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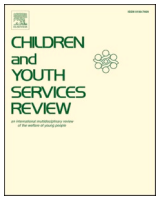

Does emotion regulation in adolescents in residential care mitigate the association between sexual victimization and poor psychological well-being?

Olga Fernández-García [a], María Dolores Gil-Llario [a,*], Rafael Ballester-Arnal [b]

[a] Department of Developmental and Educational Psychology, Faculty of Psychology, University of Valencia, Valencia, Spain
[b] Department of Basic and Clinical Psychology and Psychobiology, Faculty of Health Sciences, Jaume I University, Castellón de la Plana, Spain

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ABSTRACT

Background: Childhood sexual abuse/assault has been linked to mental health problems that affect an individual's psychological well-being. This study explores the facets of emotional regulation as mediating mechanisms in the relationship between sexual victimization and psychological well-being in adolescents in residential care in Eastern Spain. Furthermore, it examines the role of sex assigned at birth and being unaccompanied asylum seeker children as possible moderators of the mediation model.
Methods: A total of 346 adolescents (34.1% girls, 65.9% boys) aged between 11 and 19 years old completed a battery of instruments. Parallel multiple mediation paths were tested to determine whether sexual victimization is associated to psychological well-being across emotional regulation dimensions. Moderated mediation models with sex assigned at birth and the condition of unaccompanied asylum seeker children were tested too.
Results: This study demonstrates that high sexual victimization is associated with poor psychological well-being in adolescents in residential care through the lack of emotional clarity, non-acceptance of emotional responses, and limited access to emotional regulation strategies ($\beta = -0.6$, 95%CI $= -1.26, -0.09$; $\beta = -0.38$, 95%CI $= -0.9, 0.002$; $\beta = -0.39$, 95%CI $= -0.93, -0.03$, respectively). In addition, the latter indirect effect pathway was significantly moderated by the condition of being unaccompanied asylum seeker children ($\beta = 1.46$, 95%CI $= 0.28, 2.84$). Sex assigned at birth was not shown to be a significant moderator.
Conclusions: Identifying which mechanisms of emotional regulation mediate the relationship between sexual victimization and psychological well-being in adolescents in residential care may contribute not only to reducing the psychological distress of these adolescents but also to improving the effectiveness and efficacy of the child welfare system.

1. Introduction

Adolescents in the child welfare system that were removed from their families to ensure their physical and emotional well-being, often undergo numerous victimization experiences from an early age (Collin-Vézina et al., 2011). Specifically, this population reports extremely high rates of sexual victimization, which are linked to negative behavioral, emotional, and cognitive developmental outcomes (Casanueva et al., 2012; Indias et al., 2019).

Psychological well-being, according to Ryff's approach, is a dynamic construct and refers to optimal psychological functioning and positive individual development (McLellan et al., 2012; Ryff, 1989). This approach is framed within the eudaimonic philosophical stance, which states that it is important for individuals to have a sense of meaning and fulfilment in life (Deci & Ryan, 2008). Taking this stance, Ryff (1989) proposed a theoretical model of psychological well-being which comprises six different aspects of positive functioning, namely autonomy (as the sense of self-determination and freedom from norms), environmental mastery (as the belief of one's ability to manage life events), personal growth (as one's openness to new experiences and growth), purpose in life (as the sense of purpose and meaningfulness in life), positive relations with others (as the extent of having satisfying relationships with others) and self-acceptance (as one's attitude towards oneself). Although Ryff's model was originally developed to reflect

* Corresponding author at: Departamento de Psicología Evolutiva y de la Educación, Facultad de Psicología, Universitat de València, Av. Blasco Ibáñez, 21, València 46010, Spain.
E-mail addresses: olga.fernandez-garcia@uv.es (O. Fernández-García), dolores.gil@uv.es (M.D. Gil-Llario), rballest@uji.es (R. Ballester-Arnal).

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adults' positive functioning (Ryff, 1989), there is sufficient empirical evidence that this theoretical model benefits research in adolescents' psychological well-being as well (Gao & McLellan, 2018). In adolescents, it is associated with the ability to evaluate oneself according to personal standards, having positive attitudes toward oneself, perceiving quality family and friendship relationships, and having the perception of pursuing meaningful goals (Reis et al., 2018). Psychological well-being is quantified by an individual's positive and negative experiences, so it is not surprising that, despite the efforts of child welfare professionals to ensure the healthy psychological development of these adolescents, several studies report lower levels of psychological well-being among adolescents in residential care compared to their peers in community samples (Crous, 2017; Greeno et al., 2019).

The individual's ability to regulate his or her emotions in the face of adverse events is a key process in the development of positive psychological functioning, especially among adolescents that are transitioning into adulthood with all the different changes that this life stage requires (Park et al., 2020). Emotional regulation is considered a multidimensional construct consisting of cognitive and behavioral processes to manage emotional responses and involves: (a) awareness and understanding of emotions, (b) acceptance of emotions, (c) ability to control impulsive behaviors and engage in goal-directed behaviors when experiencing negative emotions, and (d) ability to use emotional regulation strategies appropriate to the situation (Gratz & Roemer, 2004). The skills necessary for emotional regulation are often acquired, in part, through interaction with primary caregivers. Thus, those adolescents who have experienced victimization and live in residential care facilities have not only had fewer opportunities to develop coping skills, but often the strategies learned are maladaptive or caregivers minimize or punish their emotional displays. This puts them at a disadvantage when it comes to identifying, regulating, and expressing emotions effectively (Finkelstein-Fox et al., 2022).

A history of childhood sexual abuse/assault has been consistently linked to a variety of mental health and interpersonal problems that affect an individual's psychological well-being (Breckenridge et al., 2019; Burgić Radmanović, 2020; Burns et al., 2010; Hébert et al., 2021). This association has also been documented in the literature on adolescents in the child welfare system (Auslander et al., 2015; Matta Oshima et al., 2014; Papalia et al., 2021). Auslander et al. (2015), in their study with adolescents in the U.S. child welfare system, demonstrated that victims of sexual abuse experienced negative psychological outcomes of significant severity, even leading to suicide (Matta Oshima et al., 2014). Therefore, identifying the mechanisms through which such a relationship is established is crucial to understanding what interferes with the psychological recovery of sexual victimization survivors and developing early interventions for this high-risk population.

In this sense, some studies justify that sexual abuse/assault may interrupt typical psychological and biological developmental processes, creating vulnerabilities in self-regulatory functioning across physiological, affective, and behavioral domains (Papalia et al., 2018; Papalia et al., 2021). These vulnerabilities can affect their psychological well-being and can increase risk for various mental health disorders via mechanisms such as impaired risk detection and response, emotion dysregulation and risk-taking behavior (Atmaca & Geçöz, 2016; Krahé & Berger, 2017; Papalia et al., 2021).

However, we should not forget that the possible mediation of the variables involved in this association may also be moderated by certain sociodemographic characteristics. The sex asigned at birth could be one of them. According to the literature, the prevalence of sexual victimization varies substantially by sex assigned at birth (Fernández-García et al., 2023a; Indias et al., 2019) as do mental health indicators, especially those related to emotional regulation (Kaur et al., 2022; Zalar et al., 2018). Matta Oshima et al. (2014) found that girls immersed in the child welfare system who had experienced sexual abuse made significantly greater use of mental health services than men, possibly due to differences related to skills and behaviors developed because of having experienced sexual victimization. However, in general, non-acceptance of emotional response and avoidance of negative emotions is significantly higher among boys, possibly due to stereotypical gender roles adopted in our society, which identify men's emotional expression as a sign of weakness and grant women the development of more emotional regulation strategies (Kaur et al., 2022).

In addition, it is well known that emotions have an important cultural component. Unaccompanied asylum seeker children (UASC) are young people under the age of 18 who arrive to other country without any responsible adult to care for them and who are applying for asylum in their own right (Generalitat Valenciana, n. d. a). Because of the traumatic experiences they have had before or during their flight and the difficulties involved in the acculturation process, they are at particularly high risk of mental health problems. This coexists with their difficulties with emotional regulation, especially anger management and goal setting and striving to achieve them (El-Awad et al., 2017). Nickerson et al. (2011) concluded that impaired emotion regulation might act as a mechanism empowering the connection between migrate' victimization experiences and mental health outcomes. It is, the experience of extreme emotional distress in connection with trauma events, like sexual abuse/assault, might force the migrate to use dysfunctional emotion regulation strategies and limit their access to functional strategies, which may thus empower the association between sexual victimization experiences and psychological problems (El-Awad et al., 2017; Nickerson et al., 2011). These results alert us that being UASC is possible moderating covariate that should be taken into account in the analysis of the mediating effect of facets of emotional regulation on the relationship between experiences of sexual victimization and psychological well-being.

1.1. The study context

Spanish legislation establishes that the administrative agency must promote, on a preventive basis, whatever actions are necessary to guarantee the comprehensive and integral development of minors in their family nucleus (art. 89 Ley 26/2018, de 21 de diciembre). However, when this cannot be guaranteed, the Law 26/2018 on Rights and Guarantees for Children and Adolescents establishes that the public administration will assume the care of the child through foster care and, if it is not possible or convenient for the child's interest, through residential care (art. 110 Ley 26/2018, de 21 de diciembre). Residential care is a protective measure whereby a protected person is provided with a place of residence and cohabitation and care oriented towards their holistic and community development (art. 137 Ley 26/2018, de 21 de diciembre). That is, these homes or residences offer comprehensive and educational care to children and adolescents in care and/or guardianship who are deprived of a suitable family environment. Although the avoidance of institutionalization of children aged 0–6 years is encouraged, all homes or residences are intended for persons up to 18 years of age (except for emancipation homes) whose custody is the responsibility of the regional administrative social service agency, with the ratio of children per center being 8 children/adolescents in the case of homes and up to 30 children/adolescents (maximum) in the case of residences. Depending on the functional characteristics, we can distinguish between reception centers (intended for immediate care or first reception, when they have just separated from their guardians), specific centers for minors with behavioral problems (intended for the care of boys and girls with special needs), general care centers, and homes for preparation for emancipation and adult life (for adolescents and young people between 16 and 23 years of age who would otherwise be expelled from the system) (Dirección General de Infancia y Adolescencia, 2017).

1.2. Objectives of this study

Although some of the literature has focused on the study of inadequate emotional regulation as a risk factor for internalizing and externalizing problems (McLaughlin et al., 2020; Weissman et al., 2019),

there are few studies that inquire about which factors of emotional regulation are actually acting as mediators in this relationship. Knowing the mechanisms of action is something really relevant, according to the *meta*-analysis of Compas et al. (2017), to gain efficacy and effectiveness in interventions. Likewise, published investigations focus on the study of mental health pathologies from a deficit approach and not from a positivist approach of promoting psychological well-being, which may mean that those young people who do not meet the diagnostic standards for certain psychopathologies do not benefit from scientific advances.

Also, following the life course perspective approach, our study assumes that lives unfold over time and that events and conditions at earlier phases of the life course have persisting effects at later phases. According to this theory posits that inequality widens across the life course, with the advantaged becoming even more advantaged over time and the disadvantaged becoming more disadvantaged. Therefore, research aimed at mitigating cumulative disadvantage is considered of relevance. This involves research with adolescents in residential care, a highly vulnerable group to unfavorable life development, whose early experiences place them at a disadvantage and motivate scientific interest in reversing this undesirable predisposition. In this sense, the life course perspective assumes that certain aspects (time, place, history, and interpersonal relationships) affect the life trajectory according to the individual's condition. Thus, it insists on and justifies the need to document the ways in which life course trajectories differ across population subgroups, including those based on sex assigned at birth, and other circumstances related to race/ethnicity (George, 2020).

In this sense, under the life course perspective approach, the present study aims to explore the mediating role of multiple facets of emotional regulation in the relationship between sexual victimization and psychological well-being in adolescents in residential care in Eastern Spain, as well as to examine the modulating role of the covariates of the mediation model (sex assigned at birth and being UASC) that are shown to be significant.

Given the results obtained so far and considering what is planted by the life course perspective, the starting hypothesis is that all the facets of emotional regulation (awareness of emotions, acceptance of emotions, emotional clarity, control impulsive behaviors, goal-directed behaviors when experiencing negative emotions and emotional regulation strategies) mediate the relationship between sexual victimization and psychological well-being in adolescents in residential care. Specifically, greater sexual victimization is expected to be associated with greater lack of emotional awareness and clarity, less acceptance of emotional responses, more difficulties in persisting in goal-directed behaviors when feeling distress and in controlling impulses, and less access to emotional regulation strategies, all resulting in worse well-being.

Considering the discrepancies in the existing studies regarding the modulation role of sex assigned at birth in the mediation model relationship between sexual victimization experiences and psychological wellbeing, it is difficult to set a hypothesis. However, we can suppose that male acts as a modulating variable driving the association between sexual victimization and greater lack of emotional awareness and clarity, less acceptance of emotional responses and access to emotional regulation strategies, more difficulties in persisting in goal-directed behaviors when feeling distress and in controlling impulses, all resulting in worse well-being. As for, being UASC modulating role, it is expected that being UASC acts as a modulating variable driving the association between sexual victimization and having worse understanding of emotions and acceptance of emotional responses, difficulties in control of impulses and in persisting in goal-directed behavior when feeling discomfort, higher lack of emotional clarity and lower emotional regulation strategies, all resulting in worse well-being.

2. Methods

2.1. Participants and procedure

This cross-sectional study was conducted between June 2020 and May 2021. Recruitment occurred through the administrative agency responsible for the welfare of adolescents in the Valencian region, which put us in contact with the directors of the residential care facilities. After explaining the project to them and obtaining their authorization to enter the home or residence, the center's staff explained the proposal to the youth of the residential care facility and appointments were arranged with the minors who wished to participate. A total of 346 adolescents were recruited from 47 residential care facilities in Eastern Spain (hosting a total of 509 children and adolescents), obtaining a response rate of 68%. Those adolescents who wished to participate voluntarily and gave their consent were interviewed by an expert from our team specifically trained for this purpose. The application of the standardized instruments was carried out in person, individually, and in a comfortable environment of maximum privacy. Only the participant and one of the evaluators were present while the assessment was being completed. All participants were informed of the confidentiality of their responses before beginning to complete the instruments, as well as of their right to leave the study at any time. Inclusion criteria were (1) being 11 years of age or older and, (2) living in a residential care facility at the time of the interview. The study complied with the ethical principles of the 1964 Declaration of Helsinki and was approved by the Experimental Research Ethics Committee of the University of Valencia (Spain).

2.2. Measures

Child and Adolescent Welfare System Form (CAWSys; Fernández-García et al. 2023b).

This instrument consists of 67 items grouped into six sections: "*General information*", "*School/work situation*", "*Child welfare system history*", "*Family visitation history*", "*Biological family information*", and "*Experiences of sexual abuse*". For this study, information related to the dimensions "*General information*" (basic information about the adolescent in terms of sex assigned at birth, date of birth, nationality, the condition of being UASC and sexual orientation) and "*Child welfare system history*" (information on age of entry into the child welfare system, reason for entry, months in the system, current legal status, and current protection measures) was used. It is an instrument designed to be completed by a professional from the residential care facility who knows the child well and has access to their welfare case record.

The Juvenile Victimization Questionnaire (JVQ; Finkelhor et al., 2005; Pereda et al., 2016).

The JVQ evaluates, in a self-reported format, 36 different types of victimization against children and youth into six modules: conventional crime, caregiver victimization, victimization by peers and siblings, sexual victimization, witnessing and indirect victimization, and electronic victimization. In the current study, only the sexual victimization module was used, which inquire about 4 specific lifetime experiences of this type of victimization: sexual abuse/assault by a known adult (*"At any time in your life, did a grown-up you know touch your private parts when they shouldn't have or make you touch their private parts? Or did a grown-up you know force you to have sex?"*), sexual abuse/assault by an unknown adult (*"At any time in your life, did a grown-up you did not know touch your private parts when they shouldn't have, make you touch their private parts or force you to have sex?"*), sexual abuse/assault by a peer (*"Now think about other kids, like from school, a boyfriend or girlfriend, or even a brother or sister. At any time in your life, did another child or teen make you do sexual things?"*), and flashing/sexual exposure (*"At any time in your life, did anyone make you look at their private parts by using force or surprise, or by "flashing" you?"*). For each item, the presence or absence of this victimization experience was scored as 1 or 0, respectively, so the total score for this module ranged between 0 and 4. The internal consistency

for the sexual victimization module was r = 0.62 in this study.

The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004; Gómez-Simón et al., 2014).

It is a 36-item self-report questionnaire measuring clinically relevant aspects of emotional regulation. It is divided into six subscales: *"Awareness"* (6 items), *"Impulse"* (6 items), *"Non-acceptance"* (6 items), *"Goals"* (5 items), *"Clarity"* (5 items), and *"Strategies"* (8 items). The items are scored on a 5-point Likert scale (1: almost never, 5: almost always). Subscales and total scores are obtained by the sum of the corresponding items and higher scores indicate more difficulties in emotional regulation. The reliability analysis found α ranging between 0.70 and 0.88 in this study.

Brief Scale of Psychological Well-Being for Adolescents (BSPWB-A; Ryff, 2013; Viejo et al., 2018).

The scale contains 20 items evaluated on a Likert scale of six points (1 = completely disagree to 6 = completely agree) and was designed to assess multiple dimensions of psychological well-being. The total score (sum of all items) was used in this study, ranging from 20 to 100, with higher scores indicating greater well-being. The internal consistency was r = 0.81 for the total scale score in this study.

2.3. Data analysis

SPSS version 26 was used for statistical analysis. Significance level was set at p-value ≤ 0.05 with a confidence interval of 95%. Descriptive statistics were used to examine participant characteristics. The Shapiro–Wilk test, as well as skewness and kurtosis statistics were used to assess normality of variables. The assumptions of linearity, homoscedasticity, normality of estimation error, and collinearity were tested. The total percentage of participants who had suffered any type of sexual victimization in their lifetime was also calculated by recoding the total score of the sexual victimization module (1, 2, 3 or 4 score like a 1; 0 = no lifetime sexual victimization, 1 = some lifetime sexual victimization). Pearson correlations assessed relationships between age and sexual victimization, psychological well-being and emotional regulation dimensions. Independent t-tests assessed differences in sexual victimization, psychological well-being and emotional regulation dimensions by sex assigned at birth (male vs. female) and the condition of being UASC (non-UASC vs. UASC). All relations with psychological well-being were explored too using Pearson correlation (r) for numerical variables and chi-square (X^2) or independent *t*-test (t) for categorical variables. A parallel multiple mediation model with pathways in a causal system based on associations was tested to determine whether sexual victimization predicted psychological well-being across emotional regulation dimensions (path a = association between independent variable -sexual victimization- and mediating variables -emotional regulation dimensions-; path b = association between dependent variable -psychological well-being- and mediating variables -emotional regulation dimensions-). Sex assigned at birth and the condition of being UASC were assigned like covariates and possible moderators in path a, so moderated mediation models were also tested. We based this decision about covariates on previous research indicating the impact of each one of these variables on dependent variable (El-Awad et al., 2017; Kaur et al., 2022; Nickerson et al., 2011; Zalar et al., 2018;), as well as on the life course perspective approach (George, 2020). PROCESS v3.1 macro model 4 was used for parallel mediation and model 7 for moderated parallel mediation analyses (Hayes, 2019). Mediation was tested by computing bias-corrected (BC) bootstrapped 95% confidence intervals (CI) using 5,000 data resamples.

3. Results

3.1. Participant characteristics

Participants were between 11 and 19 years old (M = 15.73; SD = 1.76), were predominantly male (65.9%) and identified themselves as heterosexual (84.4%). Although the majority were born in Spain (57.9%), 31.3% were UASC. Regarding their background in the child welfare system, the majority of the participants (72.3%) joined the child welfare system after the age of 11 (M = 12.33; SD = 4.21) and have been in the system for between one and two year (40.3%; M = 39.58 months; SD = 45.02). Although a relatively high percentage of them, given their young age, have been in the child welfare system for more than 10 years (9.2%). Likewise, in 76.2% of them, it was the declaration of a situation of helplessness (situation arising from the failure or impossibility/inadequate exercise of the duties of protection of minors resulting in the deprivation of the latter of necessary moral or material assistance; Generalitat Valenciana, n. d. b) that triggered their immersion in the child welfare system. As for the placement stability, on average the participants had been in this residential care facility for one and a half years (M = 18.29 months; SD = 22.33).

About 35% of the sample had suffered some type of lifetime sexual victimization (sexual abuse/assault by a known adult, sexual abuse/assault by an unknown adult, sexual abuse/assault by a peer, and flashing/sexual exposure) and the means obtained in the components of emotional regulation and psychological well-being are shown in Table 1. Some demographic characteristics were associated with independent and dependent variables. Younger age was associated with more difficulties in the control of impulses and being persistent with a goal when they are excited emotionally, with lower access to efficacy strategies for emotionally regulation and with less psychological well-being (r = −0.24, p < 0.001; r = −0.21, p < 0.001; r = − 0.17, p = 0.002; r = 0.15, p = 0.008, respectively). Women showed less acceptance of emotional responses, more lack of emotional clarity, less access to efficacy strategies of emotional regulation, more sexual victimization, and less psychological well-being (t = 2.41, p = 0.017; t = 2.72, p = 0.007; t = 2.84, p = 0.005; t = 5.5, p < 0.001; t = 82.81, p = 0.005, respectively). Finally, non-UASC showed more difficulties in the control of impulses, being persistent with a goal when they are excited emotionally and more sexual victimization (t = 3.76, p < 0.001; t = 3.79, p < 0.001; t = 4.38, p

Table 1
Demographic and clinical characteristics of the sample.

	% (*n*) / M (SD)
Sex assigned at birth	
Female	34.1 (118)
Male	65.9 (228)
Age (years)	15.73 (1.76)
Nationality[a]	
Spanish	57.9 (195)
Morrocco	29.7 (100)
Eastern European	4.7 (16)
West African	3.3 (11)
South/Central American	2.7 (9)
Pakistani	1.2 (4)
Portuguese	0.6 (2)
Unaccompanied Asylum Seeker Children	
Yes	31.3 (105)
No	68.7 (230)
Sexual orientation	
Heterosexual	84.4 (287)
Homosexual	2.1 (7)
Bisexual	7.1 (24)
Pansexual	0.3 (1)
I am not sure	6.2 (21)
Sexual Victimization	0.59 (0.93)
Emotional Regulation	
Awareness	17.53 (5.39)
Impulse	17.31 (6.99)
Non-acceptance	15.95 (7.39)
Goals	16.56 (5.57)
Clarity	12.79 (4.59)
Strategies	17.24 (6.29)
Psychological Well-Being	82.73 (15.19)

Note: [a]Underrepresented nationalities were grouped according to the continental area in which they are located.

< 0.001, respectively). The relationship of all variables with psychological well-being (dependent variable) were tested too (Table 2).

3.2. Mediating effect of perceived emotional regulation components on sexual victimization and psychological well-being

Mediation analysis examined whether perceived emotional regulation components mediated the relationship between sexual victimization and psychological well-being (Fig. 1). The direct effect of sexual victimization on psychological well-being was not significant (β = -1.04, 95% CI = − 2.58, 0.51). The total effect between sexual victimization and psychological well-being for emotional regulation components was significant (β = −2.87, 95% CI = −4.75, −0.99).

There were significant pathways between sexual victimization and some emotional regulation components. Higher sexual victimization was significantly associated with more lack of acceptance of emotional responses and with difficulties in persisting in goal-directed behavior when feeling discomfort (β = 1.59, 95% CI = 0.67, 2.52; β = 0.93, 95% CI = 0.24, 1.63, respectively). Sexual victimization and lack of emotional clarity were significantly associated too (β = 0.79, 95% CI = 0.22, 1.37), the higher sexual victimization, the higher lack of emotional clarity, boys having statistically significantly higher sexual victimization than girls. And the pathway between sexual victimization and limited access to emotional regulation strategies was positive and significantly associated (β = 0.92, 95% CI = 0.13, 1.71).

Pathways between some perceived emotional regulation components and psychological well-being were statistically significant. Greater lack of emotional awareness, acceptance of emotional responses, emotional clarity, and limited access to emotional regulation strategies were statistically significantly related to worse psychological well-being (β = −0.84, 95% CI = −1.14, −0.53; β = −0.24, 95% CI = −0.47, −0.01; β = −0.75, 95% CI = −1.14, −0.37; β = −0.42, 95% CI = −0.75, −0.08, respectively). None of the results of path b were significantly different by sex assigned at birth and the condition of UASC.

This pattern of results suggests that some perceived lack of emotional regulation components mediate the relationship between sexual victimization and psychological well-being (total indirect effect β = −1.83, 95% CI = −3.25, −0.53). There is a significant indirect effect of sexual victimization on psychological well-being through perceived lack of emotional clarity, non-acceptance of emotional responses, and limited access to emotional regulation strategies (β = −0.6, 95% CI = −1.26, −0.09; β = − 0.38, 95% CI = −0.9, 0.002; β = −0.39, 95% CI = −0.93, −0.03, respectively). The higher sexual victimization, the more perceived lack of emotional clarity, the worse acceptance of emotional responses, and the higher limited access to emotional regulation strategies all result in worse well-being. The latter indirect effect was significantly moderated by UASC (conditional indirect effect of sexual victimization on psychological well-being through limited access to emotional regulation strategies β = −0.82, 95% CI = −1.61, −0.23, index of moderate mediation β = 1.46, 95% CI = 0.28, 2.84). Sex assigned at birth was not shown to be a significant moderating variable in any pathways. The results of moderated mediation analysis are included in Table 3. Indirect effect of sexual victimization on psychological well-being through perceived lack of emotional awareness, difficulties in impulse control perceived, and difficulties in persisting in goal-directed behavior when feeling discomfort were not significant.

Table 2
Relationship of all variables to psychological well-being.

		Psychological Well-Being
Sex assigned at birth (M ± DS)	Female	84.61 ± 12.97
	Male	79.15 ± 18.26
	t-test	−2.81**
Age (years)	r	0.15**
Nationality (M ± DS)	Spanish	82.41 ± 16.4
	Morrocco	82.13 ± 11
	Eastern European	87.87 ± 12.55
	West African	93.3 ± 15.35
	South/Central American	78.57 ± 25.24
	Pakistani	89.33 ± 10.02
	Portuguese	92 ± 12.73
	X^2	1.46
Unaccompanied Asylum Seeker Children (M ± DS)	Yes	83.61 ± 11.43
	No	82.75 ± 16.47
	t-test	−0.53
Sexual orientation (M ± DS)	Heterosexual	83.46 ± 14.82
	Homosexual	81.67 ± 15.55
	Bisexual	72.04 ± 16.83
	Pansexual	100
	I am not sure	87.16 ± 15.07
	X^2	3.95**
Sexual Victimization	r	−0.2***
Emotional Regulation (r)	Awareness	−0.48***
	Impulse	−0.35***
	Non-acceptance	−0.30***
	Goals	−0.29***
	Clarity	−0.53***
	Strategies	−0.43***

**p < 0.01; ***p < 0.001.

4. Discussion

To our knowledge, this is the first study to demonstrate that high sexual victimization is associated with poorer psychological well-being in adolescents in residential care through the mechanisms of perceived lack of emotional clarity, non-acceptance of emotional responses, and limited access to emotional regulation strategies. Findings from this study are consistent with and contribute to the research on sexual victimization, emotional regulation, and psychological well-being (e.g., McLaughlin et al., 2020; Weissman et al., 2019), partially fulfilling our main hypothesis. In this sense, experiences of sexual victimization predispose these adolescents to present problems of understanding emotions, emotional avoidance or disconnection, and the adoption of maladaptive emotional regulation strategies. These results, at the same time, increase the individual's stress and distress, which translates into lower psychological well-being (Gruhn & Compas, 2020).

Of note, in the specific case of the mediation of the variable "limited access to emotional regulation strategies", the fact of not being UASC moderated the impact that sexual victimization has on this component of emotional regulation, contrary to what was postulated in our third hypothesis. UASCs have very different experiences than other adolescents in the child welfare system, in part because of the difficult journey they have made without family at a very young age and the efforts they must make to integrate into a different culture without the support of their social network. This appears to lead them to become more resilient and to develop and make more frequent use of certain coping strategies as active agents (Ní Raghallaigh & Gilligan, 2010). Thus, this may explain why not being UASC acts as a modulating variable driving the association between sexual victimization and having lower emotional regulation strategies, unlike those who are UASC. Our second hypothesis was not fulfilled, because sex assigned at birth did not prove to be a significant moderating variable in any facet of emotional regulation.

Looking at the relationship between the variables in more detail, the association between high sexual victimization and low perceived emotional clarity is supported by previous research showing that the lack of attention to emotional states that characterizes survivors of sexual victimization contributes to the problems these adolescents have in identifying and labeling emotions (Walsh et al., 2011). A high sexual victimization was also associated with difficulties in persisting on a goal when excited. Some research agrees that victims of sexual abuse/assault are more likely to remain alert and employ strategies such as rumination, making it difficult for them to be persistent with their goal (McLaughlin et al., 2020). This could explain the academic and occupational problems that these young people sometimes present (Miragoli

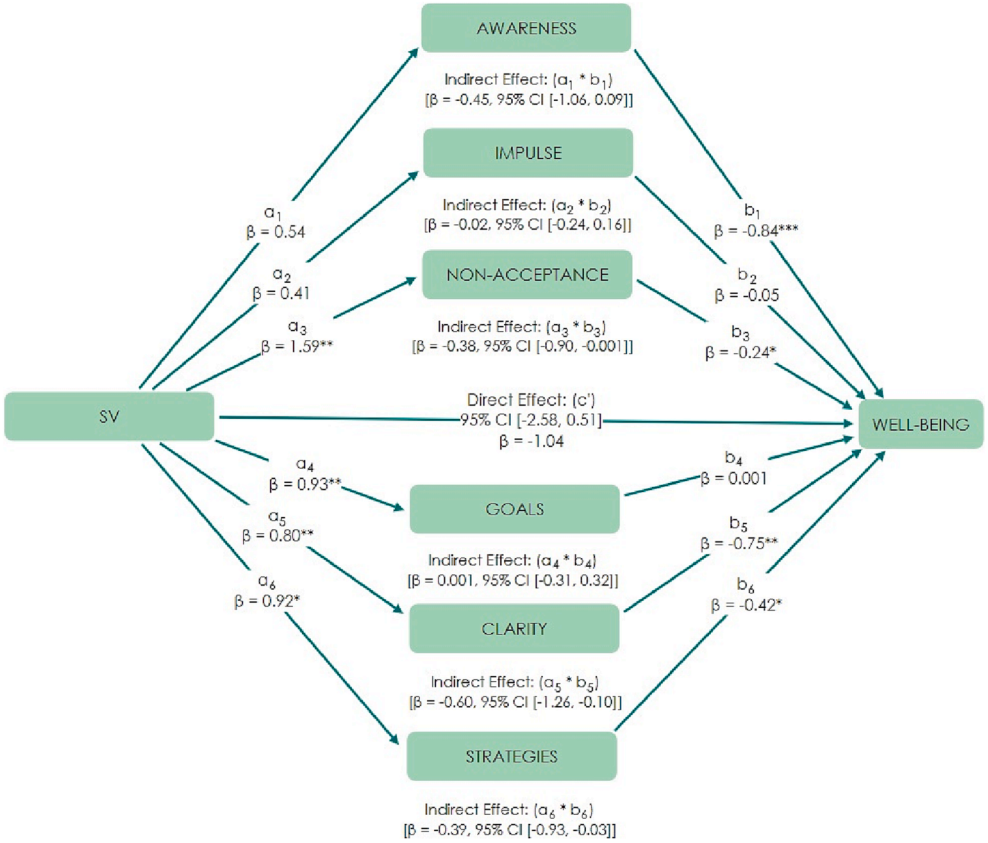

Fig. 1. Pathways and beta-coefficients of the parallel multiple mediation model of emotional regulation components on sexual victimization (SV) and psychological well-being in adolescents in Spanish residential care.

Table 3
Results of moderated mediation analysis.

Mediators	Awareness	Impulse	Non-acceptance	Goals	Clarity	Strategies
Conditional Indirect Effects	Effect (CI)[a]					
Sex assigned at birth						
Women	−0.61 (−1.46, 0.19)	−0.006 (−0.2, 0.22)	−0.44 (−1.07, 0.007)	0.006 (−0.33, 0.42)	−0.71 (−1.58, 0.05)	−0.56 (−1.22, −0.04)
Men	−0.28 (−1.09, 0.42)	−0.02 (−0.33, 0.24)	−0.32 (−0.94, 0.09)	0.005 (−0.32, 0.33)	−0.52 (−1.58, 0.05)	−0.24 (−0.98, 0.26)
UASC						
Yes	−0.48 (−1.85, 0.68)	0.002 (−0.26, 0.27)	0.18 (−0.31, 0.93)	0.01 (−0.29, 0.5)	0.16 (−0.55, 0.91)	0.63 (−0.33, 1.68)
No	−0.44 (−1.15, 0.15)	−0.01 (−0.24, 0.2)	−0.49 (−1.13, −0.02)	0.02 (−0.29, 0.38)	−0.49 (−1.18, −0.05)	−0.82 (−1.61, −0.13)
Index of moderated mediation[b]	Index (CI)[a]					
Sex assigned at birth	0.34 (−0.77, 1.43)	−0.02 (−0.38, 0.29)	0.11 (−0.45, 0.75)	−0.0007 (−0.25, 0.19)	0.18 (−0.95, 1.23	0.31 (−0.49, 1.15)
UASC	−0.04 (−1.48, 1.33)	0.01 (−0.33, 0.37)	0.67 (−0.004, 1.81)	−0.006 (−0.3, 0.36)	0.65 (−0.11, 1.77)	1.46 (0.28, 2.84)

Note:
[a] The 95% confidence interval does not include the null value (β = 0).
[b] The index of moderated mediation is the difference between two effects (UASC, non-UASC; Women, Men).

et al., 2020). Our research also suggests that sexually victimized adolescents exhibit greater emotional nonacceptance. This is consistent with a body of research that suggests that these individuals' inability to confront certain aspects of their traumatic experience leads to emotional inhibition (Walsh et al., 2011). A high sexual victimization also contributes to more problems in accessing emotion regulation strategies. It is consistent with other studies reflecting that increased victimization contributes to increased feelings of generalized helplessness in the victim, resulting in less effective attempts to reduce such emotions. In addition, these adolescents are prone to present maladaptive strategies since they have been learned from inappropriate models (Jenness et al., 2021).

Mismatches in psychological well-being can be seen as a result of the individual's attempts to regulate emotion. Our findings show that lack of emotional awareness and clarity negatively impacts psychological well-being, as deficits in emotion recognition and description interfere with cognitive processing of all experiences, which will lead to problems with self-acceptance and self-exploration. A greater lack of emotional

acceptance also contributes to poorer psychological well-being, as the unwillingness to experience emotions (and repeated efforts to suppress them) contribute to the accumulation of unresolved emotions that lead to some depletion of cognitive resources, limiting personal growth. In addition, emotional avoidance leads to experiential avoidance, with behaviors such as dissociation, self-injury, etc. having a negative impact on psychological well-being (Miragoli et al., 2020). The association between increased problems in accessing appropriate adaptive emotional regulation strategies and poorer psychological well-being suggests that the use of maladaptive strategies, such as self-medication or drug use, leads to some social disconnection and loss of support network, which negatively impacts psychological development (Gruhn & Compas, 2020; Snow et al., 2022).

Notwithstanding the above, this study has some limitations due to the use of inferential analysis with observational data (Rohrer, 2018). However, multiple plausible assumptions have been used and the findings have been reported as associations.

5. Conclusions

The present findings have important implications for alleviating some of the consequences of sexual victimization experiences and ensuring the psychological well-being of adolescents in residential care. But, in addition to the individual benefits, developing evidence of the mechanisms mediating the relationship between sexual victimization and impaired psychological well-being in these adolescents may contribute to improving the efficiency and effectiveness of the child welfare system.

This study helps professionals not only to offer interventions focused on key mediating mechanisms, but also to identify more easily those adolescents in residential care who may be at risk of maladaptive development through the detection of these key predictor variables. This will contribute to the well-being of adolescents in all areas of their lives to not reach such high levels of psychological distress, and also to improve interpersonal dynamics in residential care facilities and reduce mental health spending.

Therefore, this research is a sincere appeal to professionals in residential care facilities, but also to child welfare policy makers, who must take into account information on the characteristics of these young people and on the factors that cause the maladaptive psychological development in order to implement appropriate social plans and policies.

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Data availability statement

The data presented in this study are available on request from the corresponding author.

Ethics standards statement

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the Human Research Ethics Committee of the Experimental Research Ethics Committee of the University of Valencia.

Author statement

MDG-L conceived of the study, participated in its design, coordination and drafted the manuscript; OF-G participated in the design of the study and coordination, performed the measurement and the statistical analysis, and drafted the manuscript; RB-A conceived of the study, and participated in its design. All authors read and approved the final manuscript.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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Appendix A. Supplementary material

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