

Citation: Pfundmair, M., Paulus, M., & Wagner, E. (2020). Activism and radicalism in adolescence: An empirical test on age-related differences. *Psychology, Crime and Law*. doi:10.1080/1068316X.2020.1850725

**Activism and radicalism in adolescence:
An empirical test on age-related differences**

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Acknowledgment: Markus Paulus has been supported by a Research Fellowship from the Jacobs Foundation (JRF 2016 1217 12) and by an European Research Council (ERC) Starting Grant (No. 679000).

Declaration of interest: None.

Abstract

These days, political mobilization, particularly among young people, is on the rise. However, some of these people not only engage in legal and non-violent (activism) but also in illegal and violent actions (radicalism). In this work, we aimed to empirically explore these phenomena in greater detail, hypothesizing that younger (compared to older) adolescents are not only more prone to activism but also radicalism. We additionally aimed to investigate risk factors in this developmental period. In particular, we explored the possibility that social exclusion and a weak moral identity would make adolescents more readily express support for radicalism. In a study with four different Austrian high schools, activism and radicalism was assessed in mid- to late adolescents (14-19 years) using different validated measures. Moreover, we assessed participants' moral identity and manipulated social exclusion. Results showed that participants in mid adolescence were more susceptible to activism and, in particular, radicalism than participants in late adolescence. Moreover, weak moral convictions revealed to be related to radicalism among mid-adolescents. Social exclusion did not moderate radicalism in adolescents. Illuminating age-related differences in activism and radicalism, the current study contributes to an empirical foundation of radicalism research and may animate means of prevention in developmental populations. (200 words)

Keywords: activism; radicalism; adolescence; social exclusion; moral identity

Activism and radicalism in adolescence:**An empirical test on age-related differences**

Political mobilization is currently on the rise. One of the most visible activities these days has been the Friday for Future movement: All over the world, people peacefully marched for climate. This has (not solely but in large parts) been a phenomenon of adolescents. A similar youth activism has been observed throughout the Western world in the 1960s and 1970s (Hart & Gullan, 2010). Although intentions for legal activism are usually little related to intentions for illegal, violent political actions (Corning & Myers, 2002), some activists become radicals or even terrorists. For example, in the 1960s, the radical left militant Weather Underground Organization grew from the non-violent Students for a Democratic Society. Now, some Fridays for Future protesters have turned to commit property damage. These occurrences were largely dominated by young people. The noticeable age pattern is also evident in more general terms: Most people who join a radical group are adolescents and people in their early twenties (Dawson, 2017; Sageman, 2004; Silke, 2008). With these observations and findings, the question arises whether adolescents are particularly vulnerable to not only develop a willingness to engage in legal political actions but also in illegal ones. Moreover, one key question concerns which risk or protective factors for radicalism are present in this age.

Whereas activists are ready to engage in legal and non-violent political actions, radicals are ready to engage in illegal and violent political actions (Moskalenko & McCauley, 2009). Radicalization can be defined in three key elements: It usually is a (1) gradual process that (2) leads to an extremist belief system which (3) prepares individuals for violence, even if this is not inevitable (Hafez & Mullins, 2015). Importantly, radicalization is not the same as terrorism. Terrorists are the subset of radicals who indeed use violence. Why should adolescents be attracted by these phenomena? Adolescence is a period of challenges, *inter alia*, regarding control over behavior, psychological orientation, and social interaction. Young

people may be susceptible not only to activism but also to radicalism because they are attracted by associated factors that involve a certain appeal in their phase of life, such as confidence, impulsivity, risk-taking and status (Crone & Dahl, 2012; Silke, 2008).

Consistently, previous research has posited that youth may be drawn to activism (and radicalism) by the associated social support, the opportunity to experience success, and possibilities to control their time and actions (Berry & LaVelle, 2013). That illegal actions can satisfy these needs might be reflected by the well-known age-crime curve: According to this, the crime rate increases in the teenage years and declines as people get older. Indeed, the peak age for offending is between 15 and 18 years (Farrington, 2003), and perpetrators of violent crimes are most likely males between 15 and 25 years (Budd, Sharp, & Mayhew, 2005). All in all, due to the positive psychological side effects that come with activism and radicalism, it seems plausible that adolescents are attracted by activist and even radical ideas. However, to the best of our knowledge, it has never been investigated experimentally whether younger people are more prone to activism and radicalism than older ones. This was the central aim of the current study.

Radicalism is not only a gradual process but also a product of mutual interrelationships (Horgan, 2014). The combined impact of a number of factors pushes and pulls someone into becoming radical. For example, personal grievances have been argued to be one of those factors (Hafez & Mullins, 2015). Researchers have also suggested specific experiences in childhood and adolescence that may underpin radicalism. For example, childhood abuse and neglect, parental incarceration and abandonment, and witnessing serious crimes in childhood, as well as having problems with alcohol or drugs, truancy, and academic failure in adolescence have been reported repeatedly among former members of White supremacist groups (Simi, Sporer, & Bubolz, 2016). If such factors are known, there might be a chance to prevent radicalism. Therefore, the second aim of the current study was to

empirically investigate two factors that might be particularly relevant for adolescents, namely social exclusion and moral identity.

Humans have a fundamental need to belong (Baumeister & Leary, 1995) why social exclusion or being kept apart from others is accompanied by tremendous psychological stress, activating neural reactions similar to physical pain (Eisenberger, Lieberman, & Williams, 2003). People who are socially excluded experience bad mood, usually sadness and anger, and feel deprived in basic needs for belonging, self-esteem, control, and meaningful existence (see Williams, 2007). Moreover, they engage in extreme pro- and anti-social behaviors to cope with this threat (see Wesselmann, Ren, & Williams, 2015). For example, socially excluded people show more obedience (Riva, Williams, Torstrick, & Montali, 2014), but are also more aggressive toward neutral persons (Twenge, Baumeister, Tice, & Stucke, 2001). Against the background of its dramatic effects, previous work has argued that social exclusion might also be an important condition that allows terrorism to flourish (Weight-Neville & Halafoff, 2010). Indeed, a Norwegian survey suggested that being an outsider raises the risk for radicalization in adolescents (Pedersen, Vestel, & Bakken, 2018). Also, experimental research has found a causal relationship between social exclusion and the willingness to commit radical acts (e.g., Hales & Williams, 2018; Pfundmair, 2019). Notably, social exclusion is most prevalent among adolescents (Due et al., 2005) and developmental research has reported that adolescents experience greater distress for it (Masten et al., 2009). Therefore, we predicted social exclusion to be a risk factor for radicalism among adolescents.

Another factor which plays a vital role in how people become radical is a person's social identity. A social identity implies that a group membership is internalized and incorporated into a person's sense of self (Tajfel & Turner, 1979). Usually, radicalizing individuals undergo a long period of intense social interaction with a small radical in-group and thereby develop a strong group identification (e.g., Bakker, 2006; Kebbell & Porter,

2012). Having an alternative identity that resists the merging with a radical self-concept, on the other hand, might be a protective factor. Moral identity, a self-concept organized around a set of classical moral traits (Aquino & Reed, 2002), might be of particular interest in this context. The more important the moral identity, the less people construct psychological boundaries that define ‘us’ vs. ‘them.’ For example, people who have a strong moral identity are more likely to favorably perceive the worthiness to assist out-groups, even when these are associated with an intergroup conflict (Reed & Aquino, 2003). Moreover, the moral self-concept affects how moral information is processed (Pletti, Decety, & Paulus, 2019), and a higher moral self-concept has been related to the anticipation of negative feelings when engaging in less other-oriented behavior (Christner, Pletti, & Paulus, 2020). The moral self-concept can be differentiated into an *internalized* aspect that describes the extent to which moral traits are central to the self and a *symbolization* trait that describes the extent to which someone demonstrates their moral traits to the social world (Aquino & Reed, 2002). While some research shows that people with a strong internalized and symbolized moral identity are less likely to accept harming innocent out-group members (Reed & Aquino, 2003), usually, the effects of internalized moral identity are stronger predictors for actual social behavior (Aquino & Reed, 2002). From a developmental point of view, it has been shown that adolescence is an important period for the formation of a moral identity (Damon & Gregory, 1997). Moreover, in adolescent development, internal moral motivations play an increasing greater role (Krettenauer & Victor, 2017). For example, in a recent study, moral identity buffered against the maladaptive effects of high moral disengagement and low self-regulation among adolescents in ages 15-18 (Hardy, Bean, & Olsen, 2015). Therefore, we expected a weak moral identity, particularly with respect to internalization, to be a risk factor for radicalism among adolescents.

In a nutshell, the current study had two goals: On the one hand, it aimed to empirically investigate whether young people are particularly susceptible to both activism and radicalism. We hypothesized that younger compared to older adolescents would not only be more willing to engage in non-violent, legal political actions but also in violent, illegal actions (Hypothesis 1). Therefore, we tested high schoolers across middle to late adolescence and collected data on their willingness to join a political movement and to participate in illegal acts using two different measures. On the other hand, the current study aimed at exploring social exclusion and moral identity as risk factors for radicalism among adolescents. We hypothesized that the experience of social exclusion (Hypothesis 2a) and a weak internalized moral identity (Hypothesis 2b) would make younger individuals more readily express support for illegal and violent political actions. Therefore, we additionally assessed the high schoolers' level of moral identity and manipulated social exclusion using validated scales and paradigms.

To investigate these hypotheses, we combined a classic psychological paradigm with validated self-report questionnaires. Importantly, we approached the research questions experimentally. Experimental designs are rare among radicalism and terrorism research – only 0.6% have used such (Schuurman, 2020). This might be since research in this area is difficult, mostly due to its violent and secretive nature (Schmid, 2011). Although experimental designs come with the obvious limitation that particular concepts can only be approached, they are able to deduce a cause-and-effect relationship.

Methods

Participants

We conducted an a-priori power analysis to test the adequacy of our sample size to detect an interaction with three predictors in a linear multiple regression using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). We specified an alpha level of .05, a 1- β error

probability of .95, and a medium effect size f^2 of .15. The results of the analysis suggested a total recommended sample size of 119.

Participants were 110 students of four Austrian high schools. Of these, 100 participants reported an Austrian, two a mixed Austrian, and eight a non-Austrian nationality (viz. Armenia, China, Croatia, Kosovo or Ukraine). Thirty-five participants were in grade 9 (17 male, 18 female; mean age = 14.80 years, $SD = 0.80$), 34 participants in grade 11 (10 male, 24 female; mean age = 16.91 years, $SD = 0.62$), and 41 participants in grade 12 (10 male, 31 female; mean age = 17.49 years, $SD = 0.55$). (Due to organizational issues, no data could be assessed on grade 10.) Informed consent was obtained from the participating schools, adults and students. The study was approved by the local board of education and the university's ethics board.

Design and Procedure

The study followed a 3 (grades: grade 9 vs. grade 11 vs. grade 12) \times 2 (inclusionary status: social exclusion vs. social inclusion) between-subjects design with random and double-blind assignment to the latter condition; moral identity served as continuous moderator variable.

In each school, the study was conducted in a computer room. One experimenter instructed the participants who were each sitting in front of a computer desk. Participants were informed that the study investigated group processes and attitudes in adolescence. At first, they completed the moral identity assessment. After that, they performed a task called Cyberball which is a classic paradigm developed to manipulate social exclusion (Williams & Jarvis, 2006; see Hartgerink, van Beest, Wicherts, & Williams, 2005, for a recent meta-analysis on its effects). Cyberball games have also been effectively used in children and adolescents in previous developmental studies to induce feelings of social exclusion (e.g., Abrams, Weick, Thomas, Colbe, & Franklin, 2011). At the beginning of Cyberball,

participants were told that they would play an online ball-tossing game with two other classmates. They were asked to mentally visualize what they would experience in the game. Then, the ball-tossing game with three characters, one of them representing the participant, began on the computer display. Without the participants' knowledge, the two other players were computerized and threw the ball to the participants only twice at the beginning of the game (social exclusion) or one third of the time (social inclusion) for a total of 30 throws. After Cyberball, participants conducted a manipulation check covering their basic needs satisfaction and mood. Then, data on activism and radicalism were collected. In the end, participants were thoroughly debriefed.

Materials

Moral identity. Moral identity was assessed by the Self-Importance of Moral Identity Measure (Reed & Aquino, 2003) in a slightly adapted version for adolescents. Participants were asked to imagine a person who is friendly, kind and honest, liked by and caring for others, as well as compassionate, generous and fair. Then, they assessed themselves in relation to this person, with five items covering the internalization (e.g., 'It would make me feel good to be a person who has these characteristics'; $\alpha = .85$) and five items covering the symbolization subscale (e.g., 'I often wear clothes that identify me as having these characteristics'; $\alpha = .79$). All items were answered on 1 = *disagree completely* to 7 = *agree completely* scales.

Manipulation check. Socially excluded people usually report deprived needs satisfaction and a bad mood (see Williams, 2007). Therefore, to check the impact of the inclusionary status manipulation, participants responded to a 4-item needs satisfaction short scale (Rudert & Greifeneder, 2016) using 7-point semantic differentials to assess their levels of belonging ('rejected-accepted'), self-esteem ('devalued-valued'), control ('powerless-powerful'), and meaningful existence ('invisible-recognized'; $\alpha = .89$). Moreover,

participants specified their feelings during Cyberball using an implicit mood measure, the Self-Assessment Manikin (Bradly & Lang, 1994): Along a non-verbal scale depicting a manikin in five gradations, they indicated their level of pleasure on a 1 = *smiling, happy figure* to 5 = *frowning, unhappy figure*, their level of arousal on a 1 = *excited, wide-eyed figure* to 5 = *relaxed, sleepy figure*, and their level of dominance on a 1 = *small figure* to 5 = *large figure* scale.

Activism and radicalism. Participants' activism and radicalism intentions were assessed in two ways. First, we presented participants the description of an animal protection organization and asked them about their willingness to engage in legal, non-violent (activism) and illegal, violent (radicalism) political actions on behalf of this organization. We decided to use an organization with a more accepted ideology (namely, animal protection) to avoid both floor effects (as possibly the case for religious topics) and ceiling effects (as possibly the case for climate topics) in our student sample. Second, participants were asked which legal, non-violent (activism) and illegal, violent (radicalism) political actions they would perform on behalf of a group they chose themselves. Both approaches we used were validated in previous research, however, slightly modified to avoid difficult wording.

The first scale was adapted from Pfundmair (2019; Study 2). The high schoolers were asked to read a text about an existing, militant animal protection organization, 'Animal Liberation Front,' that goes further than traditional animal protection organizations to save animals' lives by freeing animals and taking care of them medically, but also by actually destroying certain institutions. In three items, participants indicated their willingness to join this group ('I would like to be member of this organization', 'I find the ALF appealing', 'I would like to support this organization'; $\alpha = .87$) to assess activism. In three items, they indicated their willingness to commit property damage on behalf of it ('To achieve something, you have to destroy certain structures', 'Destroying animal abusing companies is right',

‘Sometimes you have to break the law to act morally well’; $\alpha = .67$) to assess radicalism in a less reprehensible form. After that, a text about a (fictitious) incident in which several activists sent a poisonous letter to an existing animal testing institute’s manager was presented. The high schoolers were asked about their agreement to commit personal damage on behalf of such a group using three items (‘Sometimes you yourself have to make sure that unscrupulous humans are getting punished’, ‘Violence against humans is sometimes justified’, ‘The activists have acted rightly in sending the letter’; $\alpha = .82$) to assess radicalism in a more reprehensible form.¹ All items were completed on 1 = *not at all* to 7 = *very much* response scales.

In the second scale, participants responded to the Activism and Radicalism Intention Scale (ARIS; Moskalenko & McCauley, 2009). Participants were asked to think of the group they felt closest to, such as a religious group, a student league or the rural youth, and to write the name of that group in a space provided. After that, they were instructed to answer questions about the group they just named. They responded to four items of the activism intention subscale pertaining to non-violent and legal behaviors (e.g., ‘I would donate money to an organization that fights for my group’s rights’, $\alpha = .85$) and to four items of the radicalism intention subscale pertaining to illegal and violent behaviors (e.g., ‘I would continue to support an organization that fights for my group’s rights even if the organization sometimes breaks the law’, $\alpha = .87$). Each item was completed on a 1 = *disagree completely* to 7 = *agree completely* scale.

The study’s raw data can be accessed openly at: <https://osf.io/zb4fm/>.

Results

¹ The subscales “property damage” and “personal damage” were intended to measure willingness to engage in illegal and violent behaviors. Although not all items explicitly referred to illegality or violence, the respective combination of items did. Since all items of each subscale were highly intercorrelated, all $ps < .001$, we have good reasons to assume that they assessed the target construct.

Reporting of descriptive statistics can be found in Table 1 and Figure 1.

[Table 1 and Figure 1 near here]

Analyses on the manipulation check. To check the impact of the inclusionary status manipulation, independent samples *t*-tests were conducted on the manipulation check measures (basic needs satisfaction and mood).

Confirming the effectiveness of the manipulation, excluded participants reported significantly less needs satisfaction ($M = 2.07, SD = 1.16$) than included participants ($M = 4.05, SD = 1.37$), $t(108) = 8.15, p < .001, d = 1.56, 95\%CI = [1.13, 1.98]$. Moreover, excluded participants indicated less pleasure ($M = 2.50, SD = 1.00$) than included participants ($M = 2.12, SD = 0.84$), $t(108) = -2.16, p = .033, d = 0.41, 95\%CI = [0.03, 0.79]$. No differences emerged for arousal (excluded participants: $M = 3.48, SD = 1.32$; included participants: $M = 3.74, SD = 1.25$) or dominance (excluded participants: $M = 3.06, SD = 1.29$; included participants: $M = 3.12, SD = 0.96$), both $ps \geq .290$.

Analyses on the hypotheses. To investigate the hypotheses, we conducted several moderated multiple regressions including all experimental conditions. We entered grade (coded as -1 = grade 9, 0 = grade 11 and +1 = grade 12), inclusionary status (coded as -1 = social exclusion and +1 = social inclusion), and internalized moral identity (standardized) as independent variables. In each analysis, we entered a different dependent variable covering activism or radicalism. Hypothesis 1 was to be investigated in main effects of grade: Significant effects would indicate an age-related difference in activism and/or radicalism. Hypotheses 2a and 2b were to be investigated in interaction effects of inclusionary status and/or moral identity \times grade: Significant effects would indicate risk factors in specific age groups for activism and/or radicalism.

For the dependent variable joining (activism), the model revealed a significant main effect of grade (grade 9 vs. 12), $b = -1.27$, $SE = .36$, $t(98) = -3.55$, $p < .001$, 95% CI = [-1.98, -0.56]. This showed that high schoolers in grade 9 were more willing to join the animal protection organization than high schoolers in grade 12. No other effects emerged, all other $ps \geq .182$. For the dependent variable property damage (radicalism), the model also showed a significant main effect of grade (grade 9 vs. 12), $b = -0.73$, $SE = .33$, $t(98) = -2.24$, $p = .028$, 95% CI = [-1.38, -0.08], with high schoolers in grade 9 indicating more willingness to commit property damage on behalf of the animal protection organization than higher schoolers in grade 12. The model revealed no other significant effects, $ps \geq .061$. Also, no significant effects emerged on the dependent variables personal damage (radicalism), $ps \geq .105$, and activism intention, $ps \geq .063$.

For the dependent variable radicalism intention, the model showed significant main effects of grade (grade 9 vs. 11), $b = -0.80$, $SE = .38$, $t(98) = -2.09$, $p = .040$, 95% CI = [-1.56, -0.04], and of grade (grade 9 vs. 12), $b = -1.22$, $SE = .37$, $t(98) = -3.29$, $p = .001$, 95% CI = [-1.95, -0.48]. These effects demonstrated that high schoolers in grade 9 had more radicalism intentions to support their own group than high schoolers in grade 11 and grade 12. It also revealed a significant interaction effect of moral identity \times grade (grade 9 vs. 12), $b = 0.86$, $SE = .40$, $t(98) = 2.17$, $p = .033$, 95% CI = [0.07, 1.65]. To probe this interaction, we analyzed the effect of grade at different values of the moderator moral identity; we controlled for inclusionary status by entering it as covariate. High schoolers in grade 9 and 12 did not differ when they had a strong internalized moral identity (i.e., 1 standard deviation above the mean), $b = -0.34$, $SE = .49$, $t(103) = -0.70$, $p = .485$, 95% CI = [-1.30, 0.62]. However, high schoolers in grade 9 had more radicalism intentions to support their group than high schoolers in grade 12 when they had a weak internalized moral identity (i.e., 1 standard deviation below the mean), $b = -1.89$, $SE = .54$, $t(103) = -3.48$, $p < .001$, 95% CI = [-2.97, -0.81], see Figure 2.

Although, descriptively, high schoolers with a weak moral identity indicated more radicalism intentions than high schoolers with a strong moral identity in grade 9, they were not statistically different, $b = -0.50$, $SE = .30$, $t(103) = -1.65$, $p = .101$, $95\%CI = [-1.11, 0.10]$. High schoolers with a weak and strong moral identity also did not differ in grade 11, $b = 0.20$, $SE = .25$, $t(103) = 0.79$, $p = .431$, $95\%CI = [-0.30, 0.69]$, and grade 12, $b = 0.27$, $SE = .22$, $t(103) = 1.23$, $p = .223$, $95\%CI = [-0.17, 0.71]$. The model on radicalism intention revealed no other significant effects, $ps \geq .054$.

[Figure 2 near here]

In a second step, we conducted the same moderated multiple regressions, however, entering symbolized moral identity (standardized) instead of internalized moral identity.

For the dependent variable joining (activism), the model revealed a significant main effect of grade (grade 9 vs. 12), $b = -1.12$, $SE = .37$, $t(98) = -2.98$, $p = .004$, $95\%CI = [-1.86, -0.37]$. No other effects emerged, $ps \geq .162$. For the dependent variable property damage (radicalism), a significant main effect of grade (grade 9 vs. 12) emerged, $b = -0.71$, $SE = .34$, $t(98) = -2.06$, $p = .042$, $95\%CI = [-1.39, -0.02]$, but no other significant effects were revealed, $ps \geq .124$. No significant effects emerged for the dependent variables personal damage (radicalism), $ps \geq .239$, and activism intention, $ps \geq .082$. For the dependent variable radicalism intention, the model showed a significant main effect of grade (grade 9 vs. 12), $b = -0.95$, $SE = .38$, $t(98) = -2.49$, $p = .014$, $95\%CI = [-1.71, -0.19]$, however, no other significant effects, $ps \geq .062$.

Discussion

The current study investigated age-related differences as well as protective and risk factors in adolescents' support for activism and radicalism. Extending previous research, it

used an experimental design to study such. It demonstrated that mid-adolescents are not only particularly susceptible for some form of activism but also radicalism, supporting Hypothesis 1. Moreover, a weak internalized moral identity made mid-adolescents more readily express support for radicalism, whereas the experience of social exclusion did not serve as a booster. Thus, while Hypothesis 2a was not confirmed, we found some evidence for Hypothesis 2b. In sum, the study suggests age-related differences in adolescents' support for activism and radicalism, and indicates that moral identity is related to adolescents' support for radicalism.

In the following, we will discuss these findings in greater detail. We will first consider the age-related differences before turning to the role of moral identity and social exclusion.

Age as risk factor for radicalism

In the current study, high schoolers in grade 9, mid-adolescents, not only expressed a greater willingness to join an animal protection organization (which depicted activism) but also to commit property damage on behalf of it (which depicted radicalism) compared to high schoolers in grade 12, late adolescents. They also indicated more radicalism intentions to support their own group than high schoolers in grade 11 and 12. Though, it should be very clear that radical beliefs as observed in this study can inspire radical actions but do not necessarily produce 'bad actions' (McCauley & Moskalenko, 2017, p. 213).

Interestingly, two variables were not affected by age: the most 'harmless' variable, activism intention, and the most reprehensible variable, personal damage. Although younger students expressed a greater willingness to join the animal protection organization and, thus, showed a form of activism (a legal and non-violent action), the latter may be a more extreme step than just expressing activism intentions for the own group since the described organization was clearly militant. Thus, a proneness for extreme, even radical political actions was most prominent among mid-adolescents. Importantly, this proneness did not reach the most drastic form: Although personal damage highly correlated with radicalism intention, it

was not related to age. Keeping these considerations in mind, we cannot exclude the possibility of a ceiling and floor effect for these two variables. The variables covering a medium form of extremism might be more indicative for the current effect.

Clearly, age itself is not a causal factor for activism and radicalism but points to certain psychological challenges adolescents face in this age that may make them vulnerable for such ideas. Developing their identity, in mid adolescence, teenagers start to fervently engage in specific ideologies and take increased risks. In late adolescence, they already have a more solidified identity as they further develop or reject their engagement in ideologies and increase impulse control (McIntosh, Helms, & Smyth, 2003). One could thus speculate that the mid-adolescents' struggles and attempts in developing their own identity might explain the result pattern in our study. Mid-adolescents might be particularly attracted by confidence, impulsivity, risk-taking and status which are associated with activist and, in particular, radical actions (Silke, 2008). It should be noted, however, that we can only speculate about the psychological processes underlying the increased activism and radicalism in mid-adolescents (with some exceptions discussed below). An explicit investigation of the latter would be an important avenue for future research.

All in all, the current study is the first to show in a quasi-experimental design that the readiness to engage not only in legal and non-violent but also in illegal and violent political actions is particularly increased among mid-adolescents. A recent review of methods found that 99.4% of articles on terrorism do not use an experimental design and 78.1% do not incorporate statistics (Schuurman, 2020). Schuurman concluded that 'the empirical verification of explanations for involvement in terrorism [...] seems a long way off' (p. 10). Thus, the current study appears as important step for a more solid empirical foundation in this field of research, bolstering up previous observations on age-related differences in radicalism.

Moral identity as risk factor for radicalism

The results also suggest that moral identity might be a relevant factor for radicalism among adolescents. When high schoolers had a weak internalized moral identity, those in grade 9 had more radicalism intentions to support their own group than those in grade 12. There were no age-related differences for adolescents with a high moral self. This pattern only applied for radicalism on behalf of the own group but not for radicalism on the behalf of the animal protection organization (assessed by the variables property and personal damage). As outlined above, the personal damage variable might have been too extreme to produce valid outcomes. Interestingly, the property damage variable actually showed a similar pattern to the radicalism intentions variable, though the interaction effect did not reach significance².

This finding matches previous research: People who had a strong internalized moral identity were more likely to favorably perceive the worthiness to assist out-groups, even during an intergroup conflict, and less likely to accept harming innocent out-group members as a result of military retaliation (Reed & Aquino, 2003). The current study extends this work to a developing population. Yet, one should note that the results are not conclusive since there was no main effect for moral identity. In addition, the zero-order correlation surprisingly point to a different direction of effect. Moreover, there was no significant group difference for the youngest age group. Nevertheless, the moral self-concept could be a potentially valuable psychological construct for further empirical work on radicalism in adolescents.

Notably, symbolized moral identity did not relate to adolescents' radicalism. This is in line with previous work in adults that demonstrated internalized moral identity to be a

² The model on property damage showed a marginally significant interaction effect of moral identity \times grade (grade 9 vs. 12), $b = 0.67$, $SE = .35$, $t(98) = 1.90$, $p = .061$, 95%CI = [-0.03, 1.37]. To probe this interaction, we analyzed the effect of grade at different values of the moderator moral identity; we controlled for inclusionary status by entering it as covariate. High schoolers in grade 9 and 12 did not differ when they had a strong internalized moral identity (i.e., 1 standard deviation above the mean), $b = -0.10$, $SE = .43$, $t(103) = -0.24$, $p = .812$, 95%CI = [-0.96, 0.76]. However, high schoolers in grade 9 had more radicalism intentions to support their group than high schoolers in grade 12 when they had a weak internalized moral identity (i.e., 1 standard deviation below the mean), $b = -1.45$, $SE = .53$, $t(103) = -2.75$, $p = .007$, 95%CI = [-2.50, -0.41].

stronger predictor for pro- and antisocial behaviors (Aquino & Reed, 2002). From a conceptual point of view, internalized moral identity represents inner convictions that seem more important for concrete actions than superficial symbolization. Thus, only strong moral convictions may be regarded as protective factors against radicalism. In summary, the current study hints to a possible relation between moral identity and radicalism, and suggests an avenue for future research.

Social exclusion as risk factor for radicalism?

In our study, social exclusion was not a risk factor for radicalism among adolescents. This was surprising because previous empirical research consistently found a relationship between social exclusion and radical ideas, at least for adult participants (Hales & Williams, 2018; Pfundmair, 2019). The prevalence of social exclusion increases with lower age (Due et al., 2005), that is, young people more likely handle incidents of social exclusion. Habituation might be a reason for social exclusion not being relevant in radicalism among adolescents. However, it should be noted that the manipulation of social exclusion in our study did not appear to be very strong: Participants played Cyberball sitting in a class room together with their classmates. In previous experimental studies that found a relationship between social exclusion and a radical mindset using the same animal protection paradigm, participants were excluded alone and face-to-face (e.g., Pfundmair, 2019). Moreover, real-life social exclusion which has been revealed as risk factor for radicalization is usually very profound, reaching phenomena like alienation or isolation (Weight-Neville & Halafoff, 2010). Nevertheless, we found an effect of reduced needs satisfaction and pleasure for excluded participants pointing to an effective manipulation. We have to leave it to future research to explore this issue in greater detail.

Limitations

Finally, some limitations of this study should be addressed. The current work approached the central phenomena using experimentally controlled and thus – to some extent – artificial paradigms. Moreover, the scenario of animal protection which was used in the first set of variables is clearly different from other, less acceptable forms of radicalism like nationalism or religious fundamentalism. Although it has been proposed that all ideologies share basic characteristics of radical groups, from experiencing problems in society to embracing an ideology that legitimizes violence (see Doosje et al., 2016), a generalization out of the current data seems not warranted at this point. This is especially true since there are empirically validated differences between such: For example, compared to far-Rightists and religious extremists, eco- and animal rights extremists rarely target individuals, and when they do, it is mostly due to intimidation not for murder (as indicated in our items). Moreover, for far-Rightists and religious extremists, societal success seems to be blocked for different reasons, whereas the far-Left seems to have achieved some goals but got frustrated by it (Chermak & Gruenewald, 2015). This could also be a reason why social exclusion has not been effective in increasing radicalism in the current study. Notably, however, it did also not affect the more general radicalism scale. Another limitation is the specificity of the investigated sample. Whereas its demographic pattern (mostly female, visiting a high school) might be typical for left-wing or single issue groups (like the here used ALF), it is not typical for other radical groups (e.g., Smith, 1994). Moreover, females respond differently to social situations like instances of exclusion. For example, in response to social exclusion, females tend to socially compensate, whereas males rather socially loaf (Williams & Sommer, 1997). This might have blurred our results. Thus, in future research, it would be valuable to focus also on other, fundamentally different ideologies and their typical targets.

Practical Implications

What we learn in practical terms from this work is that adolescents seem to be easily approachable for activist and, in particular, radical ideas, the more the younger they are. Although it is desirable when young people engage in activism programs, it is alarming that a younger age also makes more vulnerable to radicalism. Thus, safeguarding particularly young people could be an important step to prevent radicalism. The public health model classifies three levels of prevention (Simeonsson, 1991) that can be transferred to radicalism: primary prevention which is applied to the general population, regardless of whether this population is likely to radicalize or not; secondary prevention which targets people at specific risk to radicalize; and tertiary prevention which involves interventions for already radicalized individuals (Harris-Hogan, Barrelle, & Zammit, 2016). Tapping into means of secondary prevention, adolescents should be supported to protect themselves against extremist propaganda, for example by promoting their critical media literacy (Schmitt, Rieger, Ernst, & Roth, 2018). The current work also suggests another approach to protect teenagers from radicalism: a strong moral identity. This could be supported by parents and moral education in schools (Lapsley & Stey, 2014).

Conclusion

This research aimed to illuminate age-related differences in activism and radicalism through empirical means. Finding young individuals, particularly those with a weak moral identity, to be at specific risk to engage not only in legal and non-violent but also in illegal and violent political actions, our results contribute to the establishment of an empirical foundation in radicalism research and may animate new means of prevention in developmental populations.

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Table 1

Means and standard deviations per grade (left side) as well as partial correlations (controlled for age; right side) for the main study variables

	<i>M (SD)</i>			Correlation Matrix					
	Grade 9 (<i>n</i> = 35)	Grade 11 (<i>n</i> = 34)	Grade 12 (<i>n</i> = 41)	1	2	3	4	5	6
1. Internalized moral identity	5.41 (1.09)	5.00 (1.34)	4.93 (1.37)	–					
2. Symbolized moral identity	4.15 (1.10)	3.74 (1.24)	3.66 (1.10)	.57***	–				
3. Joining (activism)	5.23 (1.25)	4.61 (1.42)	3.85 (1.71)	.26**	.23*	–			
4. Property damage (radicalism)	5.39 (1.27)	5.05 (1.31)	4.65 (1.43)	.15	.06	.40***	–		
5. Personal damage (radicalism)	3.57 (1.54)	3.11 (1.60)	3.07 (1.59)	-.03	-.04	.17	.19*	–	
6. Activism intention	4.94 (1.50)	4.90 (1.49)	4.54 (1.55)	.20*	.27**	.44***	.29**	.32**	–
7. Radicalism intention	3.34 (1.68)	2.70 (1.31)	2.30 (1.50)	.04	.08	.35***	.36***	.54***	.51***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

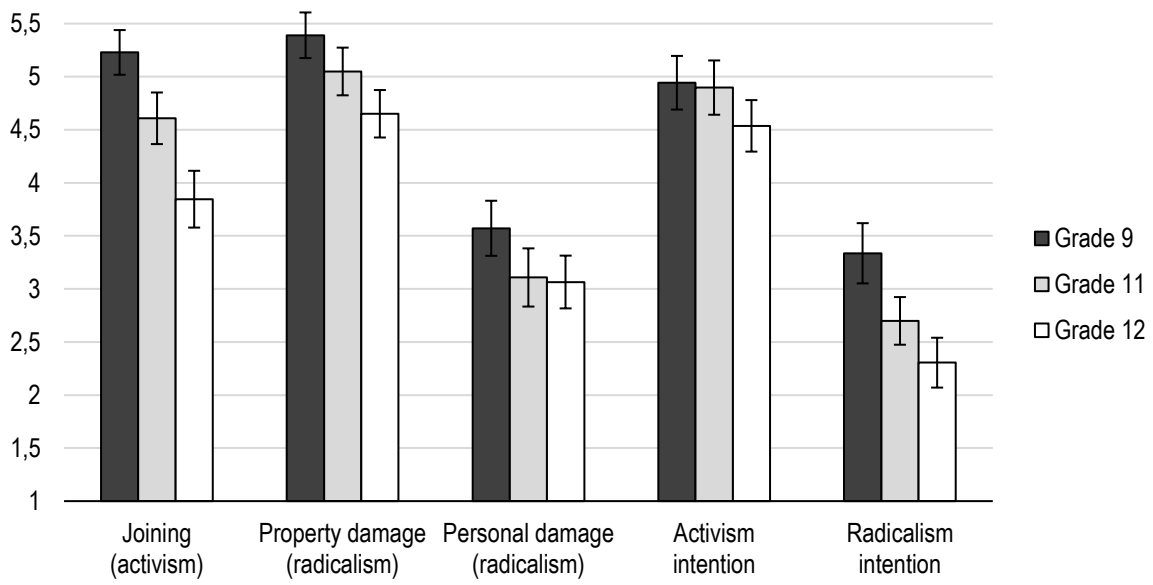


Figure 1. Degree of agreement for activism and radicalism in dependence of grade; error bars represent $\pm 1 SE$.

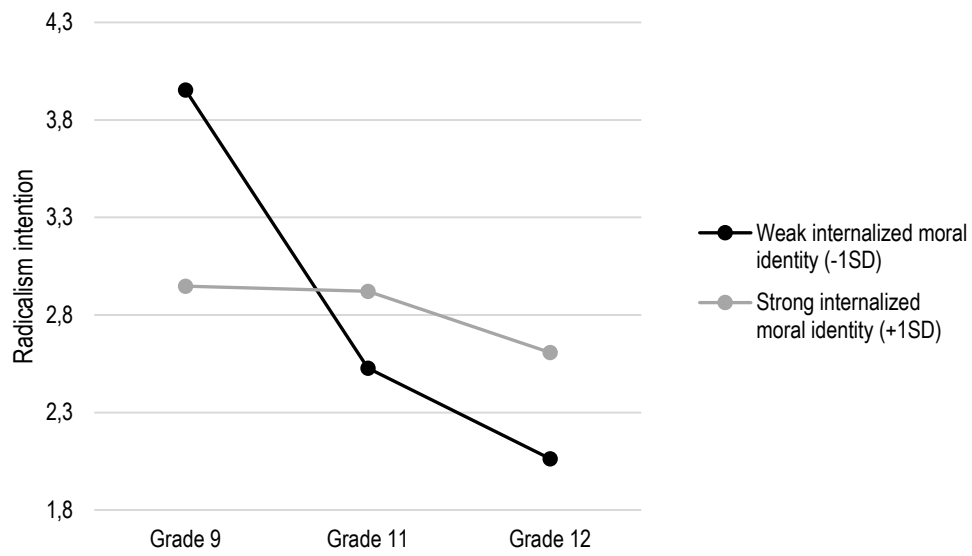


Figure 2. High schoolers in grade 9 indicated more radicalism intentions to support their own group than high schoolers in grade 12 when they had a weak internalized moral identity; no difference emerged for high schoolers when they had a strong internalized moral identity.