## GENOMICS OF HUMAN AGGRESSION: Current state of genome-wide studies and an automated systematic review tool Odintsova V.V., Roetman P.J., Ip H.F., Pool R., Van der Laan C.M., Tona K.D., Vermeiren R.R.J.M., Boomsma D.I.

## **Supplement S1. Definitions of Aggression in Reviews**

Concept	Definitions	References
Reactive/hostile/affective/impulsi ve aggression	Angry or frustrated responses to a real or perceived threat (Tuvbald,Baker, 2011)	Tuvblad&Baker, 2011 Craig et al, 2009;
	Aggressive response to a perceived threat or provocation (Waltes, 2015)	Waltes et al, 2015
Proactive/instrumental/pre- mediated aggression	Planning, the motive of the act extends beyond harming the victim (Tuvbald,Baker, 2011)	
	Planned antisocial behaviour that anticipates a reward or dominance over others (Waltes, 2015)	
Direct/physical aggression	Intentionally causing pain or harm to the victim	Tuvblad&Baker, 2011
Indirect/relational aggression	Relational social manipulation such as gossip and peer exclusion	
Chronic physical aggression	Tendency to use physical aggression more frequently than the large majority of a birth cohort over many years	Tremblay et al, 2018; Provencal et al., 2015
Externalizing behaviour	Behavior that directs problematic energy outward and is expressed as aggression, defiance, bullying, vandalism, theft, and other socially unacceptable actions	Anholt&Mackay, 2012
		Dick et al, 2016
Aggression and anger-related traits associated with suicidal behaviour	Anger can be conceptualized as a core construct of related traits or variables inwardly and/or outwardly expressed such as aggression, rage, and hostility (Spielberger et al, 1985 cite: Baud, 2005)	Baud, 2005
	Aggression and anger-related traits are considered risk factors for suicidal behaviour	
Aggression related phenotype	A dimensional trait including externalizing behaviour, anger, delinquency, criminality, violence or a diagnostic category (conduct disorder, oppositional defiant disorder, callous unemotional, and antisocial personality)	Fernandez-Castillo, Cormand, 2016
Frustrative non-reward aggression	Behaviours that correspond to the withdrawal or prevention of reward	RDoC nomenclature
		Veroude et al, 2015
Defensive aggression	Behaviors caused by the perception of an immediate threat, which have the goal of eliminating the threat	
Offensive (or proactive) aggression	Instrumental behaviors aimed at achieving a positive goal, often in the face of competition or in the context of social hierarchies	
Aggression as behavior category in conduct disorder (CD)	CD is a developmental disorder characterized by a consistent pattern of externalizing behavior, developing during childhood or adolescence, where an individual displays aggression toward people or animals, destroys property, exhibits deceit by lying or stealing, and/or seriously violates societal rules or norms (DSM-V)	DSM-V
		Salvatore et al, 2018
	Conduct disorder is a psychiatric disorder of childhood and adolescence characterized by aggression toward people and animals, destruction of property, deceitfulness or theft, and serious violation of rules (Salvatore, 2018)	
Antisocial behaviour	Refers to actions that violate social norms in ways that reflect the violation of others' rights	Moffit, 2005; Gard et al, 2018
Aggression as violence	No definition is given	Vassos et al, 2014