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The Negotiation of Contact and Pain in Pedagogical Settings

Police Recruits Preferred Levels of Contact in Police Use of Force Training

Abstract

The interaction between partners is an essential part of the training process in police use of force training. In order to simulate training tasks that are both representative and motivating, the level of contact when receiving and delivering punches and kicks is an important issue. The current study investigates the preferred level of contact of trainees in police use of force training settings. For that purpose, 112 recruits of the Hessian State police were interviewed via an online questionnaire. The results showed that (a) male participants prefer higher levels of contact when using a pad to practice punches and kicks compared to other training situations and (b) female officers prefer lower levels of contact in sparring exercises and pad work compared to male officers. The findings highlight the different needs of participants in training settings with regards to different situations. As such, the results provide valuable insights for police use of force coaches to manage and address contact intensity in training simulations.

Zusammenfassung

Die Interaktion mit dem Trainingspartner ist ein wesentlicher Teil des Trainingsprozesses im polizeilichen Einsatztraining. Die in der jeweiligen Übungsform ausgehandelte Kontaktintensität hat Auswirkungen auf die Repräsentativität der Übungsform sowie auf motivationale Aspekte der Partnerinteraktion. Die vorliegende Studie nimmt die Perspektive der Teilnehmer*innen im polizeilichen Einsatztraining in den Fokus der Betrachtung und untersucht, wieviel Kontakt von den Teilnehmer*innen in verschiedenen Übungsformen und Trainingssituationen als optimal empfunden wird. Zu diesem Zweck wurden 112 Polizeikommissar*innen der hessischen Polizei mittels eines Online-Fragebogens befragt. Die Antworten zeigen, dass (a) männliche Trainingsteilnehmer im Training mit Schlagpolstern eine höhere Intensität im Vergleich zu anderen Übungsformen präferieren und (b) weibliche Teilnehmerinnen weniger Härte im Sparring sowie bei der Arbeit mit Schlagpolstern gegen sich wünschen als ihre männlichen Kollegen. Die Ergebnisse der Studie liefern wertvolle Hinweise für Trainer*innen und Coaches im Bereich des polizeilichen Einsatztrainings und der Selbstverteidigung in Bezug auf die Gestaltung und das Aushandeln der Kontaktintensität in Übungsformen.

Keywords

police use of force training; partner interaction; self-defense; contact level; Polizeiliches Einsatztraining; Partnerinteraktion; Selbstverteidigung; Kontaktintensität

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1 Introduction

Police officers are regularly tasked with the resolution of conflicts (Amendola, 1996; Anderson, Litzenberger, & Plecas, 2002; Anshel, 2000). However, conflict resolution and achieving compliance is not limited to the use of force (Rajakaruna, Henry, Cutler, & Fairman, 2017; Vecchi, Van Hasselt, & Romano, 2005; Zaiser & Staller, 2015). Therefore, proficiency in communication and negotiation skills aiming at deescalating conflict situations are needed as well as physical forms of aggression such as proactive (achieving compliance via a takedown) or reactive aggression (defending against a knife attack). Police use of force training provides the learning environment, where officers learn and develop needed skills and tactics for conflict situations that hopefully will transfer to the real world (Staller, Bertram, & Körner, 2017b).

Research in the police use of force domain traditionally focuses on the taught content (the “what”), like needed techniques (Renden, Savelsbergh, & Oudejans, 2016) and skills (Rajakaruna et al., 2017) and on the applied methodology (the “how”) in the learning process (Birzer, 2003; Nieuwenhuys & Oudejans, 2011; Renden, Landman, Savelsbergh, & Oudejans, 2015a). Regarding the trainees (the “who”), with their wants and needs, research in the law enforcement context mainly focuses on the trainee perception of course content and the applied methodology (Honest, 2016; Jager, Klatt, & Bliesener, 2013). The specific wants and needs of interactional dynamics in partner drills and exercises, especially regarding physical forms of aggression, have not been subject to any research so far. As such the current study aims at investigating the wants and needs of police trainees regarding the level of contact in learning environments aiming at developing proficiency with physical forms of aggression, such as the use of force and personal protection.

1.1 Understanding the learner in the training process

The process of skill development is bio-psycho-social in its nature (Bailey et al., 2010; Collins et al., 2012; MacNamara et al., 2011). As such, in formalized coaching settings like mandatory and ongoing police use of force training, the coach needs an understanding of the curriculum, the learning environment and the learner in order to systematically plan, deliver and review training sessions (Abraham et al., 2015). In the police use of force domain, this “who-what-how”-model distinguishes and identifies relevant pedagogical dimensions in which coaches can structure their coaching decisions: a) by considering what the requirements are for the participants (who), b) what the operational demands are for the participant (what) and c) what coaching behaviours, practice and task designs should be employed (how) to facilitate the development of the participants (Staller & Zaiser, 2015).

For coaches, understanding the wants and needs of the learner, which are a central element of the learning process, is important in order to make informed decisions. Such a coaching process puts trainees in the centre of the learning process, as advocated on several occasions in the police training and education literature (Basham, 2014; Birzer, 2003; Shipton, 2009). However, research suggests that educators in the policing sector still mainly engage in teacher-centred models of instruction (Basham, 2011; Shipton, 2012). Pointing out this discrepancy between pedagogical knowledge in lifelong learning settings and current practice in the policing context, Basham (2014) argues to abandon the term of police instructors, since coaches are needed (Basham calls them “educators”), who “not only understand the subject and its application in the operational environment; but also the student, and how to reach those police students through various approaches” (p. 106).

Regarding research within the police use of force domain, learners are in the focus of studies aiming at investigating the effectiveness of programs (e.g., Jager et al., 2013; Renden, Nieuwenhuys, Savelsbergh, & Oudejans, 2015b; Sjöberg, Karp, & Rantatalo, 2016). With regards to participant’s motivation of taking part in police use of force training recent results suggest, that the wants and needs of learners differ (Staller, Körner, Heil, & Kecke, 2018; 2019). However, the wants and needs of

learners when engaging in learning activities that have the potential to be unpleasant due to physical contact or pain have not been explored so far.

1.2 Contact and Pain in Police Use of Force Training

The experience of pain is an immanent feature of the participation in combat sports settings like mixed-martial-arts (Downey, 2007; Spencer, 2012; 2014) or self-defence practice (Staller, Abraham, Poolton, & Körner, 2017a). As such, training offers participants learning possibilities in the management of pain (Focht, Bouchard, & Murphey, 2000; J. Heil & Podlog, 2012). In some domains, like police special operation units (Asken & Grossman, 2010), Muay Thai (Muay Thai Guy, 2015) or Krav Maga (Staller, Abraham, Poolton, & Körner, 2017a), there are specific training activities aiming at improving the level of pain tolerance in violent conflict situations. However, as participants engage in such practices, it is not clear if the ability to cope with pain after a longer period of training is actually a training effect or a result of a selection process (i.e. pain tolerant individuals stay, pain intolerant individuals drop out). Results of expert interviews with Krav Maga coaches suggest that the latter is the case (Staller, Abraham, Poolton, & Körner, 2017a).

In mandatory training settings, like police use of force training within the academy, it is not possible to easily withdraw from the training. However, if training does not meet the wants and needs for the officer, a decrease of motivation may be the case (Honest, 2016). This can result in inefficient behaviour in partner drills when one party has different needs than the training partner. Research concerning the design of representative learning tasks (Broadbent, Causer, Ford, & Williams, 2015; Pinder, Renshaw, Headrick, & Davids, 2014; Staller, Zaiser, & Körner, 2017c) suggests that high quality partner behaviour on the side of the simulator (the party that helps the other party to practice his/her skills) has to be aligned to the task that has to be performed in the real world context and should feature the key informational variables of that situation (functionality). On the side of the learner (the party that practices a task in order to develop skills), the task has to allow for the performance of the key features of behaviour, including affective, cognitive and motor components (action fidelity). The design of high-quality partner interactions is an important feature of training settings in the police use of force domain that enables skill transfer to the real world environment (Körner & Staller, 2017). The experience of contact and pain has the potential of reducing the level of quality in partner behaviour. Data of a recent interview study with German police officers (Staller et al., 2018; 2019) supports this argument. A participant reported that women do not like engaging with the same level of contact as their male counterparts when engaging in learning activities that have the potential to be unpleasant due to physical contact or pain. This may be explained by differing levels of pain sensitivity between men and women (Hashmi & Davis, 2014). However, in order to follow up this anecdotal report, an empirical examination of preferred levels of contact in activities in police use of force settings for different genders is needed. This would provide the police use of force coach, as the decision-maker in the coaching, with a clearer understanding of different wants and needs regarding the interactional dynamics with regards to levels of contact and pain in police use of force training.

1.3 Aim and Hypothesis of the Study

The aim of the current study is to investigate potential differences in the needs of police officers when it comes to exercises that incorporate physical combat techniques between partners. Specifically, the current study aims at eliciting potential differences in the level of contact partners want to deliver and receive from each other depending on their role they are having in the partner drill (either simulator or learner). Since different training activities incorporate the use (or the lack) of protection gear, it was hypothesized, that (a) there are differences between partner drills (hypothesis 1). Furthermore, since research has confirmed differences between male and female individuals with regards to pain

sensitivity (Hashmi & Davis, 2014), it was hypothesized that male and female officers will differ with regards to the preferred levels of contact (hypothesis 2).

2 Methods

A questionnaire was distributed via an online survey programme (www.soscisurvey.de, SoSci Survey GmbH, Munich, Germany) to collect the favoured level of contact in police use of force training of police recruits. Police recruits of the Hessian Police at the Hessian University of Applied Sciences for Police and Public Administration (Hessische Hochschule für Polizei und Verwaltung) in Mühlheim were invited to take part in the study. An email providing information about the study and the link for the questionnaire was sent to all recruits undergoing academy training in Mühlheim/Hesse at this time. All participants gave their informed consent prior to filling out the questionnaire. The project received ethical approval from the Research Ethics Committee of the German Sports University Cologne.

2.1 Participants

A total number of 132 police officers of the Hessian Police took part in the study (male: $n = 82$; female: $n = 50$). All participants were recruits in the beginning of the second year of academy training. They already had undergone 19 weeks of basic training with instruction in police use of force. Twenty participants did not fully complete the questionnaire. Therefore, these cases were excluded from the study, resulting in a final sample of 112 police officers. Characteristics of the final sample are displayed in Table 1. There were no statistically significant differences in age between male and female police officers, $t(92.67) = 1.63, p = .107, d = .35$.

Table 1: Age Characteristics of Police Recruits

	<i>N</i>	<i>M</i>	<i>SD</i>
Sample	112	23.20	3.74
Male	73	23.59	3.96
Female	39	22.46	3.21

2.2 Materials

The questionnaire consisted of 12 items with which recruits indicated their expectations about the level of contact when receiving techniques from a Partner (6 questions) or when performing the techniques on the partner (6 questions). Participants were able to choose the level of favoured contact by setting a slider between 0 (without contact) and 100 % (full contact). The questions are displayed in Table 2.

Table 2: Questionnaire about Favoured Levels of Contact in different Police Use of Force Training Activities with Physical Contact

	Question	Item Name
	How much contact from your partner against you would you prefer, when	
1	... you are doing pad work together and you are holding the pad	Pad Work R
2	... you are sparring together with protection gear	Sparring R
3	... you are doing partner drills and you are the attacker and your partner performs the defense technique against you	Simulator R

4	... when you are doing partner drills and you are the defender performing the defense technique and your partner is attacking you	Learner R
5	... when you are doing scenario training and you are the defender	Learner Scenario R
6	... when you are doing scenario training and you are the attacker or one of the attackers	Simulator Scenario R
How much contact from you against your partner would you prefer in the following training situations?		
7	... you are doing pad work together and your partner is holding the pad.	Pad Work D
8	... you are sparring together with protection gear	Sparring D
9	... you are doing partner drills and you are the attacker and you partner performs the defense technique against you	Simulator D
10	... when you are doing partner drills and you are the defender performing the defense technique and your partner is attacking you	Learner D
11	... when you are doing scenario training and you are the defender	Learner Scenario D
12	... when you are doing scenario training and you are the attacker or one of the attackers	Simulator Scenario D

Note: R refers to "receiving" (individuals that receives contact from partner); D refers to "delivering" (individual delivering contact to partner)

2.3 Statistical Analysis

Statistical analysis was conducted using SPSS version 24.0 and R. In order to assess potential differences between the preferred levels of contact depending on the training situation and gender, a 2 x 12 mixed ANOVA (Gender x Training situation) was performed with Training situation as a repeated measures factor. The assumptions for the use of parametric methods were not met: the data yielded outliers which had a studentized residual value greater than ± 3 . However, the levels of favoured contact were normally distributed, as assessed by Normal Q-Q Plots. There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ($p > .05$) except for values of Sparring – receiving ($p = .025$) and Sparring – delivering ($p = .030$). Furthermore, the data showed no homogeneity of covariances, as assessed by Box's test of equality of covariance matrices ($p < .001$). Therefore, it was decided to use a robust two-way mixed ANOVA on 20% trimmed means using the *bwtrim()* function in R (A. Field, Miles, & Field, 2012; Wilcox, 2012). Gender (male and female) was the between-subjects factor, whereas the roles and training activities (Pad work, Sparring, etc.) were accounted for as a repeated within-subjects factor. Significant results were followed up by separate robust one-way repeated measures ANOVAs on 20% trimmed means using the *rmanova()* function. Post hoc tests were computed by the use of *rmmcp()* function as suggested by Field et al. (2012). Furthermore, Mann-Whitney U tests were used to further assess differences between gender for each training situation. A p -level of .05 was set to indicate statistical significance.

3 Results

The preferred levels of contact depending on the training situation are displayed in Table 3. Results of the robust 2 x 12 mixed ANOVA yielded a statistically main effect of training situation, $Q = 4.07, p < .001$, and a statistically significant interaction (Gender x Training Situation) effect, $Q = 2.60, p = .010$. The result was followed up by separate robust one-way repeated measures ANOVAs on 20% trimmed means using the *rmanova()* function. For male police officers, results yielded a significant main effect of training situation on the preferred level of contact, $F(4.77, 209.89) = 13.43, p < .001$. Post hoc tests using the *rmmcp()* function (20% trimmed means) revealed several significant differences between training situations at $p < .05$, which are displayed in Table 3. For female police officers, results yielded

a significant main effect of training situation on the preferred level of contact, $F(6.31, 151.51) = 4.36$, $p < .001$. However, post hoc tests using the *rmmcp()* function (20% trimmed means) revealed no significant differences between training situations at $p < .05$. To further elaborate on the Gender x Training Situation interaction effect, Mann-Whitney U test revealed differences between male and female police officers for Pad work, when holding the pad, $U = 883.00$, $z = -3.22$, $p = .001$, and for Sparring, when receiving punches or kicks, $U = 1053.50$, $z = -2.26$, $p = .024$. There was no statistically significant main effect of gender on the favoured level of contact, $Q = 0.04$, $p = 0.842$.

Table 3: Statistics of the Preferred Levels of Contact

	N	M	SD	95% CI			LQ	UQ	Difference
				LL	UL	Mdn			
1 Pad Work R	112	81.32	16.96	78.15	84.50	81.00	71.50	100.00	*
Male	73	84.95	15.35	81.36	88.53	87.00	77.50	100.00	2,3,4,6,8,9,12
Female	39	74.54	17.93	68.73	80.35	75.00	68.00	84.00	
2 Sparring R	112	72.31	17.98	68.95	75.68	74.00	60.00	86.75	*
Male	73	75.23	16.26	71.44	79.03	76.00	64.50	89.00	1,7
Female	39	66.85	19.89	60.40	73.30	65.00	51.00	84.00	
3 Simulator R	112	74.37	16.40	71.29	77.44	75.00	63.00	86.50	
Male	73	73.03	16.42	69.20	76.86	74.00	63.00	81.00	1,7
Female	39	76.87	16.27	71.60	82.15	76.00	67.00	91.00	
4 Learner R	112	75.57	16.57	72.47	78.67	75.00	65.00	90.00	
Male	73	74.40	16.42	70.57	78.23	75.00	62.50	86.00	1,7
Female	39	77.77	16.85	72.31	83.23	77.00	67.00	91.00	
5 Learner Scenario R	112	77.91	14.71	75.16	80.66	80.00	69.25	89.75	
Male	73	78.55	14.31	74.21	81.89	80.00	69.00	90.00	7
Female	39	76.72	15.55	71.68	81.76	81.00	71.00	88.00	
6 Simulator Scenario R	112	78.10	14.97	75.30	80.90	80.00	70.00	90.75	
Male	73	77.19	14.24	73.87	80.51	79.00	68.00	87.50	1,7
female	39	79.79	16.30	74.51	85.08	83.00	72.00	93.00	
7 Pad Work D	112	84.42	17.30	81.18	87.66	89.50	76.50	100.00	
male	73	85.95	16.55	82.08	89.81	90.00	80.00	100.00	2,3,4,5,6,8,9,10,11,12
female	39	81.56	18.51	75.56	87.56	81.00	73.00	100.00	
8 Sparring D	112	75.16	17.34	71.91	78.41	78.50	65.25	89.00	
male	73	77.05	16.09	73.30	80.81	79.00	70.00	89.00	1,7
female	39	71.62	19.18	65.40	77.83	75.00	51.00	89.00	
9 Simulator D	112	76.54	16.47	73.45	79.62	77.50	69.25	89.75	
male	73	75.41	16.22	71.63	79.20	76.00	66.50	86.00	1,7
female	39	78.64	16.94	73.15	84.13	80.00	70.00	91.00	
10 Learner D	112	77.63	15.47	74.74	80.53	79.50	70.00	90.00	
male	73	76.66	14.76	73.21	80.10	78.00	67.00	87.50	7
female	39	79.46	16.77	74.02	84.90	82.00	71.00	91.00	
11 Learner Scenario D	112	79.20	14.11	76.55	81.84	80.00	70.00	90.00	
male	73	79.21	13.66	76.02	82.39	80.00	70.00	90.00	7
female	39	79.18	15.10	74.28	84.07	80.00	71.00	90.00	
12 Simulator Scenario D	112	77.97	14.81	75.20	80.75	80.00	70.00	89.75	
male	73	78.15	13.03	75.11	81.19	80.00	70.00	88.00	1,7

female	39	77.64	17.87	71.85	83.43	80.00	68.00	91.00
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*Note: Numbers reflect differences at $p < .05$ between levels; * reflect differences at $p < .05$ between gender; R refers to "receiving" (individuals that receives contact from partner); D refers to "delivering" (individual delivering contact to partner)*

The results indicate that the main effect of training situation in male participants is mainly because of the higher levels of contact during pad work both as receiver (see Figure 1) and deliverer of punches and kicks (see Figure 2). The interaction effect is mainly caused by lower levels of preferred contact during pad work, when holding the pad (see Figure 3), and sparring as preferred by female recruits compared to their male counterparts (see Figure 4).

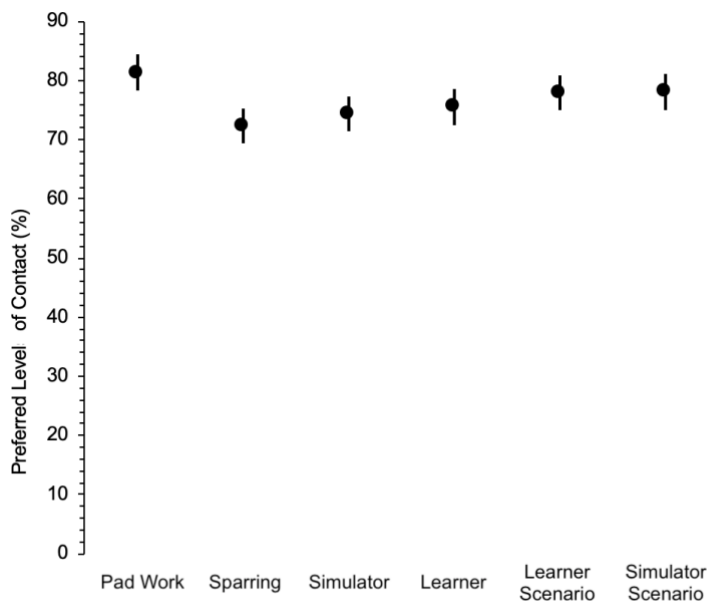


Figure 1: Preferred levels of contact of male police officers (N = 73) across different training situations when receiving kicks and punches. Error bars reflect 95% CI around the mean.

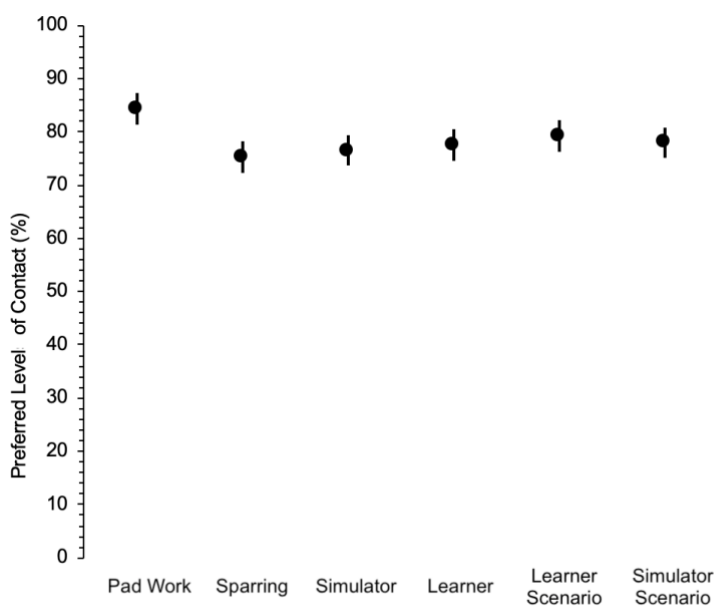


Figure 2: Preferred levels of contact of male police officers (N = 73) across different training situations when delivering kicks and punches. Error bars reflect 95% CI around the mean.

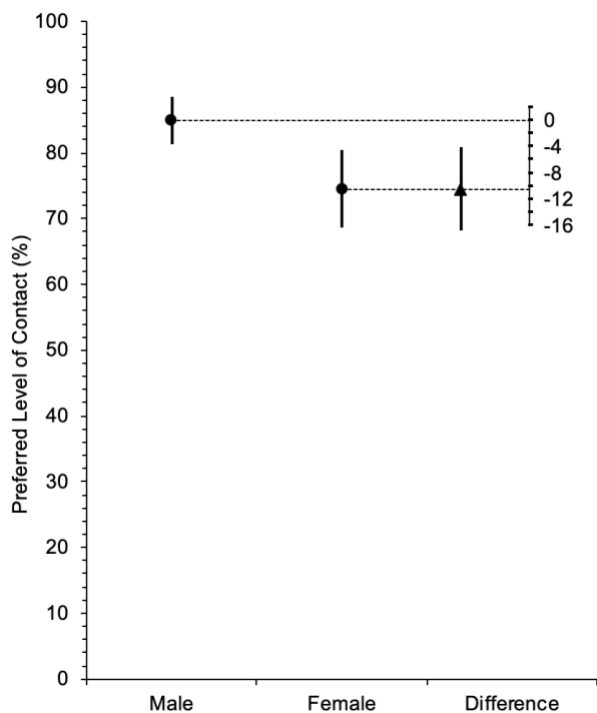


Figure 3: Preferred levels of contact of male (n = 73) and female (n = 39) police officers when receiving contact while holding the pad. Error bars reflect 95% CI around the mean.

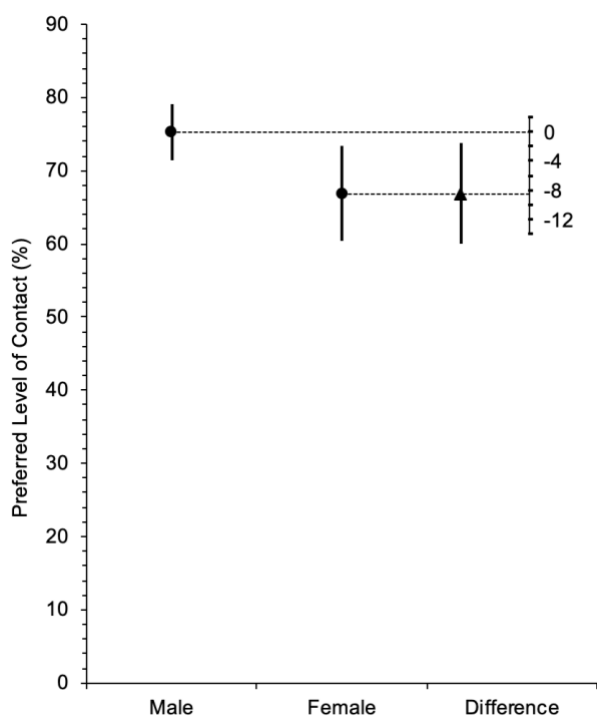


Figure 4: Preferred levels of contact of male (n = 73) and female (n = 39) police officers when receiving contact while sparring. Error bars reflect 95% CI around the mean.

4 Discussion

In the current study we investigated potential differences between the preferred levels of contact between gender and different training situations in police use of force training. The results showed several relevant findings: First, that there are differences in the levels of preferred contact between different training situations in police use of force training, thus confirming hypothesis 1. Specifically, trainees prefer higher levels of contact when hitting a pad and when receiving hits on a pad compared to any other partner drills. Second, differences between men and women were only reported for cases when female recruits hold the pad. In such situations, female officers prefer less contact than their male counterparts. However, no significant differences were observed for any other training situations. As such hypothesis 2 was only partially confirmed.

The results clearly state that needs and wants of trainees change according to the training situation at hand. In situations where hits are buffered due to a pad, trainees like to perform and receive strikes and blows with more impact. In situations where there is less buffer between the partners, when performing, partners like to perform with lower levels of contact. This is in line with research showing that contact is part of physical conflict training (Spencer, 2012; Staller, Abraham, Poolton, & Körner, 2017a) and that contact and pain has to be negotiated individually in the specific training situations (Channon & Jennings, 2013; Staller, Abraham, Poolton, & Körner, 2017a). Furthermore, the differences between male and female officers in the preferred contact level regarding working with a pad and sparring can be explained by psycho-physiological gender differences that may affect behaviour in physical conflict settings (Staller, 2015). For example, research has confirmed differences in pain sensitivity for acute, dynamic pain (Hashmi & Davis, 2014), higher upper body strength (Lassek & Gaulin, 2009) and higher body mass (Loomba-Albrecht & Styne, 2009). These aspects may contribute to a more unpleasant experience as the holder of the pad when the learner is hitting it or being at the receiving end in sparring. This is supported by the result that there are no differences between genders when delivering the punches (being the learner).

The results highlight changes in participants needs according to the training situation and the role in that situation. Simultaneously, partner interactions have to be designed representatively and performed in order to foster skill transfer (Staller, Zaiser, & Körner, 2017c). The task of the coach, to enable and support participants to engage in high quality partner interaction that (a) fit the needs of the learner and (b) promote skill transfer, is not easy and adds to the complexity of coach decision making. However, the present results add to current knowledge about different needs regarding the level of contact in physical conflict and combat situations in training. It allows the police use of coach to make more informed decisions about the instruction and delivering of any partner drill. Furthermore, the results emphasize the importance of considering individual needs of the learner in the "who-what-how" model of coaching practice (Abraham et al., 2015).

There are several practical implications for the study. First and foremost, police use of force coaches should be aware of the differences between training situations and gender and act accordingly. These differences could be addressed when explaining training activities that involve partner interaction. Second, the role of the learner and the simulator should be explained and associated with different goals (e.g., learning vs. helping the partner to learn) and different needs regarding contact behaviour. Finally, brief partner discussion about the preferred level of contact should be encouraged to individually agree on the level of contact for the current partner interaction.

The study reported here has its limitations. First, since the results are based on self-reports of recruits, it is possible that these results are influenced by aspects of impression management (Weenink, 2015).

Future studies could benefit from unobtrusive observations with regards to partner interaction in police use of force training. Second, only recruits in the beginning of their career have been surveyed. It may be possible that preferred levels of contact change over time, as the individual becomes more desensitized and is able to cope better with the experience of pain. Further research applying interventional designs might be a useful way to explore this issue more thoroughly.

Conclusion

The current study emphasizes that participants of police use of force trainings have different needs in different training situations. Hence, it provides valuable information for the police use of force coach, when planning, delivering and reviewing training sessions. Specifically, male participants prefer higher levels of contact when using a pad to practice punches and kicks compared to other training situations and female officers prefer lower levels of contact in sparring exercises and pad work compared to their male counterparts. However, further research is needed to (a) further disentangle the motivation to learn technical skill from the motivation to develop pain management abilities and to (b) investigate the effects of the behaviour on the partner interaction, when the needs of the simulator or the performer are not met.

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