



Submitted: 17 July 2019 Accepted: 05 October 2019 DOI: 10.4458/2733-02

ARTICLE INFO

The Dark Side of Homophobic Bullying: the Moderating Role of Dark Triad Traits in the Relationship between Victim and Perpetrator

Il Lato Oscuro del Bullismo Omofobico: Il Ruolo di Moderazione dei Tratti Dark Triad nella Relazione tra Vittima e Perpetratore

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ABSTRACT

Homophobic bullying is bullying related to sexual orientation and gender identity. This study investigated the moderating role of the dark triad traits (i.e., psychopathy, narcissism, and Machiavellianism) in the relationship between being a victim of homophobic bullying and being in turn a perpetrator of homophobic bullying. Participants were 285 adolescents from 16 to 20 years old. Victimization and perpetration of homophobic bullying and the Dark Triad Traits were measured. The moderation effects of dark triad traits were tested using a hierarchical regression analysis. All interaction terms (i.e., victim*psychopathy, victim*narcissism, and victim*Machiavellianism) were significant. Being a victim of homophobic bullying was related to being a perpetrator of homophobic bullying only in the presence of high psychopathy and narcissism. Conversely, high Machiavellianism buffered the relationship between being a victim of homophobic bullying and being a perpetrator of homophobic bullying. Results showed that not all dark triad traits are maladaptive per se. Research and clinical implications are discussed.

Keywords: homophobic bullying; personality traits; dark triad; psychopathy; narcissism; Machiavellianism.

RIASSUNTO

Il bullismo omofobico è una forma di bullismo associato all'orientamento sessuale e all'identità di genere. Il presente studio vuole esplorare il ruolo di moderazione dei tratti della dark triad (psicopatia, narcisismo, Machiavellismo) nella relazione tra vittimizzazione e perpetrazione di bullismo omofobico. I partecipanti erano 285 adolescenti dai 16 ai 20 anni. La vittimizzazione e perpetrazione di bullismo omofobico e i tratti di personalità della dark triad sono stati misurati. Gli effetti di moderazione dei tratti della dark triad sono stati testati con un'analisi della regressione gerarchica. Sono risultati significativi tutti i termini di interazione (vittimizzazione*psicopatia, vittimizzazione*narcisismo, vittimizzazione*Machiavellismo). Essere vittima di bullismo omofobico era legato ad essere perpetratore di bullismo omofobico, solo in presenza di alti livelli di psicopatia e narcisismo. Contrariamente, alti livelli di Machiavellismo diminuivano la relazione tra l'essere vittima di bullismo omofobico ed essere perpetratore di bullismo omofobico. I risultati indicano che non tutti i tratti della dark triad sono maladattivi di per sè. Sono discusse le implicazioni cliniche e di ricerca.

Parole chiave: bullismo omofobico; tratti di personalità; dark triad; psicopatia; narcisismo; Machiavellismo.

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Introduction

Bullying is a physical, verbal or psychological violence, repeated over time, with an imbalance between victims and perpetrators (Olweus, 1994). Juvonen et al. (2014) report that about 4 to 9% of students frequently act as bully towards peers, while about 9 to 25% play the role of victim. A smaller subgroup of student were identified as both a victim and a bully (victim/bully). Regarding the worldwide incidence of bullying, the mean prevalence is 35% both for perpetrators and for victims (Modecki et al., 2014). Italian studies found that about 50% of students aged from 11 to 17 years have suffered peers' violence (ISTAT, 2014).

A review from UNESCO (2012) underlined in different countries the incidence of homophobic bullying (HB), a specific kind of bullying related to sexual orientation and gender stigma (Espelage & Swearer, 2008). Victims are lesbian, gay, bisexual (LGB) youths (Kosciw et al., 2009) and heterosexual students not conforming to traditional gender role expectations (Poteat et al., 2013).

Homophobic victimization (HV) has severe and long-term psychosocial and health outcomes for LGB and gender non-conforming youths (Collier et al., 2013), and also for heterosexual students who have been denigrated for their perceived sexual orientation, or have witnessed homophobic harassment (Silverschanz et al., 2008). Moreover, LGB youths can have difficulties in reporting aggressions and identifying supporting peers and adults (Kosciw et al., 2009).

Regarding age differences, HV starts when adolescents become aware of their sexual attraction and peer group reinforces their gender roles (Birkett et al., 2009). HB and name-calling, as well as other kind of bullying, decrease with age (Espelage, Basile et al., 2018). Regarding biological sex differences, there are inconsistent results. Boys both use and are called with homophobic epithets (Poteat & Espelage, 2005). Men are inclined to have higher levels of homonegativity toward gay men but not toward lesbians (Lingiardi et al., 2016). Moreover, there is an association between the adoption of masculine norms and homophobic behavior during adolescence (Birkett & Espelage, 2015). Lesbian girls are at higher risk of victimization than gay boys and heterosexual students (Ioverno et al., 2016), due to their multi-minority condition (Camodeca et al., 2018).

Finally, as regard sexual orientation differences, LGB youths are predominantly victimized, both in HB and in non-HB dynamics, by heterosexual peers (Russell & Fish, 2016). LGB adolescents reported higher levels of involvement in traditional bullying, both as victims and perpetrators, than heterosexual students (Wensley & Campbell, 2012). Elipe et al. (2018) underlined that also heterosexual students experience high rates of both cyber and traditional HB and HV.

Even if many studies investigated the dynamics of HV, research on students involved in HB both as victims and as bullies still appears to be poor. In a recent review on individual predictors for HB, neither sexual orientation nor HV have been encompassed as possible risk factors for HB perpetration (Espelage, Valido et al., 2018). Thus, to our knowledge, the present research is one of the first studies exploring the relationship between HV and HB.

Studies on traditional bullying showed two different reactions of victims towards their peers: avoidance or revenge. Avoidance leads to social and school withdrawal, while revenge leads to the perpetration of aggressions (Nabuzoka et al., 2009). Victims can have several maladaptive outcomes (Connolly & Beaver, 2016) and can develop externalizing and antisocial behaviors (Wong & Schonlau, 2013). Victims who decide to revenge represent the "victim/bully category", identifying a continuum between victimization and perpetration (Olweus, 1994). Victims/bullies are a high-risk group, more than victims only or bullies only (Cook et al., 2010), showing the highest levels of proactive and reactive aggression (Salmivalli et al., 2002). Moreover, they have less favorable attitudes towards school (Dukes et al., 2009), are more isolated, and can have cognitive and social deficits (Haynie et al., 2001). Thus, they may be more likely to act antisocial and violent behaviors (Haynie et al., 2001).

A meta-analysis showed the relevant role of personality traits in understanding bullies and victims, using the five-factor model (Mitsopoulou & Giovazolias, 2015): Low agreeableness and conscientiousness, and high extraversion and neuroticism can lead to both victimization and perpetration. These results confirmed the findings of Cook et al. (2010), which found the presence of

common predictors in bullies, victims, and victim/bully status. Also low honesty/humility and agreeableness were related to different kinds of bullying (Farrell et al., 2014).

Regarding the role of maladaptive personality traits in bullying, van Geel et al. (2016) found a link between psychopathy and bullying during adolescence. Furthermore, the callous-unemotional traits have been identified as predictors of psychopathy during school age (Frick & Moffitt, 2010). Callous-unemotional traits, corresponding to the affective dimension of psychopathy have been associated with peer aggression and bullying (Fanti & Kimonis, 2012).

Some studies also investigated the role of dark triad traits (Paulhus & Williams, 2002) in bullying. Specifically, the dark triad model refers to three maladaptive personality traits: Psychopathy (i.e., high impulsivity, callousness, stimulation-seeking, antisocial behaviors, lack of anxiety, empathy, and remorse); Narcissism (i.e., exaggeration of self-worth and importance, attention-seeking, and egotism); Machiavellianism (i.e., tendency to strategically manipulate and exploit others, characterized by cunning, cold affect, lack of sincerity or ethical concern). Psychopathy, Machiavellianism and narcissism are related to bullying perpetration, with psychopathy showing the biggest effect (Baughman et al., 2012).

There is empirical evidence on the overlapping among dark triad traits, due to a common disagreeableness (Jakobwitz & Egan, 2006) leading to treat other people callously (Jonason et al , 2009). However, these traits are conceptually distinct (Jones & Paulhus, 2011). All dark triad traits are associated with social dominance orientation (Jones & Figueredo, 2013) and prejudice (Hodson et al., 2009). Moreover, being victim/bullies during high school was found related to high scores for criminal thought, proactive aggression, and psychopathy in adulthood (Ragatz et al., 2011). Both narcissism and psychopathy appeared to be respectively related to functional and dysfunctional forms of impulsivity (Jones & Paulhus, 2011). Psychopathic impulsivity has negative effects both on victims and on psychopathic people (Williams & Paulhus, 2004). Conversely, Machiavellians have more self-control and are less impulsive than psychopathic and narcissistic people, thus they can avoid to engage in counterproductive behaviors, even if they have malevolent intentions (Jones & Paulhus, 2011). Regarding the association between Machiavellianism and experiences of victimization and bullying in primary school, Andreou (2004) found that the victim/bully group showed high levels of Machiavellianism.

Within a transactional perspective, bullying is a process into which contextual and individual characteristics, especially personality traits, can affect the possibility of victims coping and responding to aggressions (Einarsen, 2000). Specifically, different personality traits could moderate the relationship between bullying victimization and psychological problems (Moreno-Jiménez et al., 2007). D'Urso et al. (2018) found how a lack of adaptive interpersonal traits and expressive characteristics is a very important risk factor in the relationship between low trust in peers and HB.

To our knowledge, no studies have yet investigated maladaptive personality traits related to victim/bully status, specifically testing their moderating role in the relationship between victimization and perpetration. Moreover, there is a lack in literature concerning the role of personality in different kinds of bullying (Farrell et al., 2014), and specifically in HB. Thus, within this theoretical framework, this research aims to study the influence of dark triad traits in the relationship between being a victim of HB and being a homophobic bully, specifically clarifying which maladaptive personality traits increase the probability that a victim becomes a bully in turn. Specifically, since dark triad traits were found to be risk factors for aggressions (Baughman et al., 2012), it is hypothesized that psychopathy, narcissism, and Machiavellianism could increase the probability that victims of HB could become in turn homophobic bullies themselves, controlling for age, biological sex, and sexual orientation.

Methods

Participants

An online survey was administered to 285 Italian adolescents (53.7% girls, n = 153) from 16 to 20 years old ($M^{\text{age}} = 17.74$; $SD^{\text{age}} = 0.85$), 86.3% (n = 246) reported being exclusively heterosexual and 13.7% (n = 39) reported to be LGB. They gave their informed consent on the first page of the survey. For minor participants written informed consents were also obtained from parents. This study was approved by the ethics committee of Sapienza University of Rome.

Measures

Socio-demographic data. Participants reported biological sex, age, and sexual orientation. Sexual orientation was assessed using the Kinsey scale (Kinsey et al., 1948). Participants rated their sexual orientation on a 5-point Likert scale from 1 (*Exclusively heterosexual*) to 5 (*Exclusively homosexual*). Sexual orientation was coded as 0 = Heterosexuals and 1 = LGB.

Dark triad traits. The 12-item Dark Triad Dirty Dozen scale (Jonason & Webster, 2010; Schimmenti et al., 2017) evaluated three socially undesirable dimensions of personality on a 9-point Likert scale from 1 (Strongly disagree) to 9 (Strongly agree): psychopathy, narcissism, and Machiavellianism. The three dimensions showed a good reliability: Cronbach's alpha of .71 for psychopathy, .89 for narcissism, and .85 for Machiavellianism.

Non-homophobic bullying. The Florence Bullying and Victimization Scale (FBVS; Palladino et al., 2016) assessed the frequency of victimization (13 items) and perpetration (13 items) of non-HB during the last 3 months on a 5-point Likert scale from 1 (Never) to 5 (More than once a week). Both victimization and perpetration of non-HB showed good reliabilities: respectively, Cronbach's alpha of .83 and .82.

Homophobic bullying. Six items, inspired by the Florence Bullying and Victimization Scale (FBVS; Palladino et al., 2016), assessed the frequency of HB-victimization (3 items; Cronbach's alpha of .77) and of HB-perpetration (3 items; Cronbach's alpha of .75) during the last 3 months on a 5-point Likert scale from 1 (Never) to 5 (More than once a week). The items covered three facets of HB: physical (e.g., "I have been because I am gay or lesbian, or because they thought that I was"), verbal (e.g., "I have been threatened because I am gay or lesbian, or because they thought that I was"), and indirect/relational (e.g., "I have been excluded from activities because I am gay or lesbian, or because they thought that I was").

Data analysis

In order to normalize the distribution of the data, the variables were transformed with the SPSS van der Waerden ranking procedure. Correlations were computed and a 2 (biological sex) x 2 (sexual orientation) multivariate analysis of variance (MANOVA) was run in order to assess if there were biological sex and sexual orientation differences in non-HB and HB victimization and perpetration and in dark triad traits (i.e. psychopathy, narcissism, and Machiavellianism). Finally, a moderation regression analysis was performed, following the suggestions of Aiken and West (1991). In order to have a complete standardized solution, all of the variables (except for biological sex and sexual orientation which were dummy coded) were standardized in advance (z-scores). We tested the hypothesis that dark triad traits (psychopathy, narcissism, and Machiavellianism) could moderate the relationship between being a victim of HB and being a homophobic bully, controlling for biological sex, age, and sexual orientation. Thus, z-scores were multiplied in order to form the three interaction terms (homophobic victims*psychopathy; homophobic victims*narcissism; homophobic victims*Machiavellianism). The moderation effects were then tested in different steps using hierarchical regression analysis. In the first step, socio-demographic variables, being a non-

homophobic bully, and being a non-homophobic victim were included as covariates. In the second step, the criterion (i.e., being a homophobic bully) was regressed on being a victim of HB, psychopathy, narcissism, and Machiavellianism. In the third step, the three interaction terms were finally included in the regression equation.

Results

Descriptive analyses

Correlations are reported in Table 1. Findings of the 2x2 MANOVA showed the presence of overall significant effects of biological sex, Wilks's lambda = 0,86, F(7,270) = 6,34, p < .001, of sexual orientation, Wilks's lambda = 0,78, F(7,270) = 10,64, p < .001, and of the interaction effect of biological sex*sexual orientation, Wilks's lambda = 0,87, F(3,270) = 5,70, p < .001, on the dependent variables. A subsequent set of univariate ANOVAs showed that boys had significantly higher means than girls regarding being a homophobic bully, F(1,280) = 4,08, p = .04, and being a homophobic victim, F(1,280) = 42,18, p < .001. Regarding sexual orientation, LGB participants showed a significantly higher mean than exclusively heterosexual participants regarding being a non-homophobic victim, F(1,280) = 14,70, p < .001, and being a homophobic victim, F(1,280) = 60,22, p < .001. The interaction effect between biological sex and sexual orientation was significant only for being a homophobic victim was higher for LGB boys than for LGB girls, heterosexual boys and heterosexual girls (see Table 2 for the means and standard deviations).

Moderation Effect of Dark Triad Traits

Socio-demographic variables, being a non-homophobic victim, and being a non-homophobic bully, entered in the first step as covariates, accounted for 4,2% of the variance, R=,20, p=.04. Only being a non-homophobic bully was a significant predictor of being a homophobic bully, B=,17, p=.008. In the second step, being victims of HB, psychopathy, narcissism, and Machiavellianism were added to the equation, accounting for 7.7% of the variance, R=,28, with a significant increment of 3.5% in the explained variance, $\Delta F(4,270)=2,57, p=.04$. Only being a non-homophobic bully, B=,17, p=.01, and being victims of HB, B=,21, p=.002, were significant predictors of being a homophobic bully. In the third step, the three interaction terms were added to the model. Being a non-homophobic bully was still a significant predictor but also homophobic victims*psychopathy, B=,35, p<.001, homophobic victims*narcissism, B=,38, p<.001, and homophobic victims*Machiavellianism, B=-,40, p<.001, were significant predictors, adding a significant 17,7% to the explained variance, $\Delta F(3,267)=21,30, p<.001$. Overall, the final model explained 25,5% of the variance, R=,50, p<.001. Full statistics of the final model are reported in Table 3.

Table 1. Correlations among variables

Variables	1	2	3	4	5	6	7	8	9	10
1.Sex (0 = boys; 1 = girls)	1									
2.Age	04	1								
3.Sexual orientation (0 = heterosexual; 1 = LGB)	.06	.01	1							
4.Non-homophobic bully	07	.03	02	1						
5.Non-homophobic victim	04	01	.21***	.27***	1					
6.Homophobic bully	09	.08	.04	.16***	.02	1				
7.Homophobic victim	13*	.05	.34***	.08	.31***	.19***	1			
8.Psychopathy	11	.12*	03	.35***	.10	.06	.09	1		
9.Narcissism	09	.04	02	.30***	.12*	.08	.01	.40***	1	
10.Machiavellianism	10	.05	.05	.40***	.06	.07	02	.49***	.50***	1

Note. *** p < .001; ** p < .01; * p < .05;

Table 2. Means and standard deviations

	Means (SD)						
	Total sample	Boys	Girls	Heterosexual	LGB		
1. Non-homophobic bully	1,24(0,36)	1,28 (0,40)	1,19 (0,31)	1,24 (0,35)	1,23 (0,39)		
2. Non-homophobic victim	1,23 (0,35)	1,24 (0,38)	1,21 (0,32)	1,19 (0,28)	1,44 (0,59)		
3. Homophobic bully	1,01 (0,09)	1,02 (0,12)	1,01 (0,03)	1,01 (0,04)	1,03 (0,21)		
4. Homophobic victim	1,03 (0,16)	1,05 (0,22)	1,01 (0,05)	1,00 (0,02)	1,16 (0,40)		
5. Psychopathy	2,93 (1,75)	3,18 (1,85)	2,71 (1,63)	2,95 (1,77)	2,77 (1,63)		
6. Narcissism	3,8 (2,23)	4,02 (2,27)	3,61 (2,19)	3,82 (2,26)	3,65 (2,08)		
7. Machiavellianism	2,70 (1,84)	2,88 (1,83)	2,55 (1,84)	2,67 (1,84)	2,88 (1,85)		

Note: N = 285

Table 3. Hierarchical regression analysis

	Homophobic bullies					
Predictor	ΔR^2	В	SE			
Step 1	,04*					
Sex $(0 = Boys; 1 = Girls)$		- 0,17	0,12			
Age		0,08	0,07			
Sexual orientation ($0 = heterosexual; 1 = LGB$)		0,15	0,17			
Non-homophobic bully		0,17**	0,06			
Non-homophobic victim		- 0,04	,06			
Step 2	,03***					
Sex		- 0,12	0,12			
Age		0,07	0,07			
Sexual orientation		- 0,02	0,18			
Non-homophobic bully		0,17*	0,07			
Non-homophobic victim		-0,09	0,06			
Homophobic victims		0,21**	0,07			
Psychopathy		-0,05	0,07			
Narcissism		,05	0,07			
Machiavellianism		0,01	0,07			
Step 3	,18***					
Sex		- 0,11	0,11			
Age		0,04	0,06			
Sexual orientation		- 0,12	0,17			
Non-homophobic bully		0,13*	0,06			
Non-homophobic victim		-0,08	0,06			
Homophobic victims		- 0,05	0,07			
Psychopathy		0,02	0,06			
Narcissism		0,06	0,06			
Machiavellianism		- 0,01	0,07			
Homophobic victims *Psychopathy		0,35***	0,08			
Homophobic victims *Narcissism		0,38***	0,07			
Homophobic victims *Machiavellianism		- 0,40***	0,09			
Total R2	,25***					

Note. * p < .05; ** p < .01 ***; p < .001

Simple Slope Analyses

To interpret the direction of the interaction, three simple slopes analyses were conducted by plotting the predicted values of being homophobic bullies as a function of being victims of HB and two different levels of each moderator: Low level conventionally represents one standard deviation below the mean (-1 *SD*), while high level represents one standard deviation above the mean (+1 *SD*) (Aiken & West, 1991).

When psychopathy and narcissism were low, there was a significant negative relationship between being victims of HB and being homophobic bullies, respectively b = -40, p = 0.007, and b = -43, p < 0.001. On the contrary, when psychopathy and narcissism were high, there was a significant positive relationship between being victims of HB and being homophobic bullies, respectively b = 30, p < 0.001, and b = 33, p = 0.003. Thus, psychopathy and narcissism moderated the impact of being victims of HB on being homophobic bullies (see Figures 1 and 3 for simple slopes for psychopathy and narcissism, and Figures 2 and 4 for regions of significance and confidence bands).

Figure 1. The Relationship Between Being a Victim and a Bully of HB in Function of Psychopathy

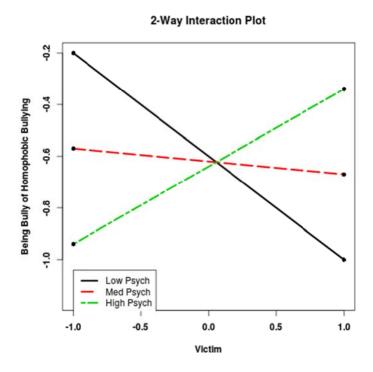


Figure 2. Plot of confidence bands for the conditional effect of the moderator Psychopathy

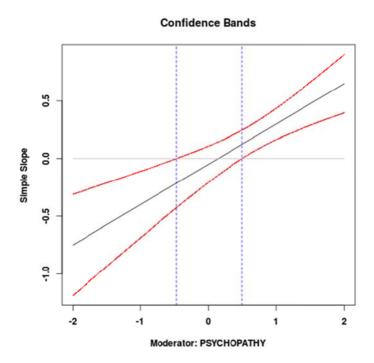


Figure 3. The Relationship Between Being a Victim and a Bully of HB in Function of Narcissism

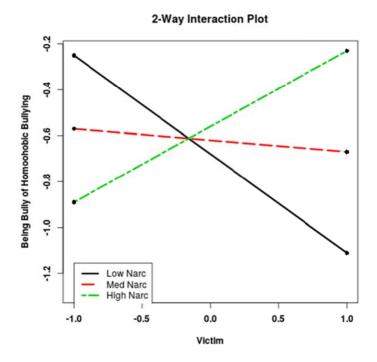
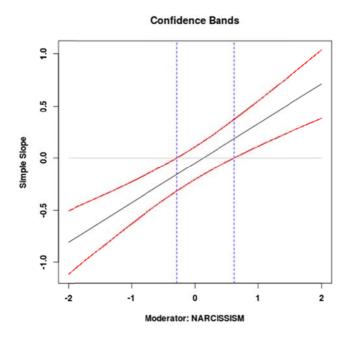


Figure 4. Plot of confidence bands for the conditional effect of the moderator Narcissism



When Machiavellianism was low, there was a significant positive relationship between being victims of HB and being homophobic bullies, b = .35, p < .001. When Machiavellianism was high, there was a significant negative relationship between being victims of HB and being homophobic bullies, b = .45, p = .002. Thus, Machiavellianism moderated the impact of being victims of HB on being homophobic bullies (see Figure 5 for simple slopes and Figure 6 for regions of significance and confidence bands).

Figure 5. The Relationship between Being a Victim and a Bully of HB in Function of Machiavellianism

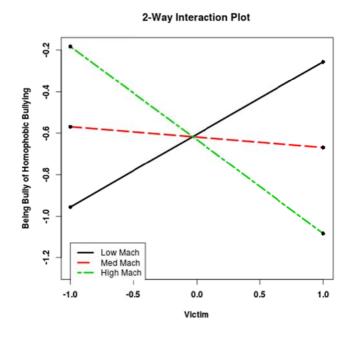
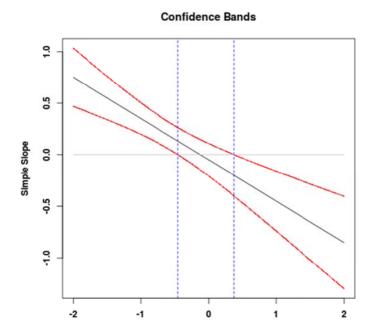


Figure 6. Plot of confidence bands for the conditional effect of the moderator Machiavellianism



Discussion

The present study is an attempt to fill the gap in literature about the victim/bully role in HB. Specifically, we aimed to investigate the moderating roles of maladaptive Dark triad personality traits in the relationship between HB victimization and HB perpetration among adolescents. Our results showed that psychopathy and narcissism are risk factors; conversely Machiavellianism emerged as a protective factor in the relationship between being victims of HB and being homophobic bullies. The direction of the moderating roles of psychopathy and narcissism confirms our hypotheses, whilst the direction of the moderating role of Machiavellianism represents an unexpected finding.

Psychopathy has been found to be strongly associated with delinquency and aggressions (Jones & Paulhus, 2011). People with psychopathic traits are impulsive, have a short-term orientation and a lack of skills in planning their actions (Pace & Passanisi, 2018). Thus, they tend to act without thinking about the consequences of their behaviors and are not concerned about their reputation and damaging their public self-image. They also expect positive outcomes from aggressions and do not care about hurting others (Pardini et al., 2003). Thus, this could be a possible explanation for why victims of HB with psychopathic traits could respond to aggressions with other direct violence, becoming bullies themselves in turn.

Differently, narcissistic people involve themselves in delinquency only if they have been previously attacked (Jones & Paulhus, 2011) and when someone threatened their egos (Twenge & Campbell, 2003). Narcissism is related to a sense of power and entitlement, to the idea of being more important than others, and to a vulnerable but grandiose self-image (van Geel et al., 2016). It is plausible that narcissistic homophobic victims could react to violence by becoming bullies themselves in order to preserve their undermined images. These victimized students could become HB perpetrators to affirm in peer group their distance from LGB and gender non-conforming students (Lingiardi & Nardelli, 2014). The compliance with conventions or gender norms is important indeed for being accepted by the peer group (Horn, 2007) and this could be even more true for the victims of HB with narcissistic traits.

Finally, contrary to our hypothesis, high Machiavellianism in HB victims emerged as a protective factor against being homophobic bullies. Machiavellian people are less impulsive and more

strategic, feeling shame in relation to their negative actions (Lau & Marsee, 2013). Machiavellianism is negatively related to delinquency because Machiavellian people are mostly concerned about maintaining a positive image within their group (Jones & Paulhus, 2011). Individuals high in Machiavellianism have indeed long-term orientations in making decisions and planning behaviors in order to reach their aims (Jones & Paulhus, 2011). Machiavellian people react to violence only in the presence of high advantages and low risks, but they respond to aggressions less than psychopathic and narcissistic people (Jones & Paulhus, 2009). For Machiavellian people, it is important to have alliances, avoiding impulsive violence that can undermine their image (Jones & Paulhus, 2011). Thus, it is plausible that HB victims with high Machiavellianism do not react to aggressions by becoming bullies in turn because this reaction could damage their relational network, leading to negative consequences. We can argue that these adolescents could react to aggression with less explicit forms of violence, and only if they have the support of their relational networks.

Thus, our findings suggest that not all dark triad traits are maladaptive, but Machiavellianism could act in some cases as a protective factor. This study could enhance our comprehension of HB within an individual perspective because previous research investigated the dynamics of HB mostly from the group's point of view (Poteat et al., 2007). Thus, our findings could help in understanding which personality profiles characterized HB victim-bullies.

A screening focused on individual traits could have important implications for prevention and intervention programs, by identifying which victims are more at risk of becoming violent with others. Anti-bullying interventions based on disciplinary sanctions and group discussions should take into account that a punishment can be a reinforcement for acting violence in future for psychopathic bullies, and that narcissistic adolescents labeled as victims in a group discussion may feel further injured (Menesini et al., 2003).

Thus victims with psychopathic traits could benefit more from individual and intensive interventions, focused on reflecting on the consequences of one's own and others' emotions and actions. Conversely, for victims of HB with Machiavellian traits, an anti-bullying program based on classmate dynamics could be more effective. If anti-homophobic bullying policies are clear in a school context, Machiavellian students will stop their manipulative and aggressive strategies.

Limitation of this study are: the use of self-report instruments that can lead to underestimating results due to social desirability bias; the use of a convenience sample, probably not representative of the population; the cross-sectional design of this study which prevent to infer causal relations between the variables. Future longitudinal studies should overcome this limit.

Author Contributions

The authors contributed equally to this manuscript.

Compliance with Ethical Standards

Conflict of interest

The authors declare that they have no competing interests.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethical approval

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.

Informed Consent

Each participant dealt with the process of informed consent.

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