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# Exploring resilience in the affect regulation of family violence-exposed adolescents

« des fois ça marche, des fois, ça [ne] marche pas »

### Katherine Maurer

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#### Article abstract

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Methods: A convenience sample of 16 youth, age 15-25 with histories of family psychological, and/or physical violence exposure, completed semi-structured qualitative interviews describing affect regulation during arousal states in past stressful situations. Interviews were recorded and transcribed verbatim. Utilising deductive framework analysis, predefined thematic coding was conducted in NVivo.

Results: Rich descriptions were generated of youth's adaptive capacities to regulate affect while under stress. We explored the presence of the three components of Ungar's (2019) resilience definition in the data: 1) Risk affect regulation during hyper-/hypo-arousal states, 2) Navigation of access to and negotiation for meaningful promotive and protective internal and external factors, and 3) Resilience outcomes of recovery, adaptation, and transformation. The framework analysis of Ungar's (2019) resilience definition illuminated differential interactions between adolescents and access to resources in their environments. Despite some resource deficits, participants demonstrated adaptive resilience when regulating affect.

Implications: Ungar's (2019) process resilience definition highlights the interconnection between youth's resource needs and the capacity of their environments to provide them to enhance resilience. Results suggest that interventions to increase resilience should incorporate the full biopsychosocial ecological process model with a focus on regulation capacity. The knowledge gained from youth perspectives of affect regulation processes is directly applicable to complex trauma-informed interventions to increase self-regulation and resilience while reducing behavioural reactivity for violence-exposed adolescents.

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#### Katherine MAURER<sup>1</sup>

1 McGill University School of Social Work

**Corresponding Author:** Katherine Maurer, Ph.D., 3506 University Street, Montréal, Québec, Canada H3A 2A7. Email: katherine.maurer@mcgill.ca.

#### **Abstract**

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**Keywords:** Adolescent; affect regulation; resilience; trauma.

### Introduction

Child and adolescent resilience research explore why some children exposed to high adversity such as family violence manifest biological, psychological, and social harm and some do not, to inform intervention practice and policy. Researchers initially conceptualized resilience as an absence of enduring biopsychosocial impairment, defined as imperviousness or the capacity to overcome the effects of atypical adversity (Masten, 2014). Assessing youth resilience often focused on behavioural outcomes construed as risky or antisocial, (i.e., substance abuse, truancy, aggression, and violence perpetration; Wright et al., 2013). Resilience theories have shifted from prioritizing and pathologizing behavioural outcomes as resilience indicators towards privileging processes of adaptation to exposure to significant adversity. Adaptation is conceptualized as contextual, varied, malleable, and dynamic; what is adaptive in one environment may be maladaptive in another (Bonanno & Burton, 2013; Cicchetti, 2013; Ellis & Del Giudice, 2019; Malhi et al., 2019; Ungar, 2017, 2019). Resilience as adaption is a function of interactions amongst biopsychosocial risk and protective factors operating within a complex person-environment social ecology (Cicchetti, 2013; Ungar, 2019). These evolutions in definition require new approaches to researching resilience with vulnerable youth (Wright et al., 2013; Ungar, 2019).

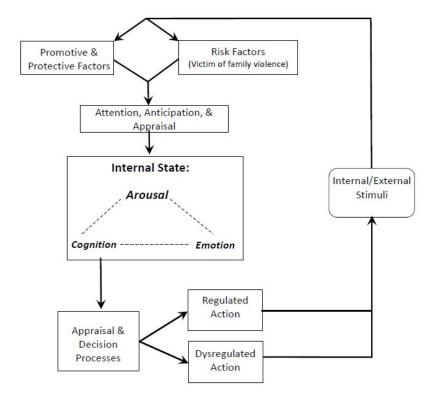
Concurrent to the evolving definition of resilience, the capacity to regulate affect has emerged as a central biopsychosocial process in child and adolescent development that is specifically vulnerable to injury (trauma) in high-adversity environments. Affect regulation, the ability to modulate internal physiological, emotional, cognitive, and behavioural responses to external and internal stress (affect arousal), is both at risk for and protective against trauma. Affect regulation is a primary target in trauma-focused interventions. A genre of interventions for high adversity-exposed children and youth focused on developmental and complex trauma has emerged which are informed by resilience theories and research (e.g., Blaustein & Kinniburgh, 2019; Perry & Hambrick, 2008). Research at the intersection of affect regulation and resilience is needed to continue refining trauma-focused interventions with children and adolescents exposed to high stress, including family violence, to enhance resilience.

Exposure to family violence as a witness to or victim of aggression and assault during childhood is associated with risk of biopsychosocial injury (Althoff et al., 2010; Boxer & Sloan-Power, 2013; Cicchetti, 2013; Teicher & Samson, 2016). Transdisciplinary study of stress responsivity has revolutionized our understanding of how reactions to exposure to adversity become entrenched to influence current and future functioning (e.g., Belsky & Pluess, 2013; Del Giudice et al., 2011; Karatsoreos, & McEwen, 2013; Teicher & Samson, 2016). The psychobiological mechanisms of the complex interactions between self and environment, in which we are continually responding to internal and external stimuli while regulating our stress responsivity to maintain our affective baseline, have been well articulated (e.g., Ellis & Del Giudice, 2019; Kalisch et al., 2015; Malhi et al., 2019). For some, exposure to chronic or extreme stressors (i.e., family violence), can effectuate changes in brain structure and function. Brain trauma, in turn, can impair the capacity to regulate affect in high arousal states (Ellis & Del Giudice, 2019; McEwen, 2007; Raio et al., 2013; Repetti et al., 2002; Romeo, 2013). Affect is at the centre of the looping processes of appraisal of stimuli, physiological response, emotion and cognitive processing, and behaviour within the person-environment interaction (see Figure 1; Althoff et al., 2010; Anderson & Bushman, 2002; Ellis & Del Giudice, 2019; Malhi et al., 2019).

### Adolescent affect regulation

Learning to regulate affect arousal is a primary task of adolescent development and a crucial indicator of trauma and recovery (Dishion & Connell, 2006; Malhi et al., 2019; Nader, 2011; Schriber & Guyer, 2016). Throughout adolescence into young adulthood, the capacity to regulate matures physically (in the brain) and socially as youth develop strategies and patterns of regulation to adapt flexibly to different levels of stress stimuli (Romeo, 2013; Schriber & Guyer, 2016). Although risky or impulsive behaviour associated with adolescent dysregulation is normative, pervasive dysregulation as the result of trauma has very different implications (Davidson et al., 2000; Ellis et al., 2012; Schriber & Guyer, 2016). For example, dysregulation in the form of hypervigilance to threat developed in a violent home is adaptive and promotes safety. However, hypervigilance to threat at school manifesting in either aggression or withdrawal may be pathologized and policed with negative consequences (Ellis & Del Giudice, 2019; Nader, 2011; Raio et al., 2013). A focus on behaviour independent of its social-ecological context may result in restricted access (i.e., school expulsion) to supportive resources adolescents need to develop resilience (i.e., increase regulation capacity under stress and reduce hypervigilance) and recover from biopsychosocial trauma.

**Figure 1**. The General Aggression Model (GAM). Adapted from "Human aggression," (Anderson & Bushman, 2002)



### **Complex trauma**

Maltreated youth manifest a broad range of traumas that influence their resilience (see Collin-Vézina et al., 2011; Courtois, 2008; Milot, Collin-Vézina, & Godbout, 2018). Trauma is both exposure to traumatogenic stressors and the biopsychosocial injury from that exposure. Family violence often occurs more than once; chronicity increases the potential for brain injury that may also be recurrent (Repetti et al., 2002). Complex trauma "refers to a type of trauma that occurs repeatedly, usually over a period of time and within specific relationships and contexts" (Courtois, 2008, p. 86). Interventions for complex trauma, informed by transdisciplinary research on stress physiology and resilience, situate affect regulation as a central process in responding to and recovering from adversity (Courtois, 2008; Malhi et al., 2019; Milot, Lemieux et al., 2018). Affect regulation process models (see Figure 1) demonstrate regulation as a continuous looping biopsychosocial activity in which the past (i.e., childhood family violence, enhances or inhibits present and future resilience; Althoff et al., 2010; Dugal et al., 2018; Ellis & Del Giudice, 2019; Greenberg et al., 2017; Malhi et al., 2019).

### A biopsychosocial ecological definition of resilience

Theoretical and empirical explorations of risk and resilience have proliferated (Ungar, 2011, 2019; Wright et al., 2013; Yoon et al., 2019). Ungar (2008, 2011, 2019) continues to refine and test a complex integrative cross-disciplinary biopsychosocial ecological definition of resilience:

The capacity of a biopsychosocial system (this can include an individual person, a family, or a community) to navigate to the resources necessary to sustain positive functioning under stress, as well as the capacity of systems to negotiate for resources to be provided in ways that are experienced as meaningful (Ungar, 2011). (Ungar, 2019, p. 2)

Resilience is a process of "recovery, adaptation, or transformation" (Ungar, 2019, p. 2) in response to "atypical exposure to stress" (p. 2) that optimizes the functioning of a system (i.e., an individual) with a minimum of consequences (trade-offs). Ungar (2019) identifies three interactive dimensions of resilience processes: stress exposure (risk), "promotive and protective factors and processes (PPFP)" (p. 2), and outcomes. Within resilience processes, variability in stress exposure and the complex interactions of PPFP (i.e., resilience-related internal/external resources) in the context

of the culture or ecology of a system reveal differential outcome effects and relevance for systems. Previous resilience conceptualizations focused on PPFP acontextually, attributing resilience to the presence or absence of specific PPFP (i.e., social support); resilience (or lack thereof) may be misattributed through a failure to account for variability in risk exposure and PPFP access (Thibodeau et al., 2017; Ungar, 2015, 2019). Furthermore, without exploring optimal functioning from the perspective of the system or culture, observers may not perceive adaptive strategies (i.e., hypervigilance) as resilience in context and may thus misevaluate resilience outcomes (Ungar, 2019).

Ungar (2011, 2013) operationalizes resilience processes using four principles: navigation, resources, negotiation, and meaning. Navigation is the capacity to and process of gaining access to resources (PPFP) which can be "psychological, social, cultural, and physical" (Ungar 2011, p. 10) that optimize the functioning of a system in specific contexts within a complex and interactive social-ecology. Negotiation is an interactive resilience process within the system's ecology of reconciling trade-offs between resilience enhancing resources that are salient and relevant (meaning) to the system's assessment of optimal functioning. Hypervigilance, understood via Ungar's (2019) definition, is a psychobiological resource that an individual navigates internally and negotiates to maintain despite the psychobiological and social consequences because hypervigilance is meaningful for protection in a violent family environment.

Ungar's (2013, 2019) biopsychosocial ecological concept of resilience integrates the interdisciplinary theory and research on stress response and child development that informs complex trauma interventions for high-adversity exposed youth (Courtois, 2008; Malhi et al., 2019; Milot, Lemieux et al., 2018; Perry & Hambrick, 2008; Schriber & Guyer, 2016). Affect regulation is a central construct in understanding the effect of adversity on resilience and a mechanism to enhance resilience. Ungar's (2019) operationalized definition may be a useful approach to exploring affect regulation risk and resilience in context as experienced by family violence-exposed adolescents.

### **Objectives**

This study is part of a larger study that sought to bridge an existing gap between biophysiological mechanistic descriptions of affect regulation (e.g., Ellis & Del Giudice, 2019) and the lived experience of regulating arousal states by family violence-exposed adolescents. In contrast to research and practice that defines resilience by psychological and behavioural outcomes, we sought to contribute to the existing knowledge base by exploring affect regulation in context as resilience processes. Our study includes Ungar's (2019) three dimensions of resilience research: heterogeneous risk exposure of family violence; PPFPs of affect regulation and other resources; desired outcome of affect regulation resilience. We explored whether or not the processes of Ungar's (2019) definition of resilience were present within our data.

### Method

In the larger study, we conducted qualitative interviews to gather rich, descriptive data on the lived experience of affect regulation by adolescent family violence victims to identify "an essential core" of the experience (Vagle, 2014). After receiving university and hospital ethics approval, recruitment began with a community organization serving homeless and at-risk youth and an outpatient adolescent clinic. We utilized three methods of on-site bilingual recruitment: staff-distributed study summaries, fliers, and research assistant-led (RA) individual and group recruitment sessions. Youth self-identified as family violence-exposed. Participation was voluntary and compensated with cash payments and public transit tokens.

Semi-structured in-depth interviews were conducted in French or English from September 2018 to February 2019 by bilingual social work RAs with prior experience with at-risk youth. The study protocol included two 1-hour sessions. Most participants completed both in one sitting with a short break. All interviews were conducted at the recruitment organizations to facilitate participation and coordinate mandatory reporting of new family violence incidents (none were reported). Prior to entering the field, English and Québécois versions of the interview guide were piloted (Creswell, 2013).

Interview questions sought to elicit rich descriptions of hyper-/hypo-arousal states and youth's affect regulation strategies, based on facets of phenomenology, trauma, self-regulation, and resilience theories (Courtois, 2008; Del Giudice et al., 2011; Høffding & Martiny, 2015). We asked participants to think of a specific incident during which they felt as if they might "lose it/péter une coche," (a colloquial proxy for being in an arousal state). Informed by a stress response model (Figure 1), we elicited descriptions of physical, emotional, and cognitive components of hyper-

/hypo-arousal states. Participants were then asked if they experienced an impulse to act, followed by prompts to elicit descriptions of regulation strategies of either taking action or inhibiting action. Whichever (action/no action) they described in the first part of the interview, they were then asked to describe an arousal experience with an opposite outcome. Given our focus on process, not outcome, participants were first prompted about arousal then action. We sought balance in exploring incidents of action and non-action to elicit data representing multiple regulation capacities.

### **Data analysis**

All interviews were digitally recorded and transcribed verbatim with the verbal and written consent of the participant. The qualitative software NVivo was used in coding. Following a first analysis of the lived experience of affect regulation (2020), the PI and one RA conducted a deductive framework analysis (Gale et al., 2013). We created predefined codes based on Ungar's (2019) three components of resilience processes (risk, PPFP, and outcomes). The first code was affect arousal as a risk factor, followed by two categories of PPFP system x environment interactions: navigation of access to resources and negotiating for meaningful resources. The system in our analysis is the adolescent and the environment is both internal and external to the individual. We privileged the participants' assessment of PPFP as positive and meaningful. Lastly, we coded for resilience outcomes as recovery, adaptation, and transformation.

### **Sample characteristics**

The purposive sample included 16 participants: one gender non-binary, seven female, and eight male, aged 15-25 years old. Thirteen participants were recruited from a community organization serving homeless and at-risk youth and three from an adolescent health clinic. All participants reported physical or psychological family violence exposure. However, sexual assault by a family member was an exclusion criterion given gender differential and specific effects of sexual victimization (see Daigneault et al., 2007). In the past year, 13 participants had witnessed psychological intimate partner violence (IPV); eight witnessed physical IPV; 10 participants reported parental psychological abuse victimization; 11 reported parental physical abuse victimization. Six participants reported prior youth protection services involvement; all but one of the participants were enrolled in school.

### **Results**

Adolescents described experiences of affect arousal and regulation during incidents in which they did and did not inhibit behavioural reactivity. Participants' experiences and environments were heterogeneous, though given that most participants were currently or recently homeless, the environments were often resource-poor. The efficacy of similar regulation strategies was interpreted differentially by participants both within their own experience and between participants. Using a deductive framework analysis (Gale et al., 2013) to explore the presence of Ungar's (2011, 2013, 2019) process definition of resilience illuminated biopsychosocial interactions in context that influence youth in their regulation strategies. Gaps in environmental resources or in the meaningfulness of resources to support and enhance optimal functioning for family violence-exposed youth were evident.

### Affect arousal as a risk factor

Affect arousal occurs in response to internal and external stress. Family-violence exposed adolescents may be especially sensitive to stress which induces arousal:

Des fois y'en parle avec les autres pour dire faut pas trop y aller genre trop serré avec moi, c'est sûr et certain que j'aime pas ça pis, des fois j'peux ben être gentil dans la vie, j'suis pas quelqu'un qui est comme méchant mais j'peux devenir méchant, si mettons si je veux là. (14M)

...des fois, il y a des petites situations qui font que moi là, je vais capoter ma vie. Des fois, je le sens que j'ai envie de passer à l'action. (12F)

For some, stressors are external and chronic:

... quand qu'il y a l'autorité, je pense à mon beau-père. Mes boss, peu importe si sont vraiment fins avec moi, après deux, trois mois, je me tanne d'eux, pis j'vois juste le négatif chez eux [...] Pis que, faut que j'sois professionnel pis je [ne] le suis pas donc je quitte par moi-même [...] Parce que j'ai tendance à considérer l'autorité comme mon beau-père. (13M)

An accumulation of environmental stressors overwhelmed regulation capacity for many participants:

C'est comme si que j'ai passé une journée de merde, puis j'ai une situation de merde, ce qui s'en vient, je [ne] suis pas capable de gérer ça. (16M)

La dernière fois que j'ai failli péter ma coche était au travail. Le travail c'est un peu stressant en tant que tel, pis t'sais y'a tellement de monde qui parle autour de moi, qui ont besoin de quelque chose, s'ils me demandent plusieurs choses en même temps. Là j'pourrais pas là, c'est une chose qui me stresse le plus, pis on dirait que si je me retourne, c'est là qu'ils me demandent plusieurs choses en même temps mais t'sais j'peux pas me diffuser en quatre parties, j'tourne en bombe à retardement. (14M)

... quand je pète ma coche, c'est un excès de pensées, c'est un excès d'émotions, c'est des choses inutiles. (4NB)

Optimal affect regulation is a coordinated flexible biopsychosocial response to reduce arousal and prevent affect dysregulation. Awareness of the components of affect arousal is key to navigating regulation processes and fostering positive adaptation to internal and external stress. Participants described physiological, emotional, and cognitive indicators of hyper-/hypo-arousal and dysregulated states. Many participants were keenly aware of embodied indicators of stress arousal:

Mais quand je sens la colère là, c'est plus le sternum [qui] devient chaud bouillant pis j'ai l'impression que ça va juste sortir de la gorge. Sortir de la gorge, toute, j'ai envie de cracher, j'ai envie de crier, j'ai envie d'insulter t'sais. Ouin pis ma mâchoire, pis je deviens distordu, mon cou, toute le chest. (13M¹)

So I get stomachaches; sometimes I puke, I'm so angry. Just grah! And vomit. (9F)

Participants also described experiences of hypo-arousal:

But it's also feeling like your body is kind of limp at the same time, even though people around you don't see it. (5F)

...c'est sûrement quand je pète une coche [que] je peux être très silencieux.se (4NB)

Heightened physiological arousal evokes emotions. While some participants focused on anger alone, several described complex emotions:

J'ai toutes les émotions quand je suis fâchée [...] je [ne] les gère pas ben là. (7F)

Cognitions play a key role in arousal:

...[thoughts] will prevent me from sleeping, or I'll be doing my homework, but half of my brain is like "what's the answer to the equation", and then like the other half of my brain is like "what the fucking..."(1F)

The essence of affect arousal is in the dynamic interaction of emotions, cognitions, and behaviour that in the absence of a capacity to regulate, often led to behavioural reactivity:

...something happens and you have an emotion based on something happening. It's not like you ... you choose, yeah in some way you choose to let that affect you, but it's hard you know? Sometimes things just affect you like, I don't know, some things affect you more, some things affect you less, but it's all due to, like, a base, like, I don't know how to explain it. Like, at the source it's ... an emotion and then you think about it and you're like "oh, I could change that" but in the moment you go on like a reaction. Action, reaction, you know? (9F)

#### Navigation of access to resources

Strategies for navigating the environment to access PPFP for optimal stress response varied. In the quote above, the participant describes a non-optimal outcome when unable to access an internal resource. Navigation of

<sup>&</sup>lt;sup>1</sup> Participant number plus gender designation: NB = gender non-binary; F = female; M = male; bilingual translations of data are presented in Appendix

internal and external environments influenced accessing internal and external resources, which in turn supported or inhibited participants' capacity to regulate in stressful situations.

Participants described navigating their internal environment for psychological and cognitive resources to promote optimal stress arousal regulation:

... it's almost like when I lose it, I'm like allowing my negative emotion, probably anger let's say, like, consume me. Whereas when I don't lose it, then I'm like, no, I'm like in charge [laughs] and I'm able to kind of be like, "no, I don't want to feel you right now." ... So it's easier to calm down, yeah. When I'm not losing it, I'm not allowing the feeling to consume me; I'm kind of just letting it pass. (1F)

...il y a quelque chose de plus gros que la colère, la frustration, la violence pour compenser ça, mais protéger en justifiant que c'est... c'est la force qui va gagner, t'sais, c'est la force. (2M)

*Ça veut dire j'ai gardé le contrôle, c'était… une belle victoire… pour moi personnellement […] je fais toujours des efforts pour arriver à avoir un contrôle de soi* (10M)

Many reported needing solitude in which to access internal regulation resources:

Je fais juste m'isoler pendant un instant, puis je me mets un peu à jaser avec moi-même, genre, si c'est justifié comment je me sens ou comme si c'est juste moi qui justement a envie de péter une coche. Fait que, j'essaie de comme me parler voir pour me calmer. Puis des fois ça marche, des fois, ça [ne] marche pas. (3F)

Some sought protective solitude to allow internal dysregulation to occur:

... je [ne] le fais jamais avec du monde alentour... c'est le flot d'émotions ... qui se relâche, j'ai peur de faire mal à quelqu'un. Fait que je m'arrange pour être tout seul. Je décâlisse, [...] je m'en vais dans un coin seul [...] où je sens qu'on va me crisser la paix puis je relâche. (11M)

External resourcing through family relationships could be both protective and promotive in supporting affect regulation:

What always helps is talking to my dad. He's very logical. My mom's very emotional. So sometimes she's very emotionally supportive, other times it can be very negative. Whereas my dad's, like, well very logical so [...] somehow that helps. (1F)

Peers provided promotive support to process experiences:

[Ma meilleure amie] a su exactement quoi me dire pour pas que j'agisse .... C'était la bonne personne qui m'a dit les bonnes choses. (11M)

Yet, when navigating for protective resources, peers did not always facilitate access:

Puis il y a eu des situations où j'étais violent puis [...] je voulais partir faire un 5 minutes pour dépomper pour pas que ça, ça arrive puis tu m'en empêches. C'est sûr que je vais péter une coche tabarnak. (16M)

Beaucoup de... de personnes que je considère comme étant des proches, finalement, ben, ils mettent un couteau dans mon dos puis c'est juste très blessant parce que je sais pu comment gérer ça. (13M)

Professionals taught participants promotive regulation skills:

I saw a therapist [... who] gave me a lot of strategies on managing certain feelings when they arrive, and recognizing them, and so, like, if I'm aware of them, then I can apply those strategies. If I'm not aware of them, then I'm just, like, lost. (1F)

Some participants describe a lack of access to either internal or external PPFP to inhibit dysregulation and aggression during hyperarousal states:

It feels like I can't control, like, my urge to hurt and destroy and break things...situations where I'm so angry it's, like, overwhelming, I've broken [things] ... I'll throw it, like, at a wall or at the floor, with [the] intention of breaking it to kind of release just the urge. (8F)

... quand je suis vraiment fâché, ça [ne] marche pas, t'sais. Je peux ben tourner en rond 500 milliards de fois puis sacrer ben raide, t'sais, à un moment donné, ... faut que ça sorte là. (6M)

### **Negotiating for meaningful resources**

Ungar (2019) proposes that the resilience process is one of negotiating trade-offs amongst resources that optimize functioning according to how they are perceived as meaningful by the system. Internal and external resources may be objectively perceived as enhancing function (i.e., family support). However, it is only in a specific biopsychosocial context that what is optimal and what has relevance can be assessed, as the quotes above pertaining to family demonstrate. Thus, to understand affect regulation resilience processes, the trade-offs made between the system and the environment for PPFP must be considered.

One common adaptive trade-off noted earlier is regulation by suppressing and delaying the arousal state in the moment to experience it later under controlled circumstances. This is an important protective internal resource, especially for individuals, i.e., participants who were currently homeless, with resource-poor and unreliable environments. This trade-off was cultivated by some:

Soit que je [ne] parle plus, soit que je pète une coche, ou soit que je m'en vais. (7F)

Mais, en général, je peux garder mon calme justement, attendre que je sois isolée puis si j'ai envie de comme laisser ça sortir, puis tout, ça. Des fois ça sort, des fois, ça [ne] sort pas, des fois je suis juste complètement neutre... (3F)

#### Others articulated the associated costs:

Puis c'est pas bon faire ça là, mais oui, j'encaisse beaucoup, puis à un moment donné, ben, ça va être un petit truc qui va me faire péter une coche pour rien, mais bon. Mais ça [ne] sera pas pour rien, c'est parce que je vais trop avoir enduré... (7F)

It's shutting down communication. Shutting down any response of happiness or sadness or anger, basically, just blank... Another day is going to pass. Away from the situation away from the anger, but also it brings disconnection from being happy too. (5F)

For some participants dysregulated release, even if consequences were negative, was a more salient protective strategy:

C'est juste crier, un peu laisser sortir le méchant, là, je dirais... C'était pas vraiment personnel à elle. C'était vraiment moi qui avais besoin de sortir mes émotions [...] un surplus d'émotions. [...] C'est souvent juste moi qui [ne] sais plus comment gérer mes émotions. Fait que, je les laisse sortir puis ça finit comme ça [agression psychologique]. (3F)

### Resilience outcomes as recovery, adaptation, and transformation

As noted in both the navigation and negotiation processes, suppressing arousal until a later time or in a safe space was a common adaptation to arousal experiences:

... quand je suis en public avec le monde, je peux être vraiment très bonne comédienne, je peux te jouer ça aisément. Mais, toute seule, c'est toute une autre chose. C'est là que je suis vraiment vulnérable puis que tout sort. (3F)

For some participants who were gaining skills in regulation, a transformation seemed in process:

When I passe à l'action, isn't a release. It's just like blow up and then like it's still there and like the release is like - it's like if I built up too much you know? - but when I talk about it and when I don't passe à l'action, it's just like instant, it's just like, "oh, you know? I made it." (9F)

C'est pas quelque chose qui se fait seulement quand les situations arrivent. Je veux dire, c'est quelque chose qui demande de la pratique. Constamment, remettre en question tes actions. Constamment, penser aux répercussions que tes actions ont sur les autres. C'est entre autres, une façon d'être en mesure de contrôler qu'est-ce que tu fais et/ou contrôler ta façon de réagir quand la situation vient, tu comprends. (10M)

For others, a lifetime of negative experiences inhibited their capacity to access resources and move towards recovery:

Ben, il est tellement arrivé de trucs que, pas bons dans ma vie, que des fois quand il arrive des trucs bons, mais je me rends pas jusqu'au bout par peur, parce que je me dis que ce n'est pas normal, genre. (7M)

As one participant noted, positive adaptation, transformation, and recovery is often not as salient to observers in the youth's environment as is one instance of dysregulated behaviour:

Puis aussi, qu'est-ce qui me frustre, c'est quand, oui, je [ne] pète pas ma coche pendant une centaine de fois, mais qui se concentrent sur une fois que j'ai pété ma coche. C'est comme "man, tu [ne] peux pas voir que j'ai pas pété ma coche pendant cent fois [...] tu te concentres sur cette situation-là?" (16M)

### Discussion

Resilience functions at all levels of biopsychosocial systems, including the microprocesses of individual-level stress responsivity of trauma-exposed youth featured in this research (Ungar, 2019; Wright et al., 2013). As resilience definitions shift to a biopsychosocial ecological process-oriented model centered on person-environment interactions, empirical evidence of the operationalization of conceptual advances is needed (Aldao, 2013; Masten, 2016; Ungar, 2019). Our deductive framework analysis (Gale et al., 2013) explored the presence of Ungar's (2019) three components of resilience (risk, PPFP, and outcomes) in data from qualitative interviews on affect regulation during arousal states with 16 family violence-exposed adolescents. Resilience processes were evident throughout the youth's descriptions, as were experiential manifestations of trauma and psychobiological mechanics of affect arousal. The heterogeneity of youth's descriptions demonstrates the valuable data gained by seeking qualitative experiential accounts of biopsychosocial processes to generate a holistic view of processes that are interactive by nature. These complex interactions are challenging to capture through quantitative measures alone (Rutter, 2012; Ungar, 2019). The adolescents' depictions of navigating hyper-/hypo-arousal states exemplified the interactive nature of precipitating stimuli (internal or external) with physical, emotional, and cognitive reactions that influenced regulation processes depicted in Figure 1. Awareness of physiological signals and emotion identification, two essential affect regulation skills (Althoff et al., 2010; Greenberg et al., 2017; Malhi et al., 2019), supported purposeful navigation. When participants' ability to think through what was happening was disrupted, they often experienced psychobiological dysregulation (Davidson et al., 2000; Ellis & Del Giudice, 2019; Raio et al., 2013). The youth emphasized the context-dependent adaptive nature of their strategies to self-regulate and the potential limitations as long-term solutions or applicability to other environments (e.g., Bonanno & Burton, 2013; Christensen & Aldao, 2015; Ellis & Del Giudice, 2019). Their descriptions demonstrate clearly that within the sample and within individuals, there is considerable variability in regulation capacity in ways that defy trait-like quantitative categorization (Ungar, 2019).

Adaptive regulation strategies often influenced participants' capacities to negotiate for protective and promotive resources (Grych et al., 2015; Ungar 2011, 2013). One of the most meaningful (Ungar, 2011) resources for these adolescents was their own internal capacity to calm physiological arousal and regain affect equilibrium when alone in a safe place. Participants acknowledged that the trade-off inhibited long-term positive functioning. Social support, a recognized resilience-promoting resource (Grych et al., 2015; Meng et al., 2018; Schriber & Guyer, 2016), was strikingly sparse in the data. All participants experienced family violence, and many were currently or formerly homeless, thus minimal supportive family connections were not unexpected (Grych et al., 2015; Ungar, 2015). Participants demonstrated awareness that regulation is a skill that can be learned and expressed optimism that they could increase their capacity to reduce dysregulation in the face of stress and perhaps not "lose it/péter une coche" as often. The data indicate a need for access to trauma-informed interventions (e.g., Collin-Vézina et al., 2018).

Our focus on individual experience elicited limited specific content regarding larger social systems' implications in resilience, a priority of Ungar's (2011, 2017, 2019) conceptualization. One participant remarked on the ongoing focus on behavioural outcomes of dysregulation with little attention paid to their many adaptive strategies to inhibit taking action in stressful situations. This observation highlights the importance of utilizing social-ecological models of resilience to provide resources that are relevant to the regulation needs of adolescents in high adversity environments to inform practice and policy (e.g., Ungar & Hadfield, 2019). Self-reliance and limited mention of social and professionals support suggests a need for comprehensive trauma-informed services to enrich the resilience of family violence-exposed youth (Blaustein & Kinniburgh, 2019; Collin-Vézina et al., 2018; Grych et al., 2015).

### Limitations

Adolescent self-reports of affect regulation were retrospective, which may limit reliability. The study focused on states of high arousal only. Youth who "lose it/péter une coche" with hypo-arousal-related internalizing strategies may not have volunteered for the study given the focus on externalizing behaviours in youth contexts. All participants had experienced many forms of biopsychosocial adversity; our findings are not exclusively associated with family violence (e.g., Cyr et al., 2012).

### **Implications**

Participants described in rich detail their resilience processes during arousal states in navigating and negotiating for affect regulation resources to be provided in meaningful ways while under stress. Many of the adaptations were in response to resource-poor or unreliable internal and external environments, echoing the concerns of resilience researchers that adaptation be understood in the context of a full biopsychosocial-ecological framework that does not prioritize or pathologize individual experience over systemic influence (e.g., Bonnano & Burton, 2013; Masten, 2016; Sameroff, 2010; Ungar, 2017, 2019). The short- and long-term impact of repression and delay of reactivity on optimal functioning from a biopsychosocial-ecological perspective merits more consideration longitudinally (Bonanno & Burton, 2013; Christensen & Aldao, 2015). Ungar's (2019) operationalization of resilience as processes is a useful lens for exploring affect regulation experiences of adolescents who have experienced high adversity.

### Implications for practice

The study results are directly applicable to trauma-informed interventions designed to increase regulation capacity for complex trauma-exposed youth. Trauma-informed interventions target both youth's experiences and the systems implicated in their lives (e.g., Bailey et al., 2019; Fratto, 2016; Hanson & Lang, 2016; Milot, Lemieux et al., 2018). The Attachment, Self-Regulation, and Competency (ARC; Blaustein & Kinniburgh, 2019) framework is especially relevant given its focus on stress responsivity, adaptive regulation strategies, increasing social support, and building resilience, congruent with Ungar's (2011, 2013, 2019) definition. Trauma-informed interventions benefit from policy-level support to influence mezzo and macro systems in the social ecology within which youth and their families seek services (Hanson & Lang, 2016; Masten, 2016).

### **Directions for future research**

Comprehensive biopsychosocial empirical evidence that endeavors to capture the full experience of a person in their environment in a process-focused manner is needed to provide meaningful support to adolescents throughout this crucial developmental stage prevent enduring biopsychosocial trauma (e.g., Althoff et al., 2012; Blaustein & Kinniburgh, 2019; Grych et al., 2015; Malhi et al., 2019; Masten, 2016; Ungar, 2017, 2019; Yoon et al., 2019). Ungar (2019) suggests utilizing mixed methods approaches that embrace the "messiness" needed to capture data on such an interactive transdisciplinary longitudinal construct without sacrificing coherence. The voices of adolescents living in adversity must be integrated via qualitative methods (i.e., phenomenology) to contextualize quantitative data to enhance a holistic understanding of resilience and affect regulation processes (Rutter, 2012; Willis & Cromby, 2020), as our results demonstrate.

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### **Conflict of interest**

The author declares no conflict of interest

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### **Appendix.** Resilience and Adolescent Affect Regulation translations

Text	Translation
Des fois y'en parle avec les autres pour dire faut pas trop y aller genre trop serré avec moi, c'est sûr et certain que j'aime pas ça pis, des fois j'peux ben être gentil dans la vie, j'suis pas quelqu'un qui est comme méchant mais j'peux devenir méchant, si mettons si je veux là. (14M)	Sometimes he talks about it with other people to say don't get too upfront and personal with me, I don't like it too much for sure, and sometimes in my life I can be nice, I'm not someone who's mean but I can become mean, if, let's say, I wanted to. (14M)
des fois, il y a des petites situations qui font que moi là, je vais capoter ma vie. Des fois, je le sens que j'ai envie de passer à l'action. (12F)	sometimes there are small situations that make me feel like I'm going to freak out. Sometimes, I feel like I want to take action. (12F)
I've never had a really good relationship with Mom, so when reacting to what she does, it takes about 30 seconds for me to just not be able to handle it and just explode Yeah, it's a reflexbecause I've had so many bad situations with Mom(5F)	Je n'ai jamais eu une très bonne relation avec Maman, alors quand je réagis à ce qu'elle fait, il me faut environ 30 secondes pour ne plus être capable de le gérer et pour exploser Oui, c'est un réflexe - parce que j'ai vécu tellement de mauvaises situations avec Maman (5F)
quand qu'il y a l'autorité, je pense à mon beau-père. Mes boss, peu importe si sont vraiment fins avec moi, après deux, trois mois, je me tanne d'eux, pis j'vois juste le négatif chez eux [] Pis que, faut que j'sois professionnel pis je le suis pas donc je quitte par moi-même [] Parce que j'ai tendance à considérer l'autorité comme mon beaupère. (13M)	when there's authority, I think of my step-father. My bosses, no matter how nice they are to me, after two or three months, I get tired of them, and I just see the negative in them [] And I have to be professional, and I'm not, so I decide to leave [] Because I tend to think of authority as my step-father. (13M)
C'est comme si que j'ai passé une journée de merde, puis j'ai une situation de merde, ce qui s'en vient, je [ne] suis pas capable de gérer ça. (16M)	It's like I've had a shitty day, then I have a shitty situation, what comes next, I can't deal with it. (16M)
La dernière fois que j'ai failli péter ma coche était au travail. Le travail c'est un peu stressant en tant que tel, pis t'sais y'a tellement de monde qui parle autour de moi, qui ont besoin de quelque chose, s'ils me demandent plusieurs choses en même temps. Là j'pourrais pas là, c'est une chose qui me stresse le plus, pis on dirait que si je me retourne, c'est là qu'ils me demandent plusieurs choses en même temps mais t'sais j'peux pas me diffuser en quatre parties, j'tourne en bombe à retardement. (14M)	The last time I almost lost my temper was at work. Work is a bit stressful in and of itself, and then, you know, there are so many people talking around me, who need something, if they ask me several things at the same time. That, I couldn't do that, it's one of the things that stresses me out the most, and it seems that if I turn around, that's when they ask me several things at the same time, but then I can't split myself into four pieces, I turn into a time bomb. (14M)
quand je pète ma coche, c'est un excès de pensées, c'est un excès d'émotions, c'est des choses inutiles. (4NB)	when I lose it, it's an excess of thoughts, it's an excess of emotions, it's useless stuff. (4NB)
Mais quand je sens la colère là, c'est plus le sternum [qui] devient chaud bouillant pis j'ai l'impression que ça va juste sortir de la gorge. Sortir de la gorge, toute, j'ai envie de cracher, j'ai envie de crier, j'ai envie d'insulter t'sais. Ouin pis ma mâchoire, pis je deviens distordu, mon cou, toute le chest. (13M)	But when I feel anger, it's more like the sternum is getting boiling hot, and I get the feeling that it's just going to come out of the throat. It's going to come out of the throat, all of it, I feel like spitting, I feel like screaming, I feel like shouting insults, you know. Yeah, and my jaw, and then I get distorted, my neck, my whole chest. (13M)
So I get stomachaches; sometimes I puke, I'm so angry. Just grah! And vomit. (9F)	Alors j'ai des maux d'estomac, parfois je vomis, je suis tellement en colère. Juste grah ! Et je vomis. (9F)
But it's also feeling like your body is kind of limp at the same time, even though people around you don't see it. (5F)	Mais en même temps, c'est aussi l'impression que le corps est un peu mou, même si les gens autour de toi ne le voient pas. (5F)
c'est sûrement quand je pète une coche [que] je peux être très silencieux.se (4NB)	it's definitely when I lose it that I can become very quiet. (4NB)
J'ai toutes les émotions quand je suis fâchée [] je [ne] les gère pas ben là. (7F)	I feel all the emotions when I'm angry [] I [don't] handle them well. (7F)
[thoughts] will prevent me from sleeping, or I'll be doing my homework but half of my brain is like "what's the answer to the equation", and then like the other half of my brain is like "what the fucking" (1F)	[les pensées] m'empêcheront de dormir, ou je ferai mes devoirs mais la moitié de mon cerveau est comme "quelle est la réponse à l'équation", et puis genre l'autre moitié de mon cerveau est comme "c'est quoi ce fucking" (1F)
something happens and you have an emotion based on something happening. It's not like you you choose, yeah in some way you choose to let that affect you, but it's hard you know? Sometimes things just affect you like, I don't know, some things affect you more, some things affect you less, but it's all due to, like, a base, like, I don't know how to explain it. Like, at the source it's an emotion and then you think about it and you're like "oh, I could change that" but in the moment you go on like a reaction. Action, reaction, you know? (9F)	quelque chose se passe et tu as une émotion basée sur quelque chose qui se passe. Ce n'est pas comme si tu tu choisis, oui, d'une certaine manière tu choisis de laisser cela t'affecter, mais c'est difficile, tu sais ? Parfois, les choses t'affectent juste comme, je ne sais pas, certaines choses t'affectent plus, certaines choses t'affectent moins, mais tout cela est dû à, comme, une base, comme, je ne sais pas comment l'expliquer. À la source, c'est une émotion, puis on y pense et on se dit : "Oh, je pourrais changer ça," mais à ce moment, on réagit. Action, réaction, tu sais? (9F)

Text	Translation
it's almost like when I lose it, I'm like allowing my negative emotion, probably anger let's say, like, consume me. Whereas when I don't lose it, then I'm like, no, I'm like in charge [laughs] and I'm able to kind of be like, "no, I don't want to feel you right now." So it's easier to calm down, yeah. When I'm not losing it, I'm not allowing the feeling to consume me; I'm kind of just letting it pass. (1F)	c'est presque comme si, quand je perdais mon calme, je laissais mon émotion négative, probablement la colère, disons, me consommer. Alors que quand je ne perds pas mon calme, c'est comme, non, c'est moi qui suis responsable [rit] et je suis capable d'être comme, "non, je ne veux pas te ressentir en ce moment." Donc c'est plus facile de se calmer, oui. Quand je ne perds pas mon calme, je ne laisse pas ce sentiment me consommer; je le laisse simplement passer. (1F)
il y a quelque chose de plus gros que la colère, la frustration, la violence pour compenser ça, mais protéger en justifiant que c'est c'est la force qui va gagner, t'sais, c'est la force. (2M)	there's something bigger than anger, frustration, violence to make up for it, but to protect by justifying that it's it's strength that's gonna win, you know, it's strength. (2M)
Ça veut dire j'ai gardé le contrôle, c'était une belle victoire pour moi personnellement [] je fais toujours des efforts pour arriver à avoir un contrôle de soi. (10M)	It means I stayed in control of myself, it was a big win for me personallyI'm always striving to achieve self-control. (10M)
Je fais juste m'isoler pendant un instant, puis je me mets un peu à jaser avec moi-même, genre, si c'est justifié comment je me sens ou comme si c'est juste moi qui justement a envie de péter une coche. Fait que, j'essaie de comme me parler voir pour me calmer. Puis des fois ça marche, des fois, ça [ne] marche pas. (3F)	I just isolate myself for a while, and then I start talking to myself a little bit, like, if how I feel is justified or if it's just me that just wants to lose my temper. So I'm trying to, like, talk to myself or something to calm myself down. Sometimes, it works; sometimes, it doesn't. (3F)
je [ne] le fais jamais avec du monde alentour c'est le flot d'émotions qui se relâche, j'ai peur de faire mal à quelqu'un. Fait que je m'arrange pour être tout seul. Je décâlisse, [] je m'en vais dans un coin seul [] où je sens qu'on va me crisser la paix puis je relâche. (11M)	I never do it with people around it's the flood of emotions that releases itself, I'm afraid of hurting someone. So I manage to be on my own. I take off, [] I go to an isolated place [] where I feel like others will leave me alone and then I let it go. (11M)
What always helps is talking to my dad. He's very logical. My mom's very emotional. So sometimes she's very emotionally supportive, other times it can be very negative. Whereas my dad's, like, well very logical so [] somehow that helps. (1F)	Ce qui aide toujours c'est de parler à mon père. Il est très logique. Ma mère est très émotive. Alors parfois elle me soutient émotionnellement, d'autres fois elle peut être très négative. Alors que mon père est très logique, donc [] d'une certaine manière, ça aide. (1F)
[Ma meilleure amie] a su exactement quoi me dire pour pas que j'agisse C'était la bonne personne qui m'a dit les bonnes choses. (11M)	[My best friend] knew exactly what to tell me so I wouldn't take action She was the right person who told me the right things. (11M)
Puis il y a eu des situations où j'étais violent puis [] je voulais partir faire un 5 minutes pour dépomper pour pas que ça, ça arrive puis tu m'en empêches. C'est sûr que je vais péter une coche tabarnak. (16M)	Then there were situations where I was violent and then [] I wanted to leave for a 5-minute break to calm down so that it doesn't, it happens and then you stop me. Of course I am going to lose my temper tabarnak (16M)
Beaucoup de de personnes que je considère comme étant des proches, finalement, ben, ils mettent un couteau dans mon dos puis c'est juste très blessant parce que je sais pu comment gérer ça. (13M)	A lot of a lot of people that I consider to be close, in the end, well, they put a knife in my back and it just hurts a lot because I don't know how to deal with it anymore. (13M)
I saw a therapist [ who] gave me a lot of strategies on managing certain feelings when they arrive, and recognizing them, and so, like, if I'm aware of them, then I can apply those strategies. If I'm not aware of them, then I'm just, like, lost. (IF)	J'ai vu un thérapeute [qui] m'a donné beaucoup de stratégies pour gérer certains sentiments quand ils surviennent, et les reconnaître, et donc, si j'en suis consciente, alors je peux appliquer ces stratégies. Si je n'en suis pas consciente, alors je suis juste, disons, perdue. (1F)
It feels like I can't control, like, my urge to hurt and destroy and break thingssituations where I'm so angry it's, like, overwhelming, I've broken [things] I'll throw it, like, at a wall or at the floor, with [the] intention of breaking it to kind of release just the urge. (8F)	J'ai l'impression que je ne peux pas contrôler mon envie de blesser, de détruire et de casser des choses des situations où je suis tellement en colère que c'est, genre, accablant, j'ai détruit [des choses] Je les jette, genre, contre un mur ou par terre, avec l'intention de les détruire pour relâcher cette envie. (8F)
quand je suis vraiment fâché, ça [ne] marche pas, t'sais. Je peux ben tourner en rond 500 milliards de fois puis sacrer ben raide, t'sais, à un moment donné, faut que ça sorte là. (6M)	when I'm really mad, it doesn't work, you know. I can go around in circles 500 billion times and swear, you know, at some point,it's gotta come out. (6M)
Soit que je [ne] parle plus, soit que je pète une coche, ou soit que je m'en vais. (7F)	Either I [don't] talk anymore, or I lose my temper, or I take off. (7F)
Mais, en général, je peux garder mon calme justement, attendre que je sois isolée puis si j'ai envie de comme laisser ça sortir, puis tout, ça. Des fois ça sort, des fois, ça [ne] sort pas, des fois je suis juste complètement neutre (3F)	But, in general, I can in fact keep calm, wait until I'm alone and then if I feel like letting it all out, then all, that's it. Sometimes, it comes out, sometimes, it doesn't, sometimes I'm just completely neutral (3F)
Puis c'est pas bon faire ça là, mais oui, j'encaisse beaucoup, puis à un moment donné, ben, ça va être un petit truc qui va me faire péter	And it's not good to do that, but yes, I'm storing up a lot, and at some point, it's going to be a little thing that's going to make me lose my

Text	Translation
une coche pour rien, mais bon. Mais ça [ne] sera pas pour rien, c'est parce que je vais trop avoir enduré (7F)	temper for nothing, but hey. But it won't be for nothing, it's because I'll have endured too much (7F)
It's shutting down communication. Shutting down any response of happiness or sadness or anger, basically, just blank Another day is going to pass. Away from the situation - away from the anger, but also it brings disconnection from being happy too. (5F)	Ça étouffe la communication. Ça étouffe toute réaction de bonheur, de tristesse ou de colère, en gros, juste un blanc Un autre jour va passer. À l'écart de la situation – à l'écart de la colère, mais cela entraîne aussi une déconnection de la joie. (5F)
C'est juste crier, un peu laisser sortir le méchant, là, je dirais C'était pas vraiment personnel à elle. C'était vraiment moi qui avais besoin de sortir mes émotions [] un surplus d'émotions. [] C'est souvent juste moi qui [ne] sais plus comment gérer mes émotions. Fait que, je les laisse sortir puis ça finit comme ça [agression psychologique]. (3F)	It's just yelling, kind of letting the bad guy out, I'd say It wasn't really personal in relation to her. It was really me who needed to get my emotions out a surplus of emotionsit's often just me who doesn't know how to deal with my emotions anymore. So, I let them out and then it ends up like this [psychological aggression]. (3F)
quand je suis en public avec le monde, je peux être vraiment très bonne comédienne, je peux te jouer ça aisément. Mais, toute seule, c'est toute une autre chose. C'est là que je suis vraiment vulnérable puis que tout sort. (3F)	when I'm out in public with people, I can be really good at humouring others, I can play that role for you easily. But, when I'm on my own, it's a whole other thing. That's when I'm really vulnerable and then everything comes out. (3F)
When I passe à l'action, isn't a release. It's just like blow up and then like it's still there and like the release is likeit's like if I built up too much you know? - but when I talk about it and when I don't passe à l'action, it's just like instant, it's just like, "oh, you know? I made it." (9F)	Quand je passe à l'action, ce n'est pas un défoulement. C'est juste comme si j'explosais, pis comme si c'est toujours là pis que le défoulement c'est comme comme si j'en avais trop accumulé, t'sais?  - Mais quand j'en parle et que je ne passe pas à l'action, c'est comme instantané, c'est comme : "Oh, t'sais? J'ai réussi." (9F)
C'est pas quelque chose qui se fait seulement quand les situations arrivent. Je veux dire, c'est quelque chose qui demande de la pratique. Constamment, remettre en question tes actions. Constamment, penser aux répercussions que tes actions ont sur les autres. C'est entre autres, une façon d'être en mesure de contrôler qu'est-ce que tu fais et/ou contrôler ta façon de réagir quand la situation vient, tu comprends. (10M)	It's not something that's only done when situations arise. I mean, it's something that takes practice. Constantly questioning your actions. Constantly thinking about the repercussions that your actions have on others. It's, among other things, a way of being able to control what you do and/or how you react when the situation arises, you understand. (10M)
Ben, il est tellement arrivé de trucs que, pas bons dans ma vie, que des fois quand il arrive des trucs bons, mais je [ne] me rends pas jusqu'au bout par peur, parce que je me dis que ce n'est pas normal, genre. (7M)	Well, so much bad stuff has happened in my life, that sometimes when good stuff happens, but I don't go through with it out of fear, because I think it's like not normal. (7M)
Puis aussi, qu'est-ce qui me frustre, c'est quand, oui, je [ne] pète pas ma coche pendant une centaine de fois, mais qui se concentrent sur une fois que j'ai pété ma coche. C'est comme « man, tu [ne] peux pas voir que j'ai pas pété ma coche pendant cent fois [] tu te concentres sur cette situation-là? » (16M)	Also, what frustrates me is when, yes, I don't lose my temper a hundred times, but they focus on the one time I lost it. It's like, "man, can't you see that I haven't lost it a hundred timesyou're focusing on that one situation? » (16M)