Adolescent Psychological Well-Being, Radicalism, and Activism: The Mediating Role of Social Disconnectedness and the Illegitimacy of the Authorities

This is an Original Manuscript of an article published by Wiley in Journal of Research on Adolescence on March 2021, available at

https://onlinelibrary.wiley.com/doi/full/10.1111/jora.12590

Citation

Costabile, A., Musso, P., Iannello, N. M., Servidio, R., Bartolo, M. G., Palermiti, A. L., & Scardigno, R. (2021). Adolescent psychological well-being, radicalism, and activism: The mediating role of social disconnectedness and the illegitimacy of the authorities. *Journal of Research on Adolescence*, *31*(1), 25-33. https://doi.org/10.1111/jora.12590

Abstract

The identification of factors that counter youth's radicalization while promoting democratic activism is a timely social issue. This paper examines the association of psychological wellbeing (PWB) with violent radicalism and non-violent activism, by focusing on the mediating role of both social disconnectedness (SD) and the perceived illegitimacy of the authorities (PIoA). Two mediation structural equation models (full vs. partial) were applied to data collected from 328 Italian adolescents (14-19 years). The results showed how SD and PIoA fully mediated the link of PWB with radicalism (negatively) and activism (positively). This model was further supported when compared with an alternative one proposing PWB as a mediator between SD and PIoA. The findings are discussed in light of the existing literature and provide potential implications for practice.

Keywords: psychological well-being, radicalism and activism, social disconnectedness, perceived illegitimacy of the authorities, adolescents.

Introduction

The term radicalization identifies a process by which individuals embrace extreme belief systems that may "justify the use of violence to effect social change" (Maskaliūnaitė, 2015, p. 14). Some authors have claimed that adolescence is a sensitive phase for the onset of this phenomenon. Indeed, in their transition to adulthood, youth undergo several biological, psychological, and social transformations that may lead them to disorientation and crisis. Such psychological vulnerabilities may propel youths to engage in extreme ideologies rooted in exclusive groups and identities, as a means to find certainty and a sense of connectedness (Campelo, Oppetit, Neau, Cohen, & Bronsard, 2018; Heinke & Persson, 2016).

From a demographic standpoint, radicalized people are often young men aged between 15 and 25, but the percentage of women is growing (Heinke & Persson, 2016; Khosrokhavar, 2014). A clear explanation for males being more predisposed to radicalize is still missing, yet greater attraction to risk behaviors is likely to drive boys to communities fulfilling their need for extreme sensations (Silke, 2008).

Among the individual factors prompting youth radicalization, psychological wellbeing (PWB) seems to play a crucial role. Relatedly, it has been found that adolescents who lack self-esteem or life satisfaction, and exhibit psychological problems, such as anxiety and depression, may be more inclined to adopt radical beliefs (e.g., Feddes, Mann, & Doosje, 2015; Rohr, 2017) and to feel close to ideologically oriented groups where they might find "a personal role, a clear worldview, and a righteous purpose" (Dalgaard-Nielsen, 2008, p. 10). However, little is known about the processes by which PWB may be related to youth radicalization. In order to fill this gap, in this study it is supposed that PWB may be linked to youth's intention to violently fight in order to support the renewal of their closest groups through the mediating role of social variables. This is in line with the assumption that it is the interplay of personal and environmental factors that sets the stage for extreme worldviews and actions (Campelo et al., 2018).

Among the societal factors triggering youth radicalization, the perception of not belonging to larger communities (i.e., social disconnectedness), and mistrust of the authorities based on the feeling that their policies are unfair (i.e., perceived illegitimacy of the authorities) have been associated with adolescents' favorable attitudes toward violence (Doosje, van de Bos, Loseman, Feddes, & Mann, 2012; Doosje, Loseman, & van de Bos, 2013). Moreover, it has been argued that there exist positive relations of PWB with social connectedness (Alcalá, Sharif, & Samari, 2017) and the perception of the legitimacy of the authorities (Prilleltensky, 2013). In light of this evidence, it seemed possible to suppose that social disconnectedness (SD) and the perceived illegitimacy of the authorities (PIoA) might mediate the association between PWB and youths' intention to turn to extreme ideologies and actions in order to establish a new social orderliness. Significantly, in order to bring about the expected changes, people may resort not only to violent actions (radicalism), but also to nonviolent ones (activism; Moskalenko and McCauley, 2009). When youth experience lower levels of PWB, a higher sense of being cut off from society and a higher perception of the illegitimacy of the authorities, they are more likely to show higher levels of radicalism (Doosje et al., 2013); when they feel well, perceive social affiliation and trust authorities, they might choose to use more democratic means to achieve their goals (Bartolo et al. 2020; Bobek, Zaff, Li, & Lerner, 2009).

What is more, SD may potentially be related to distrust in the possibility that institutions could treat people properly (van Prooijen, van den Bos, & Wilke, 2004). Hence, when individuals do not feel connected to society at large, they might blame the authorities for using unjustified procedures that exacerbate their condition. Consequently, people perceiving such damage might engage in action, as well as reinforce their ties with groups (e.g., political, religious or ethnic groups) that experience the same grievance and dissatisfaction toward the authorities. Interestingly, a stronger identification with such a milieu may exacerbate the perception that it is superior, yet treated worse than other communities; hence, it may corroborate youth's willingness to fight in order to defend their rights (Doosje et al., 2013).

Based on this line of reasoning, SD may mediate the relations between youth's PWB and PIoA; in turn PIoA may mediate the relations of PWB and SD with social actions. Theoretically speaking, when adolescents exhibit low levels of PWB, they may both go through social detachment and attribute their state to authorities' inability of providing favorable outcomes; as a result of these conditions, youth may launch illegal protests, and join groups justifying the use of violence as a means to achieve social changes (van den Bos, 2018).

The above-described model may provide a compelling picture of how the interaction between individual characteristics (PWB) and social variables (SD, PIoA) can foster youth radicalization (Figure 1a). However, it is worth stressing that PWB might also have a direct association with individuals' perception of the authorities, regardless of the overall mediation of SD. Indeed, it is plausible that psychological distress might be associated with anger against leading authorities when individuals do not feel that their needs and expectations are satisfied (Prilleltensky, 2013; Bhui, Hicks, Lashley, & Jones, 2012). Hence, a partial mediating role of SD in the link between PWB and the perception of the illegitimacy of the authorities should be explored as well (Figure 1b).

That said, the perspective adopted so far has mainly referred to studies in which the possibility of establishing causal effects between the variables relevant for this research was hindered by a cross-sectional design approach. Therefore, it is also reasonable to think of alternative models such as the one in which PWB mediates the relations between SD and

PIoA (Figure 1c). Specifically, this model contemplates the possibility that experiencing SD might lead youth to experience frustration and psychological problems (Rousseau et al., 2019), which, in turn, might be related to mistrust of the authorities and to a proneness to rise up in an attempt to restore feelings of personal significance.

Finally, when examining the above-mentioned relationships, the role of socioeconomic status (SES) should be considered. With regard to this, the literature is controversial: some researchers have argued that a low SES might not be relevant for youth radicalization (e.g., Maleckova, 2005), whereas others have stressed that poverty, educational underachievement, and unemployment might significantly contribute to it (e.g., Tanoli, Jaffry, & Ali, 2018). These revealing findings motivate a further investigation conducted as part of this study, and which included SES as a control variable.

The present study

The aim of the current study was to test a mediation model whereby PWB relates to radicalism and activism via both SD and PIoA. In light of the previous arguments, we controlled for age, gender, and SES. This study is in line with other contributions investigating individual and social factors that may influence the onset of socio-political action (Doosje et al., 2013). However, to the best of our knowledge, it is the first research to assess a clear theoretical model of the relative and joint roles of the above-mentioned variables. In particular, we hypothesized (see Figure 1a) that (a) SD and PIoA would mediate the negative relation of PWB with radicalism as well as the positive relation with activism (H1); (b) SD would mediate the negative association between PWB and PIoA (H2); (c) PIoA would mediate the positive relation of SD with radicalism as well as the negative relation with activism (H3). Furthermore, we explored whether our hypothesized model was supported when compared with the models in Figure 1b and Figure 1c.

Method

Participants and Procedure

Participants included 328 adolescents aged 14-19 years (M = 16.67, SD = 1.50; 55% males) recruited from State high schools in Southern Italy. The sample was racially and ethnically homogeneous. Ninety-seven percent of participants were European Caucasian and, of these, 97% were Italian. The majority were Catholic (77%). The SES of their families was mostly medium; based on a three-tier classification of scores developed using the Barratt Simplified Measure of Social Status (BSMSS, Barratt, 2012), 9% fell into the low-tier, 83% into the medium, and 8% into the high. The local ethics committee approved this study and its procedures. Data were collected during school time through an online questionnaire that was made available to students in the computer lab. The school principals, parents, and adolescents' written informed consent was obtained prior to collecting data.

Measures

Socio-demographics. Respondents were asked to indicate their age, gender (0 = male, 1 = female), ethnicity, and religion. SES was measured using BSMSS (Barratt, 2012), with scores ranging between 8 and 66.

Psychological well-being. We assessed PWB via three indicators: self-esteem, life satisfaction, and psychological problems. Self-esteem was measured by the five positive items (e.g., "On the whole, I am satisfied with myself") of the Rosenberg Self-Esteem Scale (1965). Life satisfaction was measured by the five items (e.g., "So far I have gotten the important things I want in my life") of the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). Psychological problems were measured by six items (e.g., "I feel that no one loves me") from the anxious/depressed syndrome scale of Youth Self-Report (YSR; Achenbach & Rescorla 2001). In all cases, items were rated on a 5-point Likert-type scale, from *strongly disagree* (1) to *strongly agree* (5) for self-esteem and satisfaction with life, and from *not true* (1) to *very true* (5) for psychological problems. The

internal reliability consistencies for scores from these scales (Cronbach's α s) were acceptable, ranging from .72 for psychological problems to .82 for self-esteem and life satisfaction.

Social disconnectedness. We assessed this construct in terms of disconnection from Italian society at large, by using four items (e.g., "In general, I feel involved in Italian society" – reverse coded) adapted from Doosje et al. (2013). Items were rated on a 5-point Likert-type scale, from *strongly disagree* (1) to *strongly agree* (5). Cronbach's α was high (.87).

Perceived illegitimacy of the authorities. We assessed this construct in terms of the perceived illegitimacy of the Italian government and police, by using three items (e.g., "I respect the Italian government" – reverse coded) adapted from Doosje et al. (2013). Items were rated on a 5-point Likert-type scale, from *strongly disagree* (1) to *strongly agree* (5). Cronbach's α was acceptable (.72).

Radicalism and activism. We assessed radicalism (illegal and violent action) and activism (legal and non-violent action) as two distinguishable, but correlated dimensions of socio-political mobilization in defense of relevant personal groups. Particularly, radicals and activists are supposed to share the common intention to effect social change, but they adopt qualitatively different means to reach their goals. Nevertheless, although not automatically, activists might transit to radicalism under specific conditions. These constructs were measured by using the eight-item Activism and Radicalism Intention Scales (Moskalenko & McCauley, 2009). Participants were initially presented with a list of 10 potential social groups to which they could belong (for example, political, ethnic, religious, and "other" – to be completed) and asked to choose which group they felt closest to ("Among these groups, indicate the one you feel closest to"). Then, they were informed that "my group" in the next eight questions referred to the group they had just chosen. The four items for radicalism (e.g.,

"I would attack police or security forces if I saw them beating members of my group"), as well as the four items for activism (e.g., "I would donate money to an organization that fights for my group's rights), were rated on a 5-point Likert scale, from *strongly disagree* (1) to *strongly agree* (5). Cronbach's αs for both radicalization (.83) and activism (.87) were high.

Data analysis

Descriptive statistics for the observed variables were initially calculated using version 24 of the Statistical Package for the Social Sciences (SPSS). Specifically, mean scores, standard deviations, and normality statistics were computed. Afterward, a series of structural equation models (SEMs) were estimated using Mplus 7 (Muthén & Muthén, 2014). First, we performed a SEM to test a measurement model including the latent variables for PWB (with self-esteem, life satisfaction, and psychological problems as indicators), SD, PIoA, radicalism, and activism (with the respective items as indicators), as well as all their potential covariances. After introducing the control variables of age, gender, and SES in this model, we obtained the bivariate correlations for all the variables of interest. Second, we estimated a full mediation SEM to test the relations between the latent variables, as illustrated in Figure 1a; age, gender, and SES were controlled by allowing them to predict all the latent variables. Third, we estimated a partial mediation SEM including a direct path from PWB to PIoA, to assess whether or not SD fully accounted for this relation (see Figure 1b). All indirect paths were tested. Finally, an alternative model was evaluated, where PWB mediated the relation between SD and perceived illegitimacy of the authorities (see Figure 1c). By acknowledging the potential limitation of the chi-square test (γ^2 should be non-significant with p > .05), due to its tendency to reject the null hypothesis with large sample sizes and complex models, we relied on well-known goodness-of-fit indices and their associated cutoffs to evaluate model fit (e.g., Kline, 2015): CFI and TLI \geq .90 for acceptable and \geq 0.95 for good fit, RMSEA \leq .08 for acceptable and \leq .05 for good fit, and SRMR \leq .10 for acceptable and \leq .05 for good

fit. In order to ascertain significant differences between nested models (the more vs. less restrictive model), at least two of these four criteria had to be satisfied (Kline, 2015): $\Delta \chi^2$ significant at p < .05, $\Delta CFI \leq -.010$, $\Delta RMSEA \geq .015$, and $\Delta SRMR \geq .010$. A significant worsening of fit between the non-nested alternative vs. hypothesized models was established when the following criterion was met: higher values of both AIC and BIC indices.

Results

Preliminary analyses

Tables 1 summarizes the descriptive statistics and shows how some observed variables were not normally distributed with skewness and kurtosis values > |1.00| (Kline, 2015). As multivariate non-normality was also evidenced (normalized Mardia's coefficient was 23.56, p < .001), the data were subsequently analyzed using maximum likelihood robust estimation methods. Both the measurement model, $\chi^2(125) = 191.45$, p < .001, CFI = .952, TLI = .941, RMSEA = .040, SRMR = .053, and the SEM specifying all the covariances among latent and control variables, $\chi^2(164) = 260.28$, p < .001, CFI = .933, TLI = .914, RMSEA = .042, SRMR = .050, fit the data acceptably. Bivariate correlations are reported in Table 2.

Mediation model

We estimated the full and partial mediation models. In the initial estimate of the full mediation model, age was uncorrelated with all the other variables, while gender was significantly related to PWB, SD, and PIoA, and SES was significantly linked to PWB. In light of this, age was excluded from the model, only the significant paths for gender and SES were retained, and the model was re-estimated. This full mediation model fit the data adequately, $\chi^2(162) = 254.43$, p < .001, CFI = .935, TLI = .924, RMSEA = .042, SRMR = .056. When comparing the full and the partial mediation models, no significant differences were found, $\Delta \chi^2(1) = 14.52$, p = .0001, $\Delta CFI = -.005$, $\Delta RMSEA = .002$, and $\Delta SRMR = .003$.

Thus, the full mediation model was considered the final model (see Figure 2 for all direct associations). In terms of indirect relations, the model showed how: (a) PWB was indirectly and significantly linked through SD and PIoA to both radicalism ($\beta = ..04$, p = .016) and activism ($\beta = .05$, p = .009); (b) SD was significantly linked through PIoA to both radicalism ($\beta = .10$, p = .012) and activism ($\beta = ..11$, p = .004); (c) gender was indirectly and significantly linked through PWB, SD and PIoA to both radicalism ($\beta = .02$, p = .023) and activism ($\beta = ..02$, p = .015), as well as only through PIoA ($\beta = ..02$, p = .049, for radicalism, and $\beta = .03$, p = .027, for activism); (d) SES was indirectly and significantly linked through PWB, SD and PIoA to both radicalism ($\beta = .01$, p = .018).

Alternative model

The comparison between the alternative model and the proposed full mediation model provided a worse fit for the former, $\Delta AIC = 26.10$, $\Delta BIC = 26.09$. Accordingly, the model positing an alternative inverse relationship between PWB and social connectedness was rejected, and the hypothesized model was retained.

Discussion

Up to now, literature suggested a possible association between youth's psychological vulnerabilities and proneness to radicalize (Campelo et al., 2018). Nevertheless, there is still a dearth of research considering mechanisms by which psychological problems might trigger adolescents' engagement in extreme ideologies and behaviors. Based on the assumption that radicalization is the byproduct of individual and social factors, this study showed that among adolescents PWB is linked to radicalization and activism through its role in SD and PIoA.

Overall, current findings highlighted that PWB is negatively related to the adoption of an extreme beliefs system leading to violent crusades (radicalism) and, contrariwise, that it is positively connected to adherence to non-violent campaigns (activism). However, as expected, both SD and PIoA mediated the association of PWB with radicalism and activism (H1). This result showed how youth with higher levels of psychological adversities (e.g., anxiety, depression, life dissatisfaction) might embrace a radical beliefs system rooted in SD and PIoA. In other words, youth might detach from society because of their psychological condition; concurrently, withdrawing may lead adolescents to blame authorities of their isolation, thus, to perceive them as illegitimate. In short, the interplay of all these factors seemed to confirm that psychological discomfort alone is not a sufficient condition to foster radicalism (Doosje et al., 2013); rather, it is the interaction of personal psychological well-being and psychosocial aspects that lays the ground for extreme beliefs and actions to occur (Soliman, Bellaj, & Khelifa, 2016).

Our hypothesis that SD fully mediates the association between PWB and PIoA was also supported (H2). This is in line with literature indicating the key role of social connectedness in preventing discontent among individuals and groups, as well as their vulnerability to extreme ideologies and actions (Alcalá et al., 2017). Such a finding was further corroborated by the fact that the alternative theoretical model tested (PWB as a mediator between SD and PIoA) was not supported.

We found evidence for H3 with regard to the mediation of PIoA between SD and radicalism and activism. When youth feel detached from society at large, they are more likely to perceive that the authorities fail to adequately involve them in the civic arena. This relates to youth's higher levels of mistrust of the authorities, as well as to greater intentions to act illegally rather than by democratic means to obtain what they think they ought to have. This result is consistent with previous research, claiming that youth show favorable attitudes toward violence when they believe that the authorities are incapable of satisfying their need for social connectedness (Doosje et al., 2013). Thus, adolescents may engage or strengthen their ties with groups (e.g., political, ethnic, religious groups) perceiving the same problems in society and offering black-and-white worldviews that may justify disruptive behaviors.

In addition, our study showed that age was not related to any of the study variables; we argued that this may be attributed to the homogeneity of our sample. However, it reported valuable results about gender differences in the social mobilization process. Indeed, in our sample females and males showed higher or lower levels of radicalism and activism depending on the mediating patterns. More specifically, females showed more radical and less activist intentions than males when considering simultaneously the mediation of PWB, SD, and PIoA. Interestingly, it seemed that SD, PIoA, and willingness to resort to violence were all related to girls' lower levels of PWB compared to males. Yet, an opposite pattern of relations (females with less radical and more activist intentions than males) was evidenced when considering the mediation of the perception of the illegitimacy of the authorities alone. In this case, girls reported a more positive perception of the authorities, which may be related to more acceptable forms of social action; conversely, males were more inclined to mistrust authorities and more prone to resort to violent means. Briefly, our findings seem to suggest that there may exist specific paths leading males and females to different types of social action; paths including factors linked to radicalization attitudes that are more social for males (i.e., PIoA) and more individual (i.e., PWB) for females.

Finally, in the current study activism and radicalism resulted as two different dimensions of political action, although correlated. This is line with Moskalenko and McCauley (2009) who found that radical and activist intentions may be distinguished according to the methods used to effect social change (violent vs. non-violent). With regard to the correlation between the two dimensions, it could be argued that several factors, such as personality dispositions, past history of violence, identification with specific groups, or historical/contextual variables (Moskalenko & McCauley, 2009) that were not taken into account in this study might explain why some youth might the transit from legal methods to illegal ones. With regard to the relations of socio-economic background with radicalism and activism, it emerged that high levels of SES are likely to be associated with less radical and more activist intentions through the mediating role of the other variables examined. Indeed, adolescents with higher SES showed greater PWB, felt more socially connected, and had a more positive perception of the authorities; the combination of all these factors seemed to be linked to the willingness to participate in legal rather than illegal actions.

Although compelling, this study has some major limitations. First, the design was cross-sectional, thus hindering the ability to clearly establish the direction of the associations between variables. Thus, while the robustness of the results presented here was evaluated by testing an alternative model, future studies should explore some other plausible models and adopt a longitudinal approach to draw more solid conclusions about both causal mechanisms and developmental processes among adolescents. Second, the measures were self-reported, and hence may lead to a social desirability bias. Third, not only was the study sample ethnically and religiously homogeneous, but it also did not distinguish between radicalized vs. non-radicalized adolescents; thus, it is unclear to what extent these findings can be generalized to larger and more diverse populations. We therefore encourage future studies to include heterogeneous samples and comparisons across different adolescent groups. Fourth, our study investigated the relations of a limited number of individual (PWB) and social (SD, PIoA) factors with radicalism and activism. This might explain the underperformance of our model, and especially the low effect size of PIoA on social action outcomes. Other correlates of radicalization should be taken into account, such as personal and collective relative deprivation.

Despite these shortcomings, to the best of our knowledge, this is the first study to propose a comprehensive model of how PWB, SD, PIoA, radicalism and activism relate to one another. Furthermore, the current findings may have practical implications for the effort to counter youth radicalization and promote democratic activism. Particularly, not only should intervention programs increase adolescents' PWB, but they should also facilitate their social cohesion and promote communication and mutual trust between youth and institutions.

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Table 1

Mean Scores, Standard Deviations, Skewness, and Kurtosis for the Study Observed Variables (N = 328).

Observed variable	Mean	Standard deviation	Skewness	Kurtosis
Psychological well-being (scored 1-5)				
Self-esteem	3.58	0.90	-0.64	-0.05
Life satisfaction	3.24	0.91	-0.31	-0.55
Psychological problems	1.97	0.79	1.14	1.05
Social disconnectedness (scored 1-5)				
Item_1	2.23	1.04	0.81	0.21
Item_2	2.00	1.11	1.08	0.48
Item_3	1.94	1.08	1.17	0.77
Item_4	2.19	1.06	0.69	-0.18
<i>Perceived illegitimacy of authorities (scored 1-5)</i>				
Item_1	2.99	1.19	0.22	-0.78
Item_2	2.41	1.21	0.60	-0.56
Item_3	2.35	1.12	0.60	-0.25
Radicalism (scored 1-5)				
Item_1	2.84	1.23	-0.02	-0.84
Item_2	2.48	1.29	0.26	-1.09
Item_3	2.56	1.29	0.21	-1.05
Item_4	2.71	1.40	0.22	-1.17
Activism (scored 1-5)				
Item_1	2.99	1.17	-0.24	-0.54
Item_2	2.89	1.12	-0.13	-0.54
Item_3	3.20	1.13	-0.41	-0.35
Item_4	3.15	1.22	-0.39	-0.71
Socio-demographics				
Age	16.67	1.50	-0.18	-0.90
Gender ($0 = male, 1 = female$)	0.45	0.50	0.19	-1.98
Socio-economic status (scored 8-66)	44.56	11.45	-0.31	0.19

Table 2

Bivariate Correlations Among Latent and Control Variables of Study After Estimating a Structural Equation Model Specifying All Covariances Between Them (N = 328).

	1.	2.	3.	4.	5.	6.	7.	8.
1. Psychological well-being	-							
2. Social disconnectedness	 41 ^{***}	-						
3. Perceived illegitimacy of authorities	40***	.58***	-					
4. Radicalism	07	10	.16*	-				
5. Activism	.07	07	21**	.56***	-			
6. Age	.08	02	.02	.05	.10	-		
7. Gender ($0 = male$, $1 = female$)	33***	.03	13***	08	01	08	-	
8. Socio-economic status	.24***	02	08	.01	.01	.02	.06	-

p < .05, p < .01, p < .01, p < .001.





Figure 2. Estimated structural equation model for the final best fitting model. Standardized regression coefficients are shown. The standardized significant indirect effects on radicalism and activism a) of psychological well-being through both social disconnectedness and perceived illegitimacy of authorities were respectively $\beta = -.04$, p = .016, and $\beta = .05$, p = .009; b) of social disconnectedness through perceived illegitimacy of authorities were respectively $\beta = .10$, p = .012, and $\beta = ..11$, p = .004; c) of gender through psychological well-being, social disconnectedness and perceived illegitimacy of authorities were respectively $\beta = .02$, p = .023, and $\beta = -.02$, p = .015; d) of gender through only perceived illegitimacy of authorities were respectively $\beta = -.02$, p = .049, and $\beta = .03$, p = .027; (e) of socio-economic status through psychological well-being, social disconnectedness and perceived illegitimacy of authorities and perceived illegitimacy of authorities were respectively $\beta = -.02$, p = .049, and $\beta = .03$, p = .027; (e) of socio-economic status through psychological well-being, social disconnectedness and perceived illegitimacy of authorities were respectively $\beta = -.02$, p = .049, and $\beta = .03$, p = .027; (e) of socio-economic status through psychological well-being, social disconnectedness and perceived illegitimacy of authorities were respectively $\beta = -.01$, p = .028, and $\beta = .01$ p = .018. *p < .05, **p < .01, ***p < .001.

