Bachelor Thesis
Sport and Exercise Psychology, 180 credits

Regulatory Focus and Penalty Taking in Handball

Sport- and Exercise Psychology, 15 credits

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Sammanfattning

Straffläggnings prestation i handboll inom ett själv-regulatoriskt fokus-ramverk undersöks. I en två-oberoende grupps design, regulatorisk inramning (antingen promotion eller prevention) gavs till deltagarna (N = 25) innan straffläggning. Mer exakt, svenska manliga (n = 15) och kvinnliga (n = 10) spelare från den manliga tredje och kvinnliga andra svenska divisionen var slumpmässigt tilldelade att skjuta tre straffar under antingen en promotion-inramad (n = 13; Målder = 20.77, SD = 3.77 år) eller prevention-inramad (n = 12; Målder = 19.25, SD = 2.09 år) straffsituation. Mätningar av positiva och negativa affekter bedömde pre-prestation emotionella tillstånd. Resultaten visade att promotions-fokuserade individer presterade bättre i en promotion-inramning straffsituatio (fit) än i en prevention-inramning straffsituatio (mismatch). Dessutom när i regulatoriskt-fit, rapporterades positiva emotioner högre än i mismatch. Resultaten är diskuterade i förhållande till rollen av fit och emotionella tillstånd i prestation-under-press kritiska situationer

Nyckelord: promotion, prevention, inramning, positiva affekter, negativa affekter, press, emotionella tillstånd

Abstract

Penalty-taking performance in handball within a self-regulatory focus framework was examined. In a two-independent group design, regulatory framings (either promotion or prevention) were given to participants (N = 25) prior to penalty-taking. More precisely, Swedish male (n = 15) and female (n = 10) players of the third male and second female Swedish Leagues were randomly allocated to shoot three penalties each under either a promotion-framed (n = 13; M_{age} = 20.77, SD = 3.77 years) or a prevention-framed (n = 12; M_{age} = 19.25, SD = 2.09 years) condition. Positive and negative affect were measured to assess pre-performance emotional states. Findings showed that promotion–focused individuals performed better in a promotion–framed penalty (i.e. fit) than in a prevention–framed (i.e. mismatch). Moreover, when in regulatory fit, pre-performance positive emotions were reported to be greater than when in mismatch. Findings are discussed in terms of role of fit and emotional states in pressure-performance critical situations.

Keywords: promotion, prevention, framing, positive affect, negative affect, pressure, emotional states
Handball is the fifth most popular sport in Sweden (Parker, 2019). This team sport is characterized by rapid shifts between offence and defence, consisting of two, 30-minute periods and the team that manage to score the most goals wins. One of the most straightforward ways to score in handball is through a penalty; for instance, in the season 2018-19 in the highest Swedish league a total of 1309 penalties were taken, with a success rate as high as 76% (Handbollsligan, 2019). Successful penalty-taking in handball may potentially be critical when it comes to the final score. Although penalties might, at first glance, look quite easy – especially given the high success rate – they still create some of the most dramatic and nerve-wracking moments in handball. With such high expectations to score, the task might feel like a burden to players and missing such a clear opportunity to score may be overwhelming. Penalties can, therefore, be quite a stressful situation for the player.

Every penalty situation is unique, and the perceived level of pressure is often influenced by various characteristics of the situation (e.g. time left, score, match importance). Additionally, how athletes approach such a high-pressure situation will also differ; it may be seen as a winning situation or as a non-losing situation. Differences regarding how one perceives stressful situations such as these are addressed by the theoretical framework of regulatory focus (Higgins, 1997). The core idea is that individuals’ motivational orientation differs depending on their chronic regulatory focus, i.e. either promotion or prevention focus (Higgins, 1997). Accordingly, performance will vary depending on the interaction between chronic regulatory focus and the characteristics of the situation (Higgins, 2000). In the present study we examined athletic performance, in particular that of penalty taking in handball, within a regulatory focus framework. In handball, similarly to football, any player is allowed to take penalties, compared to other sporting disciplines such as basketball, where the player being fouled must take the shot.

**Performance under pressure**

The capacity to perform when under pressure in elite sport, always aiming at performing one’s best when it really matters is essential. Hardy, Mullen, and Jones (1996) state that as perceived importance increases pressure levels do so too. Psychological, kinematic and muscular levels must be optimized to accomplish maximized performance (Bar-Eli et al., 2006). Social evaluation, monetary incentives and social comparison are mediators which pressure effects performance through (Cooke, Kavussanu, McIntyre, & Ring, 2010). These mediators are constant side effects of sport performances (Dohmen, 2008) and performances that are worse than expected are defined as choking under pressure (Beilock & Gray, 2007).

Attentional theories attempt to describe the pressure-performance relationship, in particular the choking under pressure phenomenon. Within this attentional framework there are two theoretical approaches that explain why under-performance occurs when under pressure: distraction theories and self-focus theories (Oudejans, Kuijpers, Kooijman, & Bakker, 2011). According to distraction theories, pressure influences task performance by making the environment distracting and thus compromises one’s working memory capacity, since it’s a restricted resource (Beilock & Gray, 2007). If one’s working memory and the ability to maintain task focus is disrupted, performance is likely to suffer from that process (Beilock, Bertenthal, McCoy, & Carr, 2004). Whereas, explicit monitoring theories suggests that self-consciousness and anxiety about performing correctly will increase when under pressure and therefore have a negative effect on performance (Baumeister & Vohs, 2004). Well learned or
procedural processes that normally function outside of conscious awareness are disrupted by step-by-step skill process and procedures according to explicit attention theories (Beilock, Kulp, Holt, & Carr, 2004). A lot of evidence points towards directing attention away from task execution in order to experience a greater performance during high procedural tasks (Beilock et al., 2004). It is crucial to understand the above-mentioned effects that pressure has on performance, to create strategies that will lead individuals to perform their best when it really matters (Oudejans et al., 2011).

**Regulatory focus theory**

Regulatory focus theory proposes that an individual’s self-regulatory orientation, i.e. one's capacity to alter one's behaviour or feelings as well as monitoring and managing thoughts (Baumeister & Vohs, 2007), can be divided in two distinguishable modes in regards to goal achievement (Higgins, 1997). Firstly, through a promotion focus, this mode is related to individuals' pursuit of success and aspirations. Prevention focus on the other hand, which is the second mode, describes individuals' aims towards security and responsibilities (Higgins, 1997).

Higgins (1997) theoretical framework was developed from the hedonic notion regarding motivational theories which suggested that human motivation is determined solely by approaching pleasure and avoiding pain. Regulatory focus theory on the other hand meant that these hedonistic principles can’t be the only determining factor, especially when looking at fundamentally different needs such as nurturance and security (Higgins, 1997; Higgins & Silberman, 1998). Regulatory focus theory therefore differentiates between individuals’ strategic means when approaching pleasure and avoiding pain, either through a promotion or a prevention way (Higgins, 1997). Following up on this, promotion focus involves pleasure experiences in the presence of positive outcomes and pain experiences in the presence of negative outcomes. Conversely, prevention focus involves pleasure experiences in the absence of negative outcomes and pain in the absence of positive outcomes (Higgins, 1997). In addition to this, Higgins, Shah and Friedman (1997) describes that individuals need to be divided into promotion and prevention groups, since these chronic regulatory focuses also vary in emotional experiences. Promotion focused individuals’ positive emotions are cheerful-related and includes happiness and satisfaction, the negative promotion emotions on the other hand are dejection-related including disappointment and discouragement (Higgins et al., 1997). Prevention focused individuals’ positive emotions are quiescence-related and include emotions such as calmness and relaxation, the negative prevention emotions are agitative-related and associated with tenseness and feeling uneasy (Higgins et al., 1997).

One's regulatory focus is determined through childhood socialization and it reflects how the person gets along in the world (Freitas & Higgins, 2002). Regulatory focus tends to be a stable psychological phenomenon, since it is established in such an early stage of life. It is therefore termed as one's chronic regulatory focus which takes form in either chronic promotion or chronic prevention (Higgins, 1997). Imagine an interaction between the caretaker and child which involves a promotion focus. The child will experience pleasure in the presence of positive outcomes and pain in the absence of positive outcomes. For example, when the caretaker hugs or kisses the child (presence of positive outcomes) the child will experience pleasure. Conversely, when the caretaker for instance removes the child's toy or concludes a story before it's over because the child isn’t paying attention, the child will experience pain (absence of positive outcomes; Higgins, 1997). In both examples the caretaker sends a message to the child regarding what really matters, the pursuit of accomplishments and reaching aspirations, i.e. promotion focus. In a prevention focused interaction between child and caretaker, the child will instead experience pleasure in the absence of negative outcomes and pain in the presence of
negative outcomes. Prevention focused situations might occur when the caretaker yells at the child when he/she isn’t paying attention (presence of negative outcomes). In contrast to pleasure experience, in these cases the caretaker could train the child to be alert to potential dangers (absence of negative outcomes; Higgins, 1997). In both of these examples the caretaker communicates three things that really matter, one's ought's, reaching one's obligations and ensuring security. In team sports a prevention focus is quite unusual, Plessner et al. (2009) performed a study where they looked at the chronic regulatory focus frequencies within elite sports. Their results displayed that in individual sports like gymnastics the range between prevention and promotion focus is more balanced than in team sports such as basketball or football, which is more promotion frequent.

**Regulatory focus and performance under pressure.** Regulatory focus theory in regards to performance differs from classic achievement and motivational theories in several ways. Promotion and prevention focus for instance are valance free, this implies that they’re neither positive nor negative (Plessner et al., 2009). Furthermore, these two modes aren’t independently able to predict whether an athlete will be more or less favourable regarding performance (Higgins, 2000). Some researchers have displayed that promotion focus seems to be beneficial in some tasks, even though these motivational strategies (i.e. promotion/prevention) are valance free. Memmert, Hütterman and Orliczek (2013) examined divergent thinking in football, their study exhibited that promotion focused athletes outperformed prevention focused athletes in cognitive tasks. Their results also indicated that this might depend on promotion focused athletes' ability to produce more flexible and original solutions. They also argue that this might be due to a more risk-taking approach towards the task at hand adopted by the promotion orientated athlete (Memmert et al., 2013). Supporting this, Friedman and Förster (2005) and Memmert and Cañal-Brunland (2009) displayed similar results regarding attentional flexibility tasks and selective attention tasks. Promotion-focused individuals characterized with chronic tendencies to maximize the gains and tend to use an approaching strategy (Plessner et al., 2009). In a sport context these individuals might have thoughts such as "we have to win this” or “we need to get the ball back quickly". In contrast to prevention-focused individuals who are sensitive to the presence or absence of negative results and use avoidance as a strategy as well as trying to minimize the losses. They instead tend to have thoughts like "we can't lose this game” or “we have to stop the opponent from scoring" (Plessner et al., 2009).

Performance involves a dynamic decision-making process between the athletes' chronic regulatory focus, the task itself and the situation (Lockwood, Jordan & Kunda, 2002; Plessner et al., 2009). The task or the situation can, in their own psychological construct, be either more promotion focused or more prevention focused (Plessner et al., 2009). Debanne, Angel and Fonteyne (2014) performed a study that investigated decision-making regarding defensive strategies during games by professional handball coaches using regulatory focus theory, their results displayed that situational factors such as time left, or scoring can interact with their chronic regulatory focus regarding the decision-making process. Their results also displayed that the defensive strategy of choice is more likely to be promotion orientated in a gains reward structure than in neutral or loss reward structure.

**Regulatory fit**

Regulatory fit is a combination between three determining factors: firstly, the construal of the situation or task (promotion/prevention). Secondly, functions of one's chronic regulatory focus (i.e. promotion/prevention). Thirdly, the task or the situation framing, an identical task can be presented in either a promotion or prevention way (Higgins, 2000). Developing this further,
promotion focused individuals will experience a greater performance in tasks where focusing on success and aspiration is advantageous. Prevention focused individuals on the other hand will perform better in situations that require focus on security and responsibility (Plessner et al., 2009). According to Higgins (1997; 2000) it’s when someone is regulatory fit the best performance occurs. When a promotion focused individual handles a task that requires focus on security and responsibility or if a prevention focused person handles a task requiring focus on success and aspiration lesser performance will occur (Higgins, 2000). Scenarios like these are termed as regulatory mismatch, when chronic regulatory focus doesn’t match the regulatory construct of the situation (i.e. promotion framed tasks/prevention framed tasks; Higgins, 2000).

Beyond performance, regulatory fit also effects people’s judgment, decision making, intrinsic motivation and attention, as well as attitude and behaviour change (Higgins, 2005; Bianco, Higgins & Klem, 2003). Spiegel, Grant-Pillow and Higgins (2004) performed a study which examined behaviour change regarding healthy eating when regulatory fit contra regulatory mismatched participants. Their results displayed that participants (with promotion/prevention focus) that were urged to eat more fruit and vegetables through a message framed (promotion/prevention framing) in a way that fitted their chronic regulatory focus consumed 20% more fruits and greens the following week contrary to those who were promoted an healthier diet through a message that mismatched their regulatory focus. Bianco et al. (2003) performed a study on regulatory fit and classic motivational variables such as fun and importance. Their results displayed that not only was performance positively affected by regulatory fit, the individuals who matched the situation were also more engaged in the task at hand and experienced stronger motivation (Bianco et al., 2003). Memmert, Unkelbach and Ganss (2010) performed a study on the impact of regulatory fit on performance in an inattentitional blindness paradigm. In their study the participants were assessed to differently framed situations (i.e. promotion or prevention). The task was to count the number of passes in a basketball game, during this game an unexpected object appeared (a gorilla), the participants whose regulatory focus matched the framing of the situation (regulatory fit) detected the gorilla more often than the regulatory mismatched participants. These results suggest that regulatory fit leads to a broader scope of attention (Memmert et al., 2010). Individuals who are regulatory fit are more motivated and more engaged regarding the task at hand, beyond this they also feel better about their decisions, performances and judgment (Higgins, 2005). To summarize, promotion focused individuals perform and feel better in promotion framed tasks and prevention focused individuals perform and feel better in a prevention framed task (Higgins, 2005; Plessner et al., 2009).

**Regulatory fit and performance under pressure.** The regulatory fit phenomenon has been applied in both sports and cognitive contexts and has received some empirical support (e.g. Plessner et al., 2009; Kutzner, Förderer & Plessner, 2013; Memmert et al., 2013; Friedman and Förster, 2005; Memmert & Cañal-Bruland, 2009; Kacperski & Kutzner, 2018; Klatt & Noël, 2019). Plessner et al. (2009) examined penalty shooting in soccer which could be regarded as a pressured situation. The penalty situation was framed as either promotion or prevention and the results displayed that there was a positive impact on performance if regulatory fit was experienced. The positive impact on performance was especially displayed during a prevention fit in contrary to a promotion fit (Plessner et al., 2009). Furthermore Plessner et al. (2009) discussed that a prevention fit was more beneficial due to the high success rate of soccer penalties (75-85%; Kuss, Kluttig, & Stoll, 2007) and the penalty-situation from the shooters perspective is a relatively easy task where the player should be able to fully rely on his/hers
Kutzner et al. (2013) examined elite golfers in a pressure manipulated putting task were the participants were randomly selected into two groups, one of the groups had a promotion framed putting task and the other a prevention framed putting task. After the task, the participants answered a questionnaire that gave the researchers information regarding the participants chronic regulatory focus (promotion or prevention focused). This study displayed that athletes who are regulatory fit experienced a greater performance by almost 20% (Kutzner et al., 2013). Their results however displayed unlike Plessner et al. (2009) that a promotion fit was more beneficial than a prevention fit (Kutzner et al., 2013). Kacperski and Kutzner (2018) study tested each participant in six table tennis matches with verbal framing of both promotion and prevention focus. They found that regulatory fit had a positive effect on performance (winning the point more often) and players who were regulatory fit were also more likely to adhere to their chosen tactics (offensive or defensive) which led to higher likelihood of winning the point. In addition to the effect of verbal framing, Klatt and Noël (2019) examined if the exact wording of manipulation instructions matter, and if these instructions bear any risk of being reformulated by the participants in order to match their regulatory focus. Their results displayed that the best performance predictor was the regulatory fit between the participants regulatory focus and their own rephrasing of the instruction. Klatt and Noël (2019) addresses the need of effective manipulation checks, in order to establish that participants truly adhere to the manipulation of the situation.

In regards to choking under pressure, which some researchers argue is due to a decrease in working memory (e.g. Markman, Maddox & Worthy 2006; Beilock & Carr, 2005) regulatory fit might give an alternative or more comprehensive explanation. Athletes who are regulatory fit are better at providing more adequate solutions, which should require greater executive attention, than athletes that experience regulatory mismatch (Maddox, Baldwin & Markman, 2006). Beyond this Worthy, Markman and Maddox (2009) study displayed that working memory isn’t directly affected by pressure, it’s rather so that pressure induces a prevention focus. Worthy et al. (2009) explains further that the induced prevention focus interacts with the situation to either produce a regulatory fit or mismatch. Choking might therefore be due to a regulatory mismatch and the decrease in working memory might only be a consequence of that mismatch (Worthy et al., 2009).

Many studies have displayed that an increase in sports performance will occur when an athlete experience a match between regulatory focus and framing of the situation (e.g. Plessner et al., 2009; Kutzner et al., 2013; Kacperski & Kutzner, 2018). These sports and tasks can in some ways resemble a handball penalty; requiring focus, decision making, optimal performance and dealing with pressure. A handball penalty might go in line with the discoveries that previous research has made in other sports, following the theme of experiencing a greater performance when athletes are regulatory fit. Especially when comparing the success rate in handball penalties with football penalties, in the highest Swedish football league 18/19 a total of 114 penalties were taken and 73% were converted to goals and in the highest Swedish handball league 18/19 a total of 1309 penalties were taken and 76% were converted to goals (Transfermarkt, 2019; Handbollsligan, 2019). With such a high success rate in handball penalties a prevention focus in a prevention framed situation might be beneficial, due to the situation's non-loss characteristic, going in line with the results displayed by Plessner et al. (2009). However, as previous research has shown, a prevention focus seems quite unusual in competitive handball (Andersson & Wolffsohn, 2019). No clear hypothesis was therefore stated regarding which regulatory fit would be the most beneficial in a handball penalty situation.
Rational and purpose of study

The capacity to perform when under pressure, aiming at performing ones best when it really matters is essential in elite sports. In handball such a situation might be a penalty shot, although they might at first glance look quite easy. Especially given the success rate as high as 76% (Handbollsligan, 2019) they still create some of the most dramatic and nerve-wracking moments handball can offer. With such high expectations to score, the task might feel like a burden to players and missing such a clear opportunity to score may be overwhelming. The core idea stated in regulatory focus theory is that individuals’ motivational orientation and the way they approach stressful situations such as a penalty shot will differ depending on their regulatory focus, i.e. either in a promotion or prevention way (Higgins, 1997). Moreover, the performance will vary depending on the interaction between their chronic regulatory focus and the characteristics of the situation, i.e. regulatory fit or regulatory mismatch (Higgins, 2000). Previous research on regulatory fit in a sport context has been made, for instance, both Kutzner et al (2013) and Plessner et al (2009) displayed that regulatory fit has a positive effect on performance. Experiencing a greater performance in a handball penalty can be critical to the final end result of the game, especially when considering the amount of penalties taken per season (1309 in the season of 18/19; Handbollsligan, 2019).

The present study therefore examined penalty taking performance in handball within a self-regulatory focus framework. To that end, in a two-independent group design, regulatory framings (either promotion or prevention) were given to participants prior to penalty-taking. Based on regulatory fit theory (Higgins, 2000), it was hypothesised that fit conditions would produce greater performances than mismatch conditions. Thus, athletes with a relative promotion focus taking penalties under a promotion-framed mindset and athletes with a relative prevention focused taking penalties under a prevention-framed mindset would exhibit greater performances. Lastly, it was hypothesised that performance in penalty taking would decrease when under mismatch (different match between relative chronic focus and framing).

Method

Participants

A convenience sample of players (N = 25) from the second female Swedish League (n = 10; ages ranging between 17-24 [M = 19.9, SD = 2.06 years]) and the third male Swedish League (n = 15; ages ranging between 17-32 [M = 20.13, SD = 3.74 years]) participated in the study. According to the Swedish Handball Federation (SHF), the first to the third divisions are elite handball, with competitions arranged by SHF (Svenska handbollsförbundet, 2018). See Table 1 for full demographic sample details.

Materials

Demographic information such as age, handball experience, gender, position and shooting hand was gathered from participants.

Questionnaires. Regulatory focus questionnaire (RFQ; Semin, Higgins, De Monte, & Estourget, 2005). The RFQ was used to assess the chronic regulatory focus of each participant. RFQ is a 12-item scale that includes six items assessing the prevention dimension and six items assessing the promotion dimension; the response scale ranges between 1 ("never or seldom") and 5 ("very often to always"). An example of a promotion is "Growing up, would you ever
“cross the line” by doing things that your parents would not tolerate?”, whilst an example for prevention is "How often have you accomplished things that got you “psyched” to work even harder?".

**Emotional states.** Two questionnaires were used to measure the emotional state of each participant during the penalty taking. The International positive and negative affect schedule short form (I-PANAS-SF; Thompson, 2007) and an emotions-specific regulatory focus questionnaire used within regulatory focus research (Higgins et al., 1997). I-PANAS-SF positive items (PA) are: alert, inspired, determined, attentive and active, whereas the negative items (NA) are: upset, hostile, ashamed, nervous and afraid. Every item is graded on a five-point scale from 1 (never) to 5 (always). The score on the PANAS ranges between 5 and 25. In addition, regulatory focus-specific emotions questionnaire also includes positive and negative emotions; that is, promotion PA (happiness and satisfied); promotion NA (disappointment and discouraged); prevention PA (calm and relaxed); and prevention NA (tense and uneasy). That scale also ranges from 1 (never) to 5 (always).

**Performance measures.** Two types of measures were taken when it comes to performance. Firstly, each shot scored was given a point whilst each shot not scored was given zero points. Moreover, in order to further examine the influence of framing onto performance, an alternative point system other than the binary goal/no goal was devised with expert handball coaches and using handball-related literature (Loffing & Hagemann, 2014). That is, a clean goal (goalie does not touch the ball, the ball goes directly to the back of the net) was given five points and then, the closer to scoring, the higher the number of points were given (ranging between 0 and 4pts). Thus, each player could obtain a maximum of 15 points from the three penalties taken if the three shots were a ‘clean goal’. Whereas, four points were given for a goal when the goalkeeper touched the ball, but still scoring; three for a hit in the goalpost and goal; two for hitting the goalpost that resulted in no goal; one point was given for a save from the goalkeeper; and zero points when the player missed the goal completely.

**Design and procedures**

The research team consisted of four people: one in the role of main researcher, and three assistants (one responsible for the camera equipment and the organization of the questionnaires, one responsible for calling out and picking the players in line and giving the needed information for the task at hand – blind to experimental manipulations – and one responsible for the framing of the penalty situation and who acted as a referee – by blowing the whistle as a signal for the player to shoot.

The present two-independent group experiment was conducted at the two different training grounds, first at the females (n = 10; 5 were given promotion framing and 5 were given prevention framing) and then at the males (n = 15; 8 were given promotion framing and 7 were given prevention framing). Such testing by gender was absolutely necessary given ball size (different for male and females) and the need to ensure same-gender goalkeepers. The procedure was the same for both groups. At first, each participant was dealt an individual number depending on when they arrived at the training court. The entire team was then informed about the ethical guidelines and the purpose of the study and how the procedure would be carried out. The team was then told that half the team would be called out to the courtside where the experiment would take place and the other half would carry on with regular handball practice, when the first group finished the experiment, they would switch place with the second
group. All the participants were then asked to warm up as they would for a usual training session. The first group were then called out to courtside (place of experiment) and handed, one by one, an envelope with their individual number on. This included a consent form, demographic information form, RFQ (regulatory focus questionnaire), the framing of the penalty (either promotion or prevention), I-PANAS-SF and a regulatory focus-specific emotions question pack. Furthermore, the instructions also included statistical information about penalties scored (for promotion framing) or missed (for prevention framing) from past seasons in the highest Swedish division. Having half the group at courtside was more manageable for practical reasons but still enough to act as an audience and create peer-pressure. Beyond this, their regular handball training could still take place at the other half of the handball court. The individual numbers served as a basis for the framing of the penalty, thus the assignment of the framing was random. The reasoning behind this was to avoid systematic fatigue differences between the promotion and prevention framing situations since the second group performed the experiment after participating in regular handball practice.

Before beginning the shoot-out, the RFQ (regulatory-focus questionnaire), demographic information and consent form was filled out by the participants. The framing was set by an information card, telling the participants either “you are going to shoot three penalties; your aspiration is to score at least two goals” (promotion-framing) or “you are going to shoot three penalties; your obligation is not to miss more than one of them” (prevention-framing). See questionnaire appendix for full framing instructions. The requirements for each focus were the same but framed differently either as an aspiration to score as many goals as possible contra an obligation to miss as few shots as possible, and the different framings of the foci were formulated following regulatory focus theory and previous research (e.g. Plessner et al., 2009).

The participants shot three penalties each. Two different goalkeepers were used for both the male and female participants, and they changed after an equal amount of penalties shot. The goalkeepers had no instructions on how to act other than do as you would in a real game. During the shoot-out one assistant verbally framed each penalty with comments such as “Perform/do better than average” and “score more” (promotion-framed statements), “do not perform/do worse than average” and “remember your obligation” (prevention-framed statements). The participants’ score was recorded by the main scientist following the performance measures set for the experiment. Every penalty was recorded with a camera for further analysis.

After the shoot-out the participants were asked to complete the two remaining emotional state questionnaires. PANAS and the regulatory focus-specific emotion questionnaire was used to investigate the emotional state/experience during regulatory fit in comparison to regulatory mismatch. When these questionnaires were completed the participant joined their group and the next participant was called out to perform three penalties.

**Setting the stage and implementing pressure.** Pressure was applied to both data gathering sessions to keep the testing environment similar in both and as close to an actual penalty situation as possible. Firstly, by peer pressure: recording and keeping record of the shoot-out and the presence and involvement from coaches. Secondly, by social evaluation: team members watching the whole shoot-out, as in real games, where everyone is watching the penalty taking. Lastly, through a price for best performance: the participant with the best score received a lottery ticket that potentially could lead to winning a large amount of money (see Dohmen, 2008, for details).
Ethics and informed consent. Each participant was informed about the study a week prior the actual experiment, they were told that their participation was going to be voluntary, kept confidential, and that they could withdraw their participation at any time during testing if they wished to do so. Participants gave written consent to participate (a written consent form was included in the first page of the questionnaire pack). Additionally, participants under the age of 18 provided written consent from their legal guardian/parent to participate. Ethical approval was gained from Halmstad University.

Data analysis
Demographic analysis based on the framing conditions for gender (male vs female), age (years), handball experience (years played), and shooting hand (right vs left vs both) were compared through either independent $t$-tests or $\chi^2$ (see descriptive of the data in Table 1) to determine potential differences between the groups (promotion vs prevention). Internal reliability of the measures used were also gathered (see Table 2 for full details). To determine whether framing influenced the shooters’ emotional states, three one-way multivariate analysis of variance (MANOVA) were performed to investigate perceived positive and negative affect. Lastly, to test the hypothesis of fit between chronic regulatory focus and framing, a one-way analysis of covariance (ANCOVA) was carried out with relative regulatory focus as a co-variate, framing as independent variable and penalty-taking performance as dependent variable.

Results
Regulatory focus
Based on previous research (Plessner et al., 2009; Kutzner et al., 2013) a relative focus was calculated for each participant by subtracting their prevention score from their promotion score. Positive values indicate a promotion focus and a negative value indicates a prevention focus, the average relative regulatory focus was $M = 1.26$ ($SD = .93$). The prevention/promotion ratio in the current study were; prevention $n = 1$ and promotion $n = 24$ displaying a tendency in handball players toward promotion focus. These findings and tendencies follow the results from a previous study conducted on handball (Andersson & Wolffsohn, 2019), that displayed a prevention/promotion ratio of; prevention $n = 17$ and promotion $n = 95$ in elite and sub-elite handball.

Demographics of sample and questionnaires’ reliability
Players did not differ in gender, age, handball experience, position or shooting hand in the two independent groups (see Table 1 for descriptive statistics). When it comes to the internal reliability of the measures used in the present study, they all showed very good Cronbach’s alpha values (see Table 2 for details).
Table 1.

Study sample (N= 25) demographic based on framing conditions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prevention framing</th>
<th>Promotion Framing</th>
<th>t or ( \chi^2 )</th>
<th>p</th>
<th>df</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>19.25 (2.09)</td>
<td>20.77 (3.76)</td>
<td>-1.23</td>
<td>.46</td>
<td>23</td>
<td>.49</td>
</tr>
<tr>
<td>Handball experience</td>
<td>10.67 (2.71)</td>
<td>13.15 (5.13)</td>
<td>-1.49</td>
<td>.31</td>
<td>23</td>
<td>.59</td>
</tr>
<tr>
<td>Shooting hand</td>
<td>12</td>
<td>13</td>
<td>1.85</td>
<td>.4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>12</td>
<td>13</td>
<td>.027</td>
<td>.87</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note: Age: in years (M and SD); Handball experience (in years, M and SD); shooting hand (right vs left vs both, frequency); Gender (male vs female, frequency). Significance level was set at \( p < 0.05 \), \( d = \) Cohen’s effect size, \( \chi^2 = \text{Chi}^2 \).

Table 2.

Alpha values for questionnaires used in the study.

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Cronbach’s ( \alpha ) values</th>
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<td>RFQ Promotion</td>
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Notes: PA = Positive Affect; NA = Negative Affect

Framing-emotional states link checked

A one-way MANOVA was conducted to compare the athlete’s emotional experiences in the two different framed situations. Levene’s test was carried out and assumptions met (\( p = .03 \)). There was no significant difference regarding NA and the two framed situations (\( F_{1, 23} = .37, p = .55 \), partial \( \eta^2 = .02 \)). PA displayed a significant difference between the framings (\( F_{1, 23} = 7.75, p = .01 \), partial \( \eta^2 = .25 \)). Partial \( \eta^2 \) was displayed at 25%, this is the proportion of the variance in PA that can be explained by which framing the athletes were exposed to. Within PA the prevention framing displayed a mean of 3.18 (\( SD = .94 \)) and the promotion framing a mean of 4.03 (\( SD = .54 \)) suggesting that athletes in the promotion framing reported a greater amount of positive affect.

Further regarding emotions, two MANOVA’s were conducted to compare the emotions discussed within regulatory focus theory. Levene’s test was carried out and equal variance
cannot be assumed ($p > .05$). Promotion negative emotions, prevention positive and negative emotions showed no significant difference. Promotion positive emotions displayed a significant difference between the framings ($F_{1, 23} = 6.35, p = .01$, partial $\eta^2 = .22$). Partial $\eta^2$ was displayed at 22%, this is the proportion of the variance in promotion positive emotions that can be explained by framing differences. Prevention framing displayed a mean of 3.12 ($SD = .83$) and the promotion framing mean of 3.84 ($SD = .59$) suggesting that promotion framed athletes reported a greater amount of promotion positive emotions.

**Main analysis**

Firstly, a one-way ANCOVA was performed to compare the goal frequency (goal or no goal) in two differently framed penalty situations (i.e. promotion or prevention). Levene’s test was carried out and equal variances cannot be assumed ($p = .62$). No significant difference could be found in regarding goals ($F_{1,22} = 3.56, p = .07$) between the differently framed penalty situations, whilst adjusting for relative regulatory focus. Partial $\eta^2$ value was displayed at 14%. Post hoc test (Bonferroni) showed no significant difference ($M_{Diff} = .57, Std = .30, p = .07$) between promotion framing ($M = 2.54, SD = .87, p = .07, d = .71$) and prevention framing ($M = 2, SD = .60, p = .07, d = .71$). Cohen (1988) consider this effect size as moderate.

Secondly, another one-way ANCOVA was performed to compare the score frequency (ranging from 0-15) in two differently framed penalty situations (i.e. promotion or prevention) whilst controlling for relative regulatory focus (i.e. promotion or prevention). Levene’s test was carried out and equal variances cannot be assumed ($p = .81$). There was a significant difference in penalty score ($F_{1,22} = 4.62, p = .04$) between the differently framed penalty situations, whilst adjusting for relative regulatory focus. Partial $\eta^2$ value was displayed at 17%, this is the proportion of variance in goal frequency that the two differently framed penalty situations share that is not attributed to relative regulatory focus. Post hoc test (Bonferroni) showed a significant difference ($M_{Diff} = 2.44, Std = 1.14, p = .04$) between promotion framing ($M = 12.38, SD = 3.25, p = .04, d = .79$) and prevention framing ($M = 10.08, SD = 2.46, p = .04, d = .79$). Cohen (1988) consider this effect size as moderate. Additionally an independent t-test displayed no significant difference between promotion framing ($M = 1.33, SD = .69$) and prevention framing ($M = 1.18, SD = 1.16$), $t(23)=-.40, p = .69$) regarding their relative regulatory focus, indicating that all participants had a higher relative promotion focus score.

**Discussion**

The present study examined penalty taking performance in handball within a self-regulatory focus framework. To that end, in a two-independent group design, regulatory framing (either promotion or prevention) was given to participants prior to penalty-taking. Based on regulatory fit theory (Higgins, 2000), it was hypothesised that fit conditions would produce greater performances than mismatch conditions. Thus, athletes with a relative promotion focus taking penalties under a promotion-framed mindset and athletes with a relative prevention focus taking penalties under a prevention-framed mindset would exhibit greater performances. Lastly, it was hypothesised that performance in penalty taking would decrease when under mismatch (different relative chronic focus and framing).

The results of this study invite to further discussion regarding performance enhancement when athletes regulatory focus match the framing of the situation. The promotion focused handball players in the promotion framed situation (i.e. regulatory fit) performed better at the
penalty shooting task than the athletes who were regulatory mismatched, going in line with previous research (e.g., Kutzner et al., 2013). According to Higgins (2000) people are regulatory fit when their regulatory focus matches the demands or framing of the situation. No significant difference was shown between the participants relative regulatory focus, indicating that most athletes scored higher in the promotion scale. The players in the promotion framed situation therefore experienced a regulatory fit and produced higher scores on the penalty shooting task. The framing effects on performance whilst adjusting for relative regulatory focus displayed a significant difference between the two situations. The athletes in the promotion framed group outperformed the athletes in the prevention framed group. These findings are of value, especially in combination with their effect size which was regarded as a moderate (Cohen, 1988). The performance differences depending on fit contra mismatched might at first glance look quite small. However, a small difference in handball penalty performance can have a great impact on the final score, due to the amount of penalties taken each season (1309 penalties in the season 2018-2019 in the Swedish first league). The Swedish national ladies team had a chance to play in the semi-final during the last world championship in Japan, all they had to do was to win against Montenegro in their final group match. They lost the game 26-23, interesting is that Sweden missed three penalties whilst Montenegro didn’t miss a single one. This example increases the understanding of how crucial handball penalties truly are. If Sweden would have converted their three missed penalties into three goals the game would have been very different, firstly by giving a tied game. Secondly, during the game the pace and confidence of the Swedish players would most likely have changed. Which could have increased the opportunity of winning the game. Penalties in handball are important and the advantage of being regulatory fit can be crucial to the final score.

Explicit monitoring/attention theories suggests that directing attention towards task execution could have a negative effect on performance (Beilock et al., 2004). Kutzner et al. (2013) argues that individuals who are regulatory fit shift their attention away from the focal task itself, having attention allocation as a plausible mediator between regulatory fit and performance. The results displayed by Memmert et al. (2010) supports this notion, individuals who are regulatory fit seem to have a broader attention scope. This attentional shift might be the reason why athletes exhibit greater performances when regulatory fit. Transferring attention away from explicit step-by-step monitoring of task execution seems to have a positive effect on performance (Beilock et al., 2004). Imagine experiencing a broader attention scope in a handball penalty, enabling the athlete to register a greater amount of penalty choices and scrutinizing every move of the goalkeeper instead of focusing on their own step-by-step motoric shooting procedure. This might be why the regulatory fit athletes in the promotion framed condition outperformed the athletes in the prevention framed condition in the present study. Beyond the positive effect regulatory fit has on performance, regulatory mismatch seems to effect executive attention in a negative way and therefore performance. Athletes who are regulatory mismatched produce less adequate solutions which might be due to this decrease in executive attention (Maddox et al., 2006). In the present study this might have been the reason why the athletes in the prevention framed situation produced less successful penalty choices.

Though the present study displayed a significant difference between the two groups the variance in performance could have been larger since performance is expected to drop during a regulatory mismatch (e.g., Plessner et al., 2009). One reason it didn’t drop more might be due to the mismatched athletes’ ability to reformulate the framing to match their own regulatory focus. Klatt and Noël (2019) showed that at least half of their participants in an expected
mismatch situation rephrased the framing instructions to their advantage and performed better by creating a fit to the situation. It might be that the ability to rephrase the framing instructions to one’s advantage is a necessity for success in sports following the expectations and demands at a higher level of competition.

The statistical tests performed on the two emotion questionnaires and the two framing situations displayed a significant difference. The promotion focused athletes in the promotion framed penalty situation experienced a greater amount of positive affect than the promotion focused athletes in the prevention framed situation. This study alone can’t establish why they experienced more positive emotions, since that wasn’t the purpose of the study. It could be a consequence of a greater performance, the promotion framed group performed better at the penalty shooting task and that may be why they experienced more positive emotions. However, it could also be due to the effect of regulatory fit described by Higgins (2005), that individuals who are regulatory fit feel better about their decisions, performances and judgment. It’s plausible that regulatory fit effects performance through emotional experiences. Strengthening this notion is the result from the regulatory focus-specific emotions included in the present study. The promotion focused athletes in the promotion framed situation experienced higher degrees of promotion focused positive emotions than the mismatched promotion focused athletes in the prevention framed situation. Promotion focused individuals’ positive emotions are cheerful-related and includes happiness and satisfaction (Higgins et al., 1997). These findings help to establish that the different situations were framed correctly, further strengthening that the participants in the promotion group were regulatory fit.

Whilst one could hypothesise, in line with football penalty taking findings (Plessner et al., 2009), that a prevention fit condition would result in best performances. Especially when looking at the high success rate from the player perspective when taking a penalty in handball (76%; Handbollssligan, 2019), similar to that of football (73%; Transfermarkt, 2019). It is worth noting that penalty-taking in football is very different to that of handball when it comes to the number of penalties taken (dozens vs hundreds) and who normally takes them (mostly same player vs a variety of players); therefore, no definitive hypothesis was put forward as to which regulatory fit condition (i.e. prevention or promotion fit) would result in best performances. From a theoretical standpoint a greater performance when experiencing a prevention fit makes sense, especially when examining the high success rate in handball penalties. Plessner et al. (2009) argues that the non-loss characteristics of a penalty demands a prevention focus, since it’s an obligation which the athlete needs to fulfil. However, the results from the present study displayed that the best performance occurred during a promotion fit. Kutzner’s et al. (2013) study on golf-puts and regulatory fit also displayed that promotion fit was the most beneficial. The present study wasn’t able to determine whether prevention fit, or promotion fit is the most beneficial in a handball penalty due to the lack of prevention focused athletes. However, when comparing the results from the present study with the ones displayed by Plessner et al. (2009), one reason as to why they differed, beyond the lack of prevention focused athletes, might be due to the experimental approach. Plessner et al. (2009) created a manipulated penalty shootout situation, the present study on the other hand aimed at creating as close to an in-game penalty situation as possible since penalty shootouts rarely occur in handball. Goal or no goal in a penalty shootout is much more critical for the final end result than goal or no goal in an in-game penalty situation. Firstly, if you miss one penalty it is necessarily not the determining factor between win or lose, unlike a penalty in a shootout. Secondly, if the player misses the penalty he/she isn’t likely to take another penalty later on in the game. Promotion-focused individuals
characterized with chronic tendencies to maximize the gains and tend to use an approaching strategy. In a sport context these individuals might have thoughts such as "we have to win this" (Plessner et al., 2009). Missing one penalty in a handball game might not have as big of a consequence as missing a penalty in a football shootout. Having thoughts as the ones described by Plessner et al. (2009) could therefore lead the athletes to go for it when the consequences aren’t as high (i.e. having a promotion focus). Tendencies to maximize the gains might be more beneficial in handball, in order to score and continue your position as the designated penalty taker. Beyond this, promotion focused individuals also tend to be more prone towards risk taking (Memmert et al., 2013). The results from the present study might also have differed due to experienced pressure during the penalty shooting task. Previous research has displayed that pressure induces a prevention focus (Worthy et al. 2009). The applied pressure from Dohmen (2008) such as social evaluation, video recording and the lottery ticket didn’t induce as much pressure as the penalty shootout situation in Plessner et al. (2009) and therefore providing different results. Handball penalties are still a critical aspect of the game due to the amount of penalties taken during an entire season. Beyond that, scoring a penalty might create momentum and therefore have an effect on the overall game.

Strengths and limitations

The present study was carried out through an experimental design, enabling us to measure performance and creating an environment as close to a real life setting as possible. Since previous research has been lacking in that area, Memmert et al. (2013) for example performed an experiment assessing the impact of regulatory focus on divergent thinking in sports with a pen and paper maze which is quite far from a real-life soccer game. Our aim on the other hand was to create externally valid manipulation instructions that are more likely to occur in an actual game of handball. For example, the present study disregarded the scripted behaviours for the goalkeepers used by Plessner et al. (2009). Further, the researcher who had the role of referee has an actual referee education. The experiment took place at the teams own training locations, where they play all their home games as well as train during the entire season. By doing this, we aimed at creating a situation as relatable as possible. There was no significant difference regarding goal or no goal in the present study, however, looking at the effect size which was considered as moderate the results might have differed with a larger sample size. The value of scores were therefore changed to get an easier statistical approach, the performance was not only measured with goal or no-goal but with a scorecard that evaluated performance of the penalty takers actions. Where making a clear goal was worth more points than hitting the goalpost and then in. The scorecard did go outside of the reality of a penalty situation for a goal hitting the post first is worth as much as a clear goal, this should be considered as a limitation. However, instead of having to perform six penalties like Plessner et al. (2009) the participants only performed three each and the scorecard created a bigger performance difference without risking the possibilities of fatigue differences amongst the penalty taker as well as the goalkeepers. Performing three penalties in one game is not unusual in a real-life handball game whilst six penalties in a game is less likely to occur, increasing the external validity further. The different scores on the scorecard was thoroughly created with the help of a former elite handball player. Furthermore, every penalty situation was videotaped and analysed before giving points, making sure no measurement errors were made.

One of the limitations to current study is the research method. The best method would have been to have two equal sized groups of promotion and prevention focused individuals and then
expose half of each group for either promotion or prevention framing. But this type of research is not possible to conduct due to a couple of reasons. Firstly, shown by previous research, almost every team sport has an environment that demands a promotion focus (e.g. Plessner et al., 2009). Environmental demands create and shape athletes for them to develop and get better at their sport, creating more promotion focused athletes than prevention focused athletes (Plessner et al., 2009). Since most sports creates a promotion-oriented environment two equal sized groups with equal amount of promotion and prevention focused individuals is almost impossible since there are so few prevention focused athletes in elite team-sports. Secondly, a methodological limitation in the present study are the numbers of participants, a higher number of participants would have led to a higher degree of observed power and made the study more reliable (Cohen, 1988).

Klatt and Noël (2019) discuss the importance of well performed manipulation checks in order to avoid the internal rephrasing of instructions amongst athletes and measurement error, which seem to be an underlying reason to why some athletes aren’t affected by the experimental manipulation (i.e. no regulatory mismatch). Plessner et al. (2009) for example did not include a manipulation check, they instead established framing from studying the theoretical basis of regulatory focus theory, which could be problematic since there’ll be no way of controlling the reliability of their framing. In line with Plessner et al. (2009) the present study did not include a manipulation check, which should be considered as a limitation. However, it did use two different emotion experience questionnaires, PANAS and the regulatory focus-specific emotions (Higgins et al., 1997). In contrary to most previous research these two emotion questionnaire packs were included in order to further examine the regulatory fit phenomenon and how fit affect individuals’ emotional experiences (Higgins et al., 1997 & Higgins, 2005). There was a significant difference regarding the positive affects in both PANAS and regulatory focus-specific emotion questionnaires, the athletes in the promotion framed situation experienced more positive affects than the athletes in the prevention framed situation. Strengthening the notion by Higgins (2005), that individuals who are regulatory fit feel better regarding the situation, their decisions and their performance. Furthermore, the athletes reported their emotional experiences retrospectively, i.e. how they felt right before taking the penalty. However, their performance shouldn’t have affected their answers, firstly the two groups didn’t know how they differed from each other regarding goals made. Secondly, they weren’t informed on how the present study assessed performance. It’s therefore unlikely that the positive emotion difference was only due to the performance difference. The emotion packs were measured after the performance measure in order to have the framing instructions as close to the penalty taking as possible, with as few things as possible effecting the athletes, beyond the framing instructions.

**Future research**

Klatt and Noël (2019) explain that regulatory fit shouldn’t be viewed as a match between the athletes’ regulatory focus and the instructions of the situation (i.e. framing), it’s rather a fit between regulatory focus and the self-rephrased situational instruction. Future research should include validated manipulation checks in order to establish that the athletes adhered to the manipulation instructions. It might be possible that the score difference in the present study is due to the participants ability or inability to rephrase the instructions to fit their regulatory focus. The present study isn’t able to conclude if elite athletes develop this rephrasing ability or if athletes who develop this ability are the ones who become elite, since that wasn’t the purpose
of the present study, but it does invite to new research questions. Future research should definitely examine athletes rephrasing abilities, especially when looking at the results from Klatt and Noël (2019). Beyond this should the use of manipulation checks be further developed in order to assess if the framing truly influenced the athlete, for example by using a validated questionnaire. Klatt and Noël (2019) suggests that future research should ask the participants to rephrase the framing instructions in order to control that they truly were exposed to the framing effects or if they reformulated the instructions to better fit their chronic regulatory focus.

Finally, future research should examine plausible mediators between regulatory fit and performance. Following Kacperski and Kutzner (2018) study that investigated adherence to tactical choices mediates regulatory fit effects in table tennis, a similar study could be conducted in handball. Several participants expressed tactical changes when a new goalkeeper came into play during the shoot-out. The present study has not measured any form of tactical choices but based on comments from the participants and findings from previous research within tactical choices future research should investigate this. Regulatory fit might have an effect on attention allocation and therefore minimizing the risk of excessive self-monitoring and self-awareness which thereby has a positive effect on performance (Kutzner et al., 2013; Memmert et al., 2010). Another plausible mediator is the indirect effect regulatory fit seem to have on working-memory capacity. Athletes who are regulatory fit are better at providing more adequate solutions, which should require greater executive attention, than athletes that experience regulatory mismatch (Maddox et al., 2006). Emotional experiences might also function as a mediator between regulatory fit and performance. It’s clear that emotional experiences played a role in the handball penalty situations. The present study can’t establish if the underlying reason to why the groups varied in performance was affected through mediating processes dependent on the degree of positive emotions the athlete experienced in the given situations. The difference in positive emotions might solely be a consequence of a greater performance, however Higgins (2005) states that individuals feel better when they’re experiencing regulatory fit. Based on the results from the present study and previous research (e.g. Higgins, 2005) future research should examine if emotional experiences are a product of, or a causing factor to optimal performance, or both.

**Applied implications**

The present study will contribute to penalty-taking in the sport of handball. By further understanding how one’s regulatory focus and the framing of the situation influence the process of a penalty, a different approach to penalties could be applied to improve positive outcome (goals made). Both the players and coaches will benefit from a greater knowledge regarding penalties and regulatory focus. Players will benefit through better understanding of themselves in specific penalty-situations, firstly through the knowledge itself and secondly by being able to find ways to counteract the negative effects of a regulatory mismatch. Coaches will benefit through knowing his/her players regulatory focus and will therefore be able to appoint a penalty-taker that he/she knows will have a smaller risk of regulatory mismatch. Practical recommendations for players and coaches could be (a) as a coach measure the players chronic regulatory focus as a complement to the tactical and physical skills of the players and use the players with a regulatory focus that matches the situation or (b) the coach can communicate instructions matching each players' regulatory focus. (c) As a player use regulatory focus to be more aware of situational demands (framing) and regulate or rephrase these demands after that.
Conclusion

The results from the present study contribute additional evidence regarding the effect of regulatory fit on sports performance, specifically within handball penalties. The effect of regulatory fit was displayed in a promotion framed situation with relative promotion focused athletes. A larger sample of prevention focused athletes is necessary in order to determine whether prevention fit, or promotion fit is more beneficial than the other in a handball penalty situation. However, future research might want to examine performance differences depending on the level of promotion focus (i.e. low to high promotion focus), since prevention focus seems to be an unusual characteristic amongst athletes in team sports (Plessner et al., 2009).
References


Appendixes questionnaires

Demographic information form
Kod; uppge dagen du är född (datum), den första bokstaven i vardera förälders namn och de två sista siffrorna i postkoden du är född i. Exempel: 23HM30 (Detta görs för att vi ska ha en specifik kod på varje deltagare) Exempel, se bild nedanför.

94-03-23 Hans & Mia 30253

23HM53

Svar:

1. Kön?
   Man☐ Kvinna☐ Vill inte uppgå☐

2. Ålder?

3. Hur många år har du spelat handboll?

4. Vilken position spelar du på?
   Vänster☐ Höger☐ Mitt☐ Vänster 9☐ Mitt 9☐ Höger 9☐

5. Skjuter du vanligtvis straffar?
   Ja☐ Nej☐

6. I genomsnitt hur många straffar du lägger på en säsong?

7. Hur många av de straffarna har du gjort mål på? (Uppskatta i procent)

8. Vilken hand skjuter du med?
   Höger☐ Vänster☐

9. Vilken nuvarande nivå spelar du på?
   Allsvenskan☐ Divison 1☐
Regulatory focus questionnaire (Semin, Higgins, De Monte, & Estourget, 2005)

Svara på frågorna och uppskatta ditt svar från 1 (aldrig/välldigt sällan) till 5 (väldigt ofta) genom att ringa in den siffra som stämmer bäst in på dig. Frågorna är på engelska, förstår du inte frågorna fråga experimentledare för en bättre förklaring.

1. Growing up, would you ever "cross the line" by doing things that your parents would not tolerate? (ex gått över gränsen genom att göra saker som dina föräldrar inte tolererat)
   1 2 3 4 5

2. How often have you accomplished things that got you "psyched" to work even harder? (ex åstadkommit saker som gör dig mer peppad till att jobba hårdare)
   1 2 3 4 5

3. Did you get on your parents nerves often when you were growing up? (ex om du gick på dina föräldrarnas nerver under din uppväxt)
   1 2 3 4 5

4. Growing up, did you ever act in ways that your parents thought were objectionable? (objectionable = stötande)
   1 2 3 4 5

5. Do you often do well at different things that you try?
   1 2 3 4 5

6. Not being careful enough has gotten me into trouble at times.
   1 2 3 4 5

7. I feel like I have made progress toward being successful in my life.
   1 2 3 4 5

8. Are you fanatic when you are trying to realize your goals? (ex är du fanatisk när du försöker förverkliga dina mål)
   1 2 3 4 5

9. Do you find that there are things that you have not thought about when you choose something? (ex finns det saker du inte har tänkt igenom när du gör ett val)
   1 2 3 4 5

10. Are you someone who looks forward to situations in which you expect to have success? (ex ser du fram emot situationer där du förväntar dig framgång)
    1 2 3 4 5
11. I try to reach that in my life, in which I believe? (ex försöker du nå de saker du tror på i livet)

12. Do you break rules to reach your goals? (ex bryter du regler för att nå dina mål)
Du kommer att skjuta 3 straffar. Av 1309 straffar så görs det mål på i genomsnitt 76% i handbollsligan. Din uppgift är att göra mål på så många av straffarna som du kan. Din tränare vet också om denna statistik och han vill att du presterar bättre än genomsnittet. Ju bättre du presterar (bättre än genomsnitt alltså 76%) desto större chans har du att vinna lotten och kanske bli miljonär.

Det är din strävan att göra så många mål som du kan.

Du kommer att skjuta 3 straffar. Av 1309 straffar så missas i genomsnitt 24% i handbollsligan. Din uppgift är att missa på så få straffar som möjligt. Din tränare vet också om denna statistik och han vill att du inte presterar sämre än genomsnittet. Ju mindre du missar (bättre än genomsnittet alltså 24%) desto mindre chans har du att gå miste om lotten och kanske inte bli miljonär.

Det är din skyldighet att missa så få straffar som möjligt.
**I-PANAS-SF** (Thompson, 2007)

Skatta följande emotioner/känslor under straffläggningen

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**Regulatory focus emotions questionnaire pack** (Higgins et al., 1997)

Till vilken grad stämmer följande emotioner/känslor in på dig i straffsituationen

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Dexter Wolffsohn

Anton Andersson