years, 30 male) during a monetary incentive delay task with win, loss or neutral outcomes. Linked-mastoids ERPs and their reference-free current source density (CSD) transforms were quantified by temporal principal components analysis, revealing two distinct stages of reward feedback processing: feedback negativity (FN) peaking at ~310 ms (mid-anterior) and P3 (fb-P3, ~380 ms, mid-posterior). Whereas ERP components were highly consistent with prior findings, their CSD counterparts had more focal topographies. All subgroups showed: 1) greater FN to loss than win and neutral trials, suggesting FN sensitivity to negative valence; 2) greater fb-P3 to win and loss than neutral trials, suggesting fb-P3 indexes motivational salience and allocation of attention. Group × condition interactions were more subtle and dependent on transformation (ERP vs CSD). For example, for fb-P3, ERPs were greater for HR than LR for win and loss but not neutral (no MDD effects), whereas CSDs were greater for MDD− than MDD+ for win and neutral but not loss (no risk effects). These findings collectively suggest largely comparable feedback processing in individuals at low and high risk for MDD and with or without a history of MDD, however, methodological aspects are of critical importance for uncovering subtle group differences of reward processing.

VIRTUAL-034 | QUANTITY ESTIMATION IN THE BRAIN: POSSIBLE MECHANISMS

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Descriptors: number sense, connectivity, EEG
It is assumed that the number sense can be achieved through the operation of two systems of quantity estimation. The direct ("quantitative") system is thought to be crucial in the intermixed format of stimuli presentation, the visual system is more important in the separate format. The goal of this study was to identify the activation of two systems related to the dorsal and ventral brain streams. 33 adolescents performed a non-symbolic comparison test «Blue-yellow dots». Participants asked to evaluate which of the sets was larger. Simultaneously electroencephalogram (EEG) data from 64 active electrodes (International 10–10 system, Brain Products ActiChamp amplifier) was recorded. Effective connectivity between brain areas was estimated with Transfer Entropy measure. Wilcoxon paired samples t-test was used to evaluate differences between means, standard deviations (SD) and maximums of connectivity distributions in the compared conditions. The differences between standard deviations and maximums were accepted as indicators of the connectivity heavy-tailed distributions. The differences between the direct and the visual systems were found in the ventral stream structures for means ($p = .005$), SD ($p = .024$): the direct system showed the increased values. The differences between the ventral and the dorsal structures were revealed in the direct system for means ($p < .001$) and in the visual system for means ($p < .001$), maximums ($p = .001$): the dorsal structures demonstrated the increased values. Results show the involvement of both visual streams in the quantity estimation.

VIRTUAL-035 | NEUROPHYSIOLOGICAL CORRELATES OF REGULATORY CONTROL DEFICITS AMONG OFFSPRING AT RISK FOR DEPRESSION

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Descriptors: Cognitive Control, Mother–Child Transmission, Depression
Major Depressive Disorder (MDD) is characterized by a wide range of regulatory control deficits, and although maternal MDD is a robust predictor of depression onset in offspring, it is unclear whether control deficits are passed on intergenerationally. To address this gap, we tested the intergenerational transmission of regulatory control in children ($N = 59$; ages 4–10 years) with and without a maternal history of MDD. Children were administered a Go/NoGo Task while EEG data were collected while mothers (ages 24–46) completed the Flanker Task. *First*, across all children, frontal midline theta during the Go/NoGo Task increased with age ($p = .049$). *Second*, controlling for age, worse Go/NoGo Task accuracy associated with reduced error-related negativity (ERN; $p < .01$), error positivity