Invited commentary on “Medium-term health and social outcomes in adolescents following sexual assault: a prospective mixed-methods cohort study” by Clare and colleagues

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Coming from a region where rates of gender-based violence are high and public discourse on adolescent sexual assault limited, the study *Medium-term health and social outcomes in adolescents following sexual assault: a prospective mixed-methods cohort study* by Clark and colleagues holds deep personal relevance for us.

This quantitative and qualitative cohort study of adolescents who have experienced sexual assault offers valuable, nuanced and sensitive insights into their mental health, physical health and social outcomes 13 to 15 months post-trauma.

Our comments intend to add to and reflect upon points raised in the study and are trifocal—the location of rape (and sexual assault) in mental health discourse, the bidirectional relationship and reflexive nature of deprivation and trauma in early life, and the diversity of social systems an adolescent engages with (and their functioning within these systems after sexual assault, by extension).

In adolescents, as in this study, the neurobiological basis of the trauma response to sexual assault involves amygdalar activation and encoding, with impaired prefrontal lobe functioning; and associated involvement of the hypothalamic–pituitary–adrenergic axis, with adrenergic response in the acute phase and upregulation of serum

cortisol levels in the chronic phase [1]. Of theories on trauma informed psychotherapy, Herman described three stages of recovery with central tasks of establishment of safety, remembrance and mourning; and reconnection with ordinary life, in each [2].

Sexual assault occurs as the adolescent’s brain undergoes synaptic pruning and completion of frontal myelination [3]. Synchronously, the young person also undergoes socialization and consolidation of personality with establishment of autonomy and identity (identity versus role confusion as in Eriksonian psychosocial development) [3].

That sexual assault in the adolescent would incur deep and lasting consequences on their physical and mental health, and impact upon social functioning, particularly against a background of socio-economic deprivation and previous adverse early childhood experiences is clear and unambiguous. The authors demonstrate interventions for sexual assault (as well offered by the Havens) can mitigate the impact in adolescents. However, as they indicate, the risk for physical and mental illnesses, and impaired social outcomes in the form of revictimization, homelessness, and impaired educational and occupational functioning remains high. As in other studies, external stigma and internalized shame, as well as the subjective meaning of sexual assault, often mediate the relationship between assault and prospective health/functioning [4, 5].

There is also the nature of trauma to be considered. Trauma and recovery are solitary experiences for adolescents, leaving them to handle deeply personal consequences of a crime that is (dis)social in nature. Interventions for trauma, despite being survivor-led, well-designed and evidence-based shift focus from the inter-personal nature of the assault to its intra-psychic recovery. Qualitative studies describe the sense of unfairness persons who have experienced sexual assault experience, of the responsibility of the crime being the perpetrator’s while the responsibility of the healing is that of the survivor [6]. The 29% participation rate

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and 53% retention rate may be indicative of the personal and solitary nature of trauma.

The concept of being a “survivor” of sexual assault has been criticised, for the implication of placing the trauma at the centre of the person’s identity and their being defined by the sexual assault [7]. This debate assumes further importance in adolescents—their identity being defined by trauma at the critical point of consolidation of identity and personality [7].

Healthcare and healthcare research on young people who have experienced sexual assault is no exception to this position. Research places the young person at the center of the trauma narrative, but epidemiological terms such as exposure and outcome also imply a performative role during a critical developmental period. The adolescent needs to recover from the sexual assault, they need to be able to find a safe and enduring place to live (bearing in mind that most sexual assaults are perpetrated by those known to them), to avoid repeat trauma, go to school, work and maintain relationships with friends and family. These are large responsibilities for the adolescent to carry, and far more psychosocial crises than originally envisaged by Erikson.

Knowledge of medium term outcomes, and their determinants in adolescents post sexual assault helps legal, healthcare and social welfare systems plan better long-term care for the adolescent and continued engagement with systems. However, we advocate that research must also go further and emphasise the collaborative nature of the recovery trajectory from the exposure to the outcome. We recommend a frameshift from intra-psychic experience of trauma to collaborative nature of recovery and collaborative responsibility for outcomes. This would help underline that the outcomes the adolescent experiences are a function of the care relationship between the adolescent and their social systems.

Our second point regarding, is that early life deprivation and adversity, as the authors have demonstrated, not only increases the vulnerability of the adolescent to adverse exposure (sexual assault) but also to adverse outcomes (anxiety, depression, PTSD, poor sleep and appetite, placement in foster homes, persistent school absences and others). A previous paper by the authors had noted baseline psychosocial vulnerability to be associated with the presence of a psychiatric disorder in the short term (4–5 months), while assault characteristics were not [8]. Over two-thirds of the subjects in the current Haven adolescent longitudinal study lived in two quintiles with highest Index of Multiple Deprivation (IMD).

One might argue that while the IMD was not *the exposure*, under investigation, it was certainly, *an exposure* of interest, in the longitudinal study, due to its more proximal relationship to the origin of early life adversity than sexual assault (the double jeopardy hypothesis). IMD is also likely to continue to operate over the lifespan of the subjects

to modulate mental and physical health as well as social functioning.

Hearteningly, the number of subjects living in Decile 1–2 (the most deprived) reduced by 6.8% percent while those in Decile 3–4 and 5–6 increased by 2.4% and 7.7%, respectively. The implication is that care services provided to the adolescent in the aftermath of sexual assault succeed, at least partly, in addressing this risk factor and hopefully, improving the living conditions of the adolescent.

Sexual assault and IMD are likely to be bidirectional, if not circular. The authors noted the number of adolescents disengaged from education and employment rose from 31 to 41% and with persistent absence from school rose from 22 to 47% over the 13–15 months of follow up. These outcomes contribute to continuing socio-economic deprivation and predispose the adolescent to poor health and functioning. They also increase the prospective vulnerability of the adolescent to sexual assault. A distal effect, as these adolescents enter parenthood, may also include the possible inter-generational transmission of trauma and deprivation within families of procreation.

The Icelandic Health Behaviour in School-Aged Children (HBSC) noted 14.6% of 3618 students in the 10th grade reported having experiencing sexual abuse [8]. Girls were over twice as likely to be sexually abused as boys, and adolescents who perceived their families to be less affluent than others were twice as likely to be abused as those more affluent. Affluence disproportionately affected the prevalence of sexual abuse in girls rather than boys. The Icelandic HBSC authors, similar to this study, noted detrimental effects of socio-economic disadvantage in early life, including gender disproportionate vulnerability to sexual abuse [9].

Our third point is that adolescence sees a widening of the young person’s social acquaintanceship. A diverse set of social roles and social skills are required of them, as reflected in the WHO Life Skills Modules. Greesham, Sugai and Horner originally defined five dimensions of social skills—peer relational, self-management, academic, compliance and assertion [10]. Adolescents experiencing sexual assault are vulnerable to adverse outcomes across all dimensions of social functioning.

Deprivation in early life acts both a risk factor for sexual assault as well as an outcome, as in the Haven Study. Resource poor settings in developing regions, with greater gender disparity and barriers to restitution for survivors, may well expect to have even poorer outcomes for adolescents post sexual assault than demonstrated here.

The authors of the Haven Study have examined revictimization, foster care, education and employment as social outcomes. Prospective knowledge of how the adolescent functions across diverse situations including the ability to form lasting and intimate personal relationships, functioning

in occupational and educational social groups and migration would be valuable.

Among directions for further research, longitudinal studies which explore long-term outcomes of adolescents would add to literature on violence and women's mental health. Knowledge of how the outcomes and risk factors (such as the IMD and prior involvement of social services) of the current study change over time would contribute to planning services.

Finally, gender identity and sexual orientation are essential components of the adolescents evolving personhood and we recommend affirmative gendering, including the use of transwoman/transperson over male-to-female transgender [11]. Embracing self-identification of gender and orientation (including their evolution over time) would contribute to inclusive and affirmative long-term engagement of the adolescent.

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Conflict of interest The authors have no conflicts to declare with regard to the contents of this paper.

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