Traditional Male Role Norms, Social Support, and Symptoms of Post-traumatic Stress Disorder Among Male Polish Police Officers

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Abstract

Police officers' work involves the exposition to traumatogenic stimuli. The aim of the research is to investigate potential associations between post-traumatic stress disorder and the traditional masculinity norms and social support. Three questionnaires were used: the Impact of Event Scale-Revised adapted by Juczyński and Ogińska-Bulik (2009), the Social Relations Scale (Skarżyńska 2002), and the Male Role Norms Scale translated by the authors of this paper. The sample comprised 111 male active service members of the Polish Police. The analysis shows statistically significant, mildly negative associations between post-traumatic stress disorder symptomatology variables and social relations/support ($-.312$ to $-.386$), and mild-to-moderate positive associations between the traditional male role norms and post-traumatic stress disorder symptomatology variables ($.361$ – $.506$). The intergroup differences between the police officers that probably meet the PTSD criteria and those that do not meet the criteria were mainly observed in complying with the traditional masculinity norms, in which the police officers with probable post-traumatic stress disorder had higher results than those without it; the reverse was observed in the case of social relations/support. Traditional masculinity norms, length of service, number of types of traumatic events, social relations/support, and age have proved to be significant independent predictors of post-traumatic stress disorder ($\beta = -.38$ – $\beta = .49$). However, in the multivariate regression, only social status norms, age, social relations/support, and number of types of traumatic events proved to be significant predictors of post-traumatic stress disorder ($\beta = -.26$ to $.40$), accounting for 45% of post-traumatic stress disorder symptoms.

Keywords Male role norms · Social support · Post-traumatic stress disorder

Introduction

The psychological functioning of professional groups exposed to highly intensive stressors at work, such as police officers, firefighters, and paramedics, has not been thoroughly investigated yet. The research conducted by now does not involve the impact of the traditional male role norms on traumatic stress management.

The aim of the paper is to present the results of the research on the impact of the traditional masculinity norms and social support on severe stress symptoms, including post-traumatic stress disorder (PTSD), in a group of Polish police officers.

The paper consists of the sections which present psychosocial aspects of the traditional masculinity norms and an overview of research on post-traumatic stress among police officers. Finally, the results of the current study and discussion are presented.

Psychosocial Aspects of Masculinity Norms

Men behaving in accordance with the masculinity stereotype should be strong, ready to compete and win, achieve success, and avoid employing behavioral patterns typical of women (Brannon and David 1976; Thompson and Pleck 1986). During the socialization process, the traditional masculinity norms are internalized, and as a consequence, men behave and express thoughts and feelings in accordance with their male gender role (Bem 1983; Chaplin et al. 2005; Pleck 1981). Despite the fact that attitudes toward masculinity and femininity change, male roles still are strongly affected by the stereotypes (Brannon 2002; Mandal et al. 2012), because hegemonic

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masculinity serves as the standard for all men (Connell 2005; Messerschmidt 2018). Thus, men, to appear manly, should present most or all male traits, which make them constantly confirm their role (Berdahl et al. 2018; Mandal 2004).

In Poland, the police is a highly masculinized profession (15% female police officers, 85% male police officers (Policja.pl 2019a, 2020), like in other countries (Ekşi 2017; Loftus 2008). Police culture is based on the six components: law, bureaucratic control, security, machismo, competence, and morality (Herbert 1998). To be a macho, the man has to manifest hypermasculinity both in his behavior and beliefs (Mosher and Tomkins 1988). Behavior connected with hegemonic masculinity is perceived as a proper way to perform the professional role and meet its demands (Kurtz and Upton 2018). Police culture focuses on masculinity (Brown 2007; Waddington 1999), what is more the ideal of police officer, both for men and women, is described in terms of traditional male role norms (Murray 2020). Although some researchers consider equaling police culture with male culture as oversimplification (Silvestri 2017).

However, during the police training, men learn behaviors representing the traditional male role (Prokos and Padavic 2002). The internalization of the above rules may both constitute a buffer against stress and result in increasing stress (Miller 2005). Police officers neither show their emotions nor talk about difficulties they experience for fear of being perceived as weak by their colleagues (Brough et al. 2016).

The extent to which men try to adjust to traditional male roles depends on individual factors (Mahalik et al. 2003) and culture (Levant et al. 2003a). Polish culture is categorized as masculine culture (Hofstede 2001), and commitment to traditional values promotes behaviors congruent with one's gender (Kwiatkowska 1999). Conformity to traditional male roles may have many negative consequences (Gerdes and Levant 2018) which may affect one's health or even life (Addis 2008; Courtenay 2000; Houle et al. 2008). However, some studies indicate that its consequences may be also positive (Gerdes and Levant 2018; Levant et al. 2011).

Besides, men may experience a gender role conflict which manifests in stress resulting from not performing one's gender role (Good et al. 1995; O'Neil 1981; O'Neil et al. 1995), and which has negative consequences for one's health (Good et al. 1995; O'Neil et al. 1986), such as psychological and interpersonal problems (O'Neil 2008). Men suffering from depression are perceived negatively by other men (Joiner et al. 1992) and report experiencing a gender role conflict (Mahalik and Cournoyer 2000).

Police officers, like other first responders, due to the character of their work duties are at increased risk for experiencing suicidal ideation and behaviors caused by trauma experience, depression symptoms, and shift work (Chae and Boyle 2013; Cochran and Rabbincowitz 2003;

Stanley et al. 2016; Violanti et al. 2008). Besides, the suicidal crisis occurs more frequently in men who have experienced a depression episode or have recently been in a highly stressful situation as a result of which they experienced helplessness and hopelessness (Miller 2005).

In Europe, men are almost four times more likely to commit suicide than women (WHO 2019), while men performing stereotypically men's jobs, e.g., in uniformed services, are even more likely (Miller 2005; Stander et al. 2004). In Poland, men are more than six times more likely to commit suicide than women (WHO 2019); while in the Polish Police, the suicide rate is 1.5 times higher than in the general population (Gorczyca 2001). However, it is thought that the suicide rate among police officers might be underestimated (Violanti 2010). The main reason for suicidal behaviors among policemen is a combination of family problems and problems at work, which have a negative impact on their self-esteem (Berg et al. 2003; Chae and Boyle 2013; Miller 2005). Men in the Army are also reluctant to ask for psychological help (Brown et al. 2019; Pietrzak et al. 2009), which is reflected in the fact that men rarely seek mental health care services before committing suicide (Addis 2008).

Stress Among Police Officers

Police officers are a group experiencing both organizational and operational stress (Drabek 2010; Ogińska-Bulik 2015; Pendleton et al. 1989), and the former is experienced as more severe than the latter (Shane 2010). The most frequent stressors in police work are: uncertainty, severe consequences of making an error, a negative impact of work on family life, a constant availability requirement, doing one's work without adequate means (Drabek 2010), a fear of the procedure of checking the lawfulness of the firearm use (Stephens and Miller 1998), the partner's death, and a threat to one's life, the latter two being the most severe and least frequently occurring stressors (Coman and Evans 1991; Violanti and Aron 1993). Similar results are presented in the Norwegian research by Berg et al. (2005), according to which accidents on duty constitute the strongest stressor, while professional pressure is the weakest and most frequently occurring stressor. Additionally, stress might be intensified by the way the police officers are perceived by the society (Dowler and Zawilski 2007; Ogińska-Bulik 2015)—64% of Poles declare that they think highly of police officers, while 94% declare to think highly of firefighters (CBOS 2019).

There are gender differences in experiencing stress; female police officers experience a higher level of stress than men police officers and use different strategies of stress management (Berg et al. 2005; Chae and Boyle 2013; He et al. 2005). Men, however, employ avoidance strategies more often than women do (Arble et al. 2018). Besides, male police officers report that the source of the stress they experience is inability to have an impact on the way they

work (Morash et al. 2006a). Social support can improve mental health (Prati and Pietrantonio 2010), because the support they get may protect them from stress or help them to adapt to it. Police officers maintain that their family is the best source of support, while they get the least support from their superiors (Dudek and Koniarek 2003). In the men, their family support significantly decreases the level of stress (Morash et al. 2006a). Police officers that get support from their colleagues and have a sense of control at work evaluate their work as less stressful (Baka 2020; Dudek et al. 2001; Morash et al. 2006b).

Ineffective stress management and the use of negative strategies may lead to the development of chronic stress (Stępska and Basińska 2015). Besides, the use of negative strategies of stress management may lead to an increase in stress symptoms (He et al. 2002) and be related to depression, the use of stimulants, and withdrawing (Craun et al. 2014; Gershon et al. 2009, 2002). The use of avoidance strategies also contributes to an increase in the professional stress level and can have a negative impact on the person's health (Arble et al. 2018; Gershon et al. 2009). The research conducted by He et al. (2005) shows that among the predictors of professional stress experienced by police officers, there are destructive stress management and the family-work conflict. Work overload and lack of rewards contribute to emotional exhaustion and depersonalization (Ogińska-Bulik 2003), which increase the level of stress (Bannish and Ruiz 2003), while experiencing organizational problems indirectly influences the development of PTSD symptoms (Brough 2004). The research into the effects of stress on police officers shows a significantly higher level of cardiovascular disease risk factors among police officers than in the general population (Joseph et al. 2009).

One of the factors related to experiencing professional stress among police officers is exposure to traumatic events, while professional stress appears to be related to depression and domestic violence (Gershon et al. 2009). Police officers are more often exposed to traumatic events, which results from the specificity of their profession (Carlier et al. 1997). The research shows that the majority of police officers have participated or witnessed at least one traumatic event, while about 5% suffer from PTSD (Drabek 2010; Dudek 2003). In the research conducted by Carlier et al. (1997), the results are similar: 7% were diagnosed with PTSD; in Martin et al. (2009)—7.6%; in Maia et al. (2007)—8.9%; and in others—even around 40% (Davidson and Moss 2008; Lee et al. 2016a; McNally 2006). Suffering from PTSD and working on afternoon shifts contribute to the appearance of suicidal ideation (Violanti 2012). They also report that they resign from the Police due to traumatic experiences at work (Stephens and Miller 1998). In spite of the above-mentioned research,

the problem of traumatic stress has not been not widely investigated in Poland (Dudek 2003).

Risk Factors for the Development of PTSD

The risk of the development of PTSD is higher among women (Creamer et al. 2001; Kamijo et al. 2020; Syed et al. 2020), young people (at the age of 15–24) (Bromet et al. 1998), those who are married (Creamer et al. 2001), those who have longer time in policing (Dudek 2003; Syed et al. 2020; Wagner et al. 2020), and those who have problems with talking about their emotions or experience emotional exhaustion (Carlier et al. 1997; Meffert et al. 2008; Wagner et al. 2020). The factors that accelerate the development of PTSD are experiencing shame and anger as a response to other people's reaction to one's participation in a traumatic event (Dudek 2003; Papazoglu et al. 2020), a number of traumatic experiences in the young age (Buchanan et al. 2001), the intensity of the experienced trauma, multiple participation in traumatic events, and a lack of support/insufficient support (Carlier et al. 1997; Ma et al. 2015; Marmar et al. 2006; Mona et al. 2019; Violanti et al. 2018; Wagner et al. 2020). PTSD develops more frequently in persons that have got injured during a traumatic event—including perceived moral injury (Papazoglu et al. 2020); the persons also more often abuse medicines and suffer from depression and adjustment disorders (Koren et al. 2005; Wagner et al. 2020). A positive attitude toward expressing emotions (Stephens et al. 1997), self-resiliency (Lee et al. 2016b; van der Meulen et al. 2018), having a hobby, job satisfaction (Carlier et al. 1997), an internal locus of control, a sense of coherence (Schäfer et al. 2020), and co-worker support (Martin et al. 2009; Syed et al. 2020; Wagner et al. 2020) constitute protective factors.

Method

Participants and Procedure

The study is a part of a larger project pertaining to post-traumatic stress disorder among the so-called first responders. The Academic Ethics Committee in the University of Silesia in Katowice granted the permission to conduct the study (number 14/2019). The participants in the study were recruited by means of the chain referral method (Bagheri and Saadati 2015), which is especially effective in studying hard-to-reach populations, those who are not eager to participate in such a study, and those who are afraid of being identified in it. The authors of the study utilized convenience sampling by directly asking police officers to participate

in the study during patrolling, and police events and festivities. To acquire participants from different regions of Poland, the authors, utilizing the method mentioned above, invited police officers from the Silesian, Opole, Masovian, and Podlaskie voivodeships. To maximize the representativeness of the sample, the snowball sampling method was utilized as well—the authors of this paper asked participants to invite other police officers to participate in the study that met the inclusion criteria (namely, that they consented to participate in the research, and that they were male police officers). The research had an individual character and was conducted by means of the traditional paper-and-pencil method. Each participant was informed about the aim of the study. Having consented to participate in the research, they were handed an enveloped set of questionnaires.

The researchers had problems with finding research participants, in spite of the fact that they were guaranteed anonymity, and the researchers promised that the questionnaires would not be individually analyzed and that the acquired data would be used only for academic purposes. The police officers avoided answering many questions for fear of being identified. Due to the fact, the area and time of the research were expanded: the research was conducted from April 2018 to June 2019 and involved police officers from the following voivodeships: Opole, Silesia, Masovia, and Podlaskie. One hundred fifty questionnaires in total were handed out; 132 were filled out and returned. Twenty-one questionnaires were excluded from the analysis (either due to the participant's gender, or due to the fact that many answers were missing). In 111 cases which were statistically analyzed, some sociodemographic data were missing.

The sample comprised 111 male police officers—active service members of the Polish Police. Their mean age was 35.7 ($SD = 6.18$). The mean length of service of the participants was 10.0 years ($SD = 5.58$). As far as their relationship status is concerned, ($n = 100$) 21% of the participants were single, 20% lived in informal relationships, 51% were married, and 8% were divorced. The mean length of their relationships was 8.2 years ($SD = 6.57$). As far as education is concerned, ($n = 106$) 37.7% of the participants had secondary education, and 62.3% had higher education. According to the available data, the sample does not deviate in the presented sociodemographic data from the official information about Polish police officers (Policja.pl 2019b); thus, it seems to be representative of the given population.

The Sociodemographic Data

The participants were asked to provide the sociodemographic data: gender, age, marital status, length of relationship,

education, and length of service. Besides, they were asked to tick the boxes next to the events they experienced during the service: “You were attacked and your life was directly threatened”; “You were attacked and got injured”; “Other police officers were attacked and their lives were directly threatened”; “Other police officers were attacked and got injured”; “One of the police officers was killed”; “You saw dead bodies”; “You saw dead bodies, including children”; “You reached for the gun”; “You used the gun”; “You injured or shot someone”; “You took part in shooting”; “You were in a hostile and aggressive crowd.”

Next, they were asked how often they experienced the situations mentioned above: “There were no such events”; “Once”; “Several times”; “A dozen times”; “More than a dozen times.” The list was adapted from Dudek (2003).

Measures

The Impact of Event Scale-Revised The Polish adaptation of Daniel Weiss and Charles Marmar's (1997) Impact Event Scale-Revised (IES-R) by Juczyński and Ogińska-Bulik (2009), devised to measure post-traumatic stress disorder symptomatology, comprises 22 items divided into 3 subscales: intrusion, hyperarousal, and avoidance. In the current study, the internal consistency of the tool was evaluated on the basis of α Cronbach's coefficient; for the total score, it equaled 0.98; for the subscales of intrusion, hyperarousal, and avoidance, 0.97, 0.95, and 0.94, respectively. Participants were asked to rate on the 5-point Likert scale the extent to which each item applies to their experiences: 0—“definitely not”; 1—“to a small extent”; 2—“moderately”; 3—“to a large extent”; 4—“definitely yes.”

Examples of the items: “Any reminder brought back feelings about it”, “Other things kept making me think about it” (the intrusion subscale); “I felt irritable and angry”, “I felt watchful and on-guard” (the hyperarousal subscale); “I avoided letting myself get upset when I thought about it or was reminded of it”, “I was aware that I still had a lot of feelings about it, but I didn't deal with them” (the avoidance subscale).

The Social Relations Scale by Skarżyńska (2002), measuring social support, comprises 6 items which participants are to rate on the 5-point Likert scale: 1—“I definitely don't agree”; 2—“I rather don't agree”; 3—“neither yes, nor no”; 4—“I rather agree”; 5—“I definitely agree.” In the current study, the internal consistency of the tool was evaluated on the basis of α Cronbach's coefficient, which equaled 0.72.

Examples of the items: “I am surrounded by close persons”, “Usually, I am alone with my problems”

(reverse scored), “In difficult matters I can count on my friends”.

The Male Role Norms Scale (Thompson and Pleck 1986). The Polish translation of the Male Role Norms Scale by the authors of this paper comprises 26 items divided into 3 subscales: social status norms, toughness norms, and anti-femininity norms. In the current study, the internal consistency of the whole tool was evaluated on the basis of α Cronbach's coefficient; for the total score, it equaled 0.95; for the subscales of social status norms, toughness norms, and anti-femininity norms, 0.93, 0.81, and 0.87, respectively.

Examples of the items: “A man owes it to his family to work at the best-paid job he can get”, “A man should always project an air of confidence even if he really doesn't feel confident inside” (the social status norms subscale); “When a man is feeling a little pain he should try not to let it show very much”, “I think a young man should try to become physically tough, even if he's not big” (the toughness norms subscale); “It bothers me when a man does something that I consider feminine”, “I might find it a little silly or embarrassing if a male friend of mine cried over a sad love scene in a movie” (the anti-femininity norms subscale).

Data Analysis

The sociodemographic data which were missing in the cases included in the statistical analysis were not completed. The researchers took into consideration only the information provided by the participants. The data were analyzed by means of the analytics software package Statistica version 13.1. In the study, the following hypotheses were formulated:

- There is a significantly positive correlation between compliance with masculinity norms and PTSD symptomatology.
- There are significant differences in social relations and in compliance with masculinity norms between police officers who meet the criteria for PTSD and those who do not.

At the beginning of the data analysis, α Cronbach's coefficients for the utilized measures were calculated. The descriptive statistics for sociodemographic and trauma-related data, PTSD symptomatology, social relations/support, and masculinity norms were calculated and checked for normal distribution (which was found in social relations/support and the male role norms).

We took the most rigorous criteria for the interpretation of the results of the Impact of Event Scale-Revised, which assume that if the mean score in each of the three subscales is greater than 1.5, the participant is likely to suffer from PTSD (Juczyński and Ogińska-Bulik 2009).

Next, the analysis of correlation was conducted for age, length of relationship, length of service, number of types of traumatic events, frequency of traumatic events, intrusions, hyperarousal, avoidance, IES-R total score, social relations/support, social status norms, toughness norms, and anti-femininity norms. After the analysis, a series of univariate regressions was conducted, with the IES-R total score as a dependent variable and age, education, relationship status, length of relationship, length of service, number of types of traumatic events, social relations/support, social status norms, toughness norms, and anti-femininity norms as independent predictors.

Then, a forward stepwise regression was conducted, with the IES-R total score as a dependent variable and age, length of service, number of types of traumatic events, social relations/support, social status norms, toughness norms, and anti-femininity norms as independent variables.

Finally, to explore potential intergroup differences between the police officers who scored above the cut-off value in IES-R and who scored below the cut-off value in the male role norms and social relations/support, the Mann–Whitney *U* test was conducted due to non-normal distribution in most of the variables (except for social relations/support, social status and anti-femininity norms), and for the aforementioned exceptions—by means of one-way ANOVA.

Results

The analysis of the research results shows that the most frequently reported traumatic event was seeing a dead body, mentioned by 82.4% of the participants. The least frequently reported traumatic events were taking part in shooting (8.3%) and seeing another police officer die (5.6%) (see Table 1). Among the most traumatic events, the police officers most frequently mentioned situations in which they were attacked and got injured. Neither of them pointed to taking part in shooting, injuring another person, or reaching for the gun and using it. The detailed data concerning the events are presented in Table 1. Taking into consideration the method of calculating probable PTSD based on IES-R scores (Juczyński and Ogińska-Bulik 2009), 49.55% of the sample met the clinical cut-off point for a probable diagnosis of post-traumatic stress disorder.

As for the frequency of the occurrence of traumatic events, most of the respondents reported experiencing them several times (56%); 25% experienced them around dozen times, and more than that—17%. Two percent of the respondents experienced a traumatic event once, while none

Table 1 Traumatic events experienced by the research participants (%)

Event	Reported by the participants (<i>N</i> = 108)	Identified as evoking greatest shock, causing trauma, as something they could not forget (<i>N</i> = 111)
You were attacked and your life was directly threatened	42.6	23.4
You were attacked and got injured	49.1	22.5
Other police officers were attacked and their lives were directly threatened	65.7	10.8
Other police officers were attacked and got injured	69.4	8.1
One of the police officers was killed	5.6	2.7
You saw dead bodies	82.4	16.2
You saw dead bodies, including children	38.9	9
You reached for the gun	46.3	0
You used the gun	20.4	0
You injured or shot someone	21.3	0
You took part in shooting	8.3	0
You were in a hostile and aggressive crowd	88.9	7.2

declared that they did not experience any kind of traumatic event while on duty.

The correlation analysis between sociodemographic, trauma-related, PTSD symptomatology, social relations/support, and masculinity norms variables (for details see Table 2) shows statistically significant positive correlations between age and number of types of traumatic events (0.261), frequency of traumatic events (0.311), intrusions (0.410), hyperarousal (0.399), avoidance (0.336), and the IES-R total score (0.400).

In the case of length of relationship, the analysis revealed positive correlations with hyperarousal (0.673) and the IES-R total score (0.246). Number of types of traumatic events positively correlated with frequency of traumatic events (0.527), intrusions (0.452), hyperarousal (0.392), avoidance (0.353), and the IES-R total score (0.413). Frequency of traumatic events weakly positively correlated with intrusions (0.197), social status (0.214), and toughness norms (0.207). The analysis revealed mild positive correlations between IES-R subscales, its total score and social status (0.483–0.506), toughness (0.408–0.435), and anti-femininity norms (0.361–0.419) as well as mild negative correlations with social relations/support (−0.312 to −0.386). In the case of social relations/support, mild negative correlations were revealed with toughness (−0.312) and anti-femininity norms (−0.436).

Further in the analysis of the data, a series of univariate regressions were conducted, with the IES-R total score as a dependent variable and age, education, relationship status, length of relationship, length of service, number of types of traumatic events, social relations/support, social status norms, toughness norms, and anti-femininity norms as independent predictors (see Table 3).

The analysis revealed age ($\beta = 0.33$), length of service ($\beta = 0.31$), number of types of traumatic events ($\beta = 0.43$), social status ($\beta = 0.49$), toughness ($\beta = 0.41$), and anti-femininity norms ($\beta = 0.38$) as independent positive predictors of PTSD symptomatology development and social relations/support as an independent negative predictor ($\beta = -0.38$).

Next, a forward stepwise regression was conducted, with the IES-R total score as a dependent variable to assess the model of predictor from among its independent predictors (see Table 4). In the first step, social status norms ($\beta = 0.49$) were included in the model and accounted for 24% of variance of the IES-R total score. In the second step, age ($\beta = 0.32$) was included, and the model accounted for 34% of the variance of the PTSD symptomatology. In the third step, social relations/support ($\beta = -0.24$) was added, and the model accounted for 40% of variance of the IES-R total score. In the final step, the number of types of traumatic events ($\beta = 0.23$) was added, and the model accounted for 45% of variance of the PTSD symptomatology.

To assess potential intergroup differences between the police officers who scored above the cut-off value in IES-R (PTSD1 group) and those who scored below the cut-off value (PTSD0 group) in the male role norms and social relations/support (see Table 5). Anti-femininity norms variable lacked normal distribution so in that case was conducted the Mann–Whitney *U* test (Table 6), while for the other variables, potential intergroup differences were explored by means of one-way ANOVA. The analysis revealed that the members of PTSD1 group comply with all the male role norms significantly more than the PTSD0 group. The members of PTSD0 group got more social relation/support than PTSD1 group.

Table 2 Results of the analysis of the correlations of the following variables: age, length of relationship, length of service, number of types of traumatic events, frequency of traumatic events, social relations/support, intrusions, hyperarousal, avoidance, the IES-R total score, social status norms, toughness norms, and anti-femininity norms

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	–	.804 ^a ***	.859 ^a ***	.261 ^a *	.311 ^a **	.410 ^a ***	.399 ^a ***	.336 ^a **	.400 ^a ***	n.s	n.s	n.s	n.s
2. Length of relationship		–	.696 ^a ***	n.s	n.s	n.s	.673 ^a *	n.s	.246 ^a *	n.s	n.s	n.s	n.s
3. Length of service			–	.218 ^a *	.208 ^a *	.424 ^a ***	.420 ^a ***	.360 ^a ***	.413 ^a ***	n.s	n.s	n.s	n.s
4. Number of types of traumatic events				–	.527 ^a ***	.452 ^a ***	.392 ^a ***	.353 ^a ***	.413 ^a ***	n.s	.293 ^b *	n.s	n.s
5. Frequency of traumatic events					–	.197 ^a *	n.s	n.s	n.s	n.s	.214 ^a *	.207 ^a *	n.s
6. Intrusions						–	.937 ^a ***	.888 ^a ***	.969 ^a ***	–.386 ^a ***	.497 ^a ***	.434 ^a ***	.361 ^a ***
7. Hyperarousal							–	.923 ^a ***	0.980 ^a ***	–.348 ^a ***	.483 ^a ***	.430 ^a ***	.396 ^a ***
8. Avoidance								–	.960 ^a ***	–.312 ^a ***	.494 ^a ***	.408 ^a ***	.419 ^a ***
9. IES-R total score									–	–.369 ^a ***	.506 ^a ***	.435 ^a ***	.409 ^a ***
10. Social relations/support										–	n.s	–.312 ^a *	–.436 ^a ***
11. Social status norms											–	.719 ^a ***	.565 ^a ***
12. Toughness norms												–	.563 ^a ***
13. Anti-femininity norms													–
M(SD)	35.70 (6.18)	8.17 (6.57)	10.03 (5.58)	5.56 (2.72)	3.72 (0.81)	1.47 (1.29)	1.49 (1.19)	1.53 (1.22)	1.49 (1.21)	3.11 (0.79)	4.28 (1.15)	4.26 (1.01)	3.76 (1.06)

* $p < .05$; ** $p < .01$; *** $p < .001$ ^aSpearman's rank correlation coefficient^bPearson's correlation coefficient

Table 3 Results of the univariate regressions with the IES-R total score as a dependent variable and age, education, relationship status, length of relationship, length of service, number of types of traumatic events, social relations/ support, social status norms, toughness norms, and anti-femininity norms as independent predictors

Predictors	β	SEE β	B	SEE B	<i>t</i>	R^2	Adj. R^2	<i>F</i>	<i>p</i>
Age	.33	0.10	.07	0.02	3.23	.11	.10	10.40	.002
Education ^a	.10	0.10	.25	0.25	1.03	.01	.00	1.06	.306
Relationship status ^b	-.08	0.10	-.22	0.25	-0.89	.01	–	0.78	.378
Length of relationship	.10	0.13	.02	0.02	0.77	.01	–	0.59	.446
Length of service	.31	0.09	.08	0.02	3.33	.10	.09	11.07	.001
Number of types of traumatic events	.43	0.09	.19	0.04	4.86	.18	.17	23.61	<.001
Social relations/support	-.38	0.09	-.59	0.14	-4.19	.14	.13	17.58	<.001
Social status norms	.49	0.08	.51	0.09	5.92	.24	.24	35.01	<.001
Toughness norms	.41	0.09	.48	0.11	4.61	.16	.16	21.28	<.001
Anti-femininity norms	.38	0.09	.42	0.10	4.27	.14	.14	18.20	<.001

^aDummy coded: 1—higher degree, 0—up to secondary education^bSummy coded: 1—in a relationship, 0—single/divorced**Table 4** Results of the forward stepwise regression analysis for the dependent variable—the IES-R total score, and the independent variables—toughness norms, anti-femininity norms, social status norms, social relations/support, number of types of traumatic events and age

Step	Predictors	β	SEE β	<i>B</i>	SEE <i>B</i>	<i>t</i>	R^2	Adj. R^2	<i>F</i>	<i>p</i>
1	Social status norms	.49	0.10	.51	0.10	5.00	.24	.23	24.96	<.001
2	Social status norms	.50	0.09	.52	0.10	5.43	.34	.33	20.21	<.001
	Age	.32	0.09	.06	0.02	3.46				<.001
3	Social status norms	.45	0.09	.47	0.09	4.98	.40	.37	16.72	<.001
	Age	.27	0.09	.05	0.02	3.00				.004
	Social relations/ support	-.24	0.09	-.37	0.14	-2.60				.011
4	Social status norms	.40	0.09	.41	0.09	4.41	.45	.42	15.06	<.001
	Age	.21	0.09	.04	0.02	2.36				.021
	Social relations/support	-.26	0.09	-.40	0.14	-2.92				.005
	Number of types of traumatic events	.23	0.09	.11	0.04	2.54				.013

Table 5 Results of the analysis of intergroup differences, conducted by means of the ANOVA method for the variables, social status norms, toughness norms, and social relations/support

Variables	PTSD1		PTSD0		<i>F</i>	<i>p</i>	η^2_p
	M	SD	M	SD			
Social status norms	4.93	0.91	3.76	1.07	37.47	<.001	.260
Toughness norms	4.64	0.70	3.96	1.13	22.36	<.001	.183
Social relations/ support	2.84	0.73	3.32	0.78	12.68	.001	.107

Table 6 Results of the analysis of intergroup differences for the anti-femininity norms variable, conducted with the use of the Mann–Whitney *U* test

Variables	PTSD1		PTSD0		<i>U</i>	<i>Z</i> corr	<i>p</i>	Cohen's <i>D</i>
	M	SD	M	SD				
Anti-femininity norms	4.10	0.93	3.49	1.10	800.50	4.26	<.001	.366

Discussion

The statistical analyses show a significant positive association between compliance with the traditional masculine norms and PTSD symptomatology. Mild positive associations were found between symptoms of PTSD and age, length of relationship, length of service, and number of types of traumatic events, while a mild negative association was found between PTSD symptoms and social relations/support.

Partially contrary to the findings of Hartley et al. (2013), Chopko et al. (2016), and Brewin et al. (2020), the frequency of traumatic events was positively associated only with intrusions, but not with any other type of PTSD symptoms or the IES-R total score. This might mean that higher frequency of traumatic events is related to more intense problems with re-experiencing the traumatic events in the form of intrusions, but not to increased hyperarousal or a higher tendency to avoid trauma-related stimuli. The length of relationship was positively associated with hyperarousal, which might be explained by low relationship satisfaction or relationship conflicts (Dudek 2003; Maia et al. 2007; Zhang et al. 2006), which is associated with more severe psychological issues (Argustaitė-Zailskienė et al. 2020).

The analysis shows statistically significant moderately negative associations between social relations/support and intrusions, hyperarousal and avoidance variables, and the general score of the Impact of Event Scale-Revised. This may suggest that limited social support has an impact on the occurrence of intrusions. As the research by Beehr et al. (1995) shows, policemen have significantly limited access to social support, and they are often stigmatized owing to their profession. The reduction of social support, one of the most important ways of stress management, has a significant impact on the development of PTSD symptoms after the traumatic experience. Police officers claim that they experience problems resulting from participation in traumatic events and need to talk about it; however, it does not always happen (Dudek 2003). Mild positive associations have been observed between the norms of social status, toughness, anti-femininity, intrusions, hyperarousal, avoidance, and the general score of the IES-R. This may suggest a significant impact, e.g., of the need for great achievements, independent self-management, which, if realized in a maladaptive way, may intensify posttraumatic stress symptoms. The intensification of trauma symptoms can also be observed among police officers experiencing strong professional stress (Dudek 2003).

A significantly negative association has been shown between toughness, anti-femininity norms, and social relations/support. This might imply that the values expressed in these norms, such as individualism and self-reliance, restrain police officers from seeking and accepting social support. However, the use of the

support may be difficult due to the specificity of police culture, because experiencing problems they may separate themselves from their families, thus depriving themselves of one of the sources of social support (Hołyst 2011; Miller 2005; Woody 2005). Combat stress experience can be also perceived as a masculinity test (Nash 2011). Thus, to acknowledge one's competence and courage, it is necessary to manage difficulties on one's own. Experiencing strong emotions may be identified by men with showing weakness and avoidance (Cochran and Rabinowitz 2000); that is why externalizing behaviors and emotion suppression, which may increase depression symptoms, may occur as a reaction to experienced difficulties (Genuchi and Mitsunaga 2015).

Turning to specialists for help would result in admitting to failure and feeling shame, which is why even if PTSD symptoms get worse, the policeman may have problems with accepting the symptoms and hide his experiences from other people for fear of being perceived as weak. This may influence his attitude toward specialist help in the case of the psychological trauma. Seeking psychological and psychiatric help may result in being stigmatized as someone with mental problems (Bharadwaj et al. 2017; Nieweglowski et al. 2020). This is why it is suggested that therapeutical methods are adjusted to the degree of conformity to traditional masculinity norms (Addis and Mahalik 2003). Although there are many strategies of psychotherapy for men, further research is necessary to find the most effective ones (Mansfield et al. 2003), which would not intensify the feeling of gender role conflict (Mahalik 1999).

Social status, toughness, and anti-femininity norms as well as age, length of service, and number of types of traumatic events have been found to be positive independent predictors of developing PTSD symptoms. Contrary to the findings of Motreff et al. (2020), level of education was not associated with PTSD symptomatology; this might be affected by relatively high education among the current sample, which might have decreased the effect of education on the development of PTSD symptoms; similar results were also reported by Maia et al. (2007), Asmundson and Stapleton (2008), and Lee et al. (2016a).

In the case of age, similar results were found by Schütte et al. (2012), while contrary results were found in the studies by Maia et al. (2007) and Lee et al. (2016a). This might be the result of potential cognitive decline connected with aging, which gradually decreases the ability to process traumatic events (Foa and Kozak 1986). Length of service also seems to increase the odds of developing symptoms of post-traumatic stress disorder, which might be the result of high demands and low resources in the workplace and burnout (Acquadro Maran et al. 2020; Foley and Massey 2020). In the case of number of types of traumatic events, the more diversified the traumatogenic stimuli, the higher

are the odds of developing PTSD symptomatology (similar results were found by Hartley et al. (2013). This might be the result of the “cognitive overload” with trauma-related stimuli; police officers might have problems with processing them (Foa and Kozak 1986). Social relations/support have been found to be an independent protective factor against the development of PTSD symptomatology; similar results were found in Ellrich and Baier (2017) Galovski et al. (2018), and Motreff et al. (2020).

The forward stepwise regression has revealed that the model consisting of social status norms, age, social relations/support, and number of types of traumatic events as predictors accounted for 45% of the variance of PTSD symptomatology. This might imply that traditional male norms concerning the achievement of high social status (including those in the police force) and prestige have a stronger impact on the development of PTSD symptoms than norms pertaining to toughness or anti-femininity.

Police officers highly conforming to the social status norms might refrain from seeking support and/or professional help for the sake of their career: admitting to having problems might impact negatively on their career. In the case of age and number of types of traumatic events, as has been already mentioned, a possible explanation for their impact might lie in an increased burden of processing traumatic stimuli (Foa and Kozak 1986). The only protective factor against the development of PTSD symptomatology that has been revealed in the model is social relations/support. The social role norms acquired by men during the socialization process seem to have a negative impact on the way they manage stress, which may result in experiencing difficulties in professional life as well as beyond it (Berger et al. 2005; Berke et al. 2017; Connell and Messerschmidt 2005; Mandal 2007; Pleck 1981, 1995).

The intergroup differences between the police officers that probably meet the PTSD criteria and the police officers that do not meet the criteria have been observed in complying with the traditional masculine norms of toughness, social status, and anti-femininity, in which the PTSD1 group had higher scores; the reverse has been observed in the case of social relations/support. In accordance with their social role, police officers should represent hypermasculinity (the macho personality is based on the conviction that men are tough, independent, strong, and perceive danger as exciting (Mosher and Sirikin 1984), which may lead to the intensification of PTSD symptoms as well as a decrease in the use of social support. Fear of losing emotional control is related to the symptoms of PTSD. Thus, the avoidance of expressing emotions may contribute to low adjustment to trauma (Berke et al. 2018; Price et al. 2006).

The social status norms are related to the need for achievements. Attempts to realize the need, as the research results show, are related to a greater chance for the

development of PTSD symptoms because of the experienced trauma. It may result, first of all, from the fact that an individual motivated by the need for achievements, in this case a police officer, may, in spite of traumatic experiences, engage in the service in a maladaptive way, neglecting the psychological costs. Respecting the traditional masculinity norms affects the perception of psychological health problems (Addis and Mahalick 2003; Galdas 2009; Yousaf et al. 2015); this is related to the negative perception of depression symptoms (Magovcevic and Addis 2005), and problems with emotion identification (Berke et al. 2018; Pleck 1981, 1995), emotion expression (Mandal 2004), and alexithymia (Levant et al. 2003b).

The masculinity norms are to a large extent based on the principle of opposition to stereotypical femininity. Talking about one's emotions, admitting to experiencing difficulties and expressing the need for help are in contradiction to patterns of male behavior. This may result in attempts to maintain emotional control and self-reliance by engaging in avoidance behaviors and abstaining from talking about experienced distress (Addis 2008; Berke et al. 2018). Another feature typical of stereotypical femininity, the collectivity orientation in this case is perceived as undesirable either. This might also explain the intergroup differences between PTSD1 and PTSD0 groups in social relations/support, where the former scored significantly lower than the latter.

Taking into consideration the guidelines of the Impact of Event Scale-Revised concerning the PTSD occurrence, 49.55% of the research participants suffer from probable PTSD. McNally (2006), Davidson and Moss (2008), and Lee et al. (2016a) got similar results in their research. However, other studies show that intensification of PTSD can be observed in less than a fifth of the rate found in the current study (Carlier et al. 1997; Stevelink et al. 2020). The research into a group of Polish police officers conducted by Dudek (2003) shows that 5% of police officers were diagnosed with PTSD. These significant disproportions in the research results indicate that further research is needed, which would explain the differences in prevalence rates of PTSD and help find factors responsible for PTSD appearance. Besides, the research should include other professional groups likely to participate in traumatic events, such as firefighters and paramedics.

Limitations of the Study

In the analysis of the results of the current study, a few issues should be taken into consideration. First, a relatively small number of police officers constituted the study sample. Second, a response bias—male role norms, especially in such a highly masculinized profession as

the police (Mosher and Sirikin 1984)—might have kept the respondents from disclosing information about their mental health condition to comply with the toughness norms. Taking into consideration the avoidance of trauma-related stimuli, which is a clinical feature of PTSD (Foa and Kozak 1986), respondents suffering from PTSD might not have fully disclosed their symptoms; thus, both of the aforementioned could have resulted in the underestimation of the intensity of PTSD symptomatology in the sample.

Third, a recall bias—the respondents might have forgotten some of the trauma-related information, which could affect the reliability of the presented study results.

Another issue that should be taken into account in analyzing the data is the respondents' need for social desirability and its effect on their responses. This might have influenced, as has been mentioned earlier, the reported PTSD symptomatology, and the level of compliance to the traditional male role norms. Working in a highly masculinized workplace as well as living in a traditional masculine society (Hofstede 2001; Kwiatkowska 1999) might have increased their tendency to present hypermasculine attitudes; thus, the reported compliance to the traditional male role norms might have been overestimated.

Fifth, the police in the current study was treated as a whole, its divisions and their potential division-based differences were not the aim of this study. According to some studies (Ogińska-Bulik 2006), police officers from the Central Bureau of Investigation and counter-terrorist units report highest levels of mental health issues in the Polish Police. Further studies might reveal potential differences in that context.

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Data Availability Due to their sensitive character, the data is not available to the reader.

Declarations

Ethics Approval The Academic Ethics Committee in the University of Silesia in Katowice granted the permission to conduct the study (number 14/2019).

Consent to Participate All participants of the study were asked for consent to participate in the study and they explicitly did so.

Conflict of Interest The authors declare that there is no conflict of interest.

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