When Do Chronic Differences in Self-Regulation Count?:
Regulatory Focus Effects
in Easy and Difficult Soccer Tasks

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Research on regulatory focus theory (Higgins, 1997) suggests that performance increases if instructions fit
with sportspersons’ dispositions. Sportspersons who chronically focus on wins (i.e., promotion-oriented indi-
viduals) perform best if instructions frame the objective as a promotion goal (e.g., “Try to hit!”). By contrast,
sportspersons who chronically focus on losses (i.e., prevention-oriented individuals) perform best if instruc-
tions frame the objective as a prevention goal (e.g., “Try not to miss!”). Recent theorizing also suggests that
regulatory focus interacts with task difficulty. In an experiment, we assessed soccer performance as a function
of chronic focus, instructional focus, and task difficulty. Results support that task difficulty moderates the
effects of fit on performance; fitting instructions to match the sportsperson’s chronic regulatory focus improved
performance in the easy rather than the difficult task. Findings are discussed regarding the role of regulatory
fit in altering subjective pressure during sports performance.

Keywords: penalty, pressure, regulatory fit, self-regulation, performance, task difficulty

Regulatory focus theory (RFT; Higgins, 1997) suggests that individuals vary in their chronic tendency
to focus on promotion or prevention goals. Promotion-oriented individuals are sensitive to positive outcomes
and possible wins and seek aspiration and self-fulfillment. By contrast, prevention-oriented individuals tend to
focus on negative outcomes and possible losses and are obligation and responsibility centric. Crucially, with
respect to performance, neither chronic focus is superior, but performance depends on whether the chronic focus
fits the given situation. In this respect, the objective of taking a soccer penalty can be framed as a prevention
goal (e.g., “Do not miss the goal!”) or a promotion goal (e.g., “Score the goal!”). Accordingly, chronic preventers
should perform better given the former instruction, but promoters are likely to profit from the latter. Indeed,
Plessner, Unkelbach, Memmert, Baltes and Kolb (2009) showed that the relative chronic focus—the difference
between promotion and prevention focus—moderates the effects of promotion vs. prevention frames on soccer
penalty performance. After responding to a regulatory focus questionnaire, active soccer players took a series
of five penalties. The task was framed as a promotion goal for half of the players and as a prevention goal for
the other half. The task yielded an unpredicted main effect for the chronic focus, with preventers scoring more
goals than promoters. More importantly, players whose chronic focus fitted the task frame scored significantly
more penalties than players whose chronic focus did not fit the task. This finding implies that coaches should try to
create a fit between task affordances and players’ chronic foci to increase player performance. But does this also
account for tasks more difficult than penalty kicks? The literature on regulatory fit effects on sports performance
allows for two different predictions, which are briefly introduced below.

The Person x Difficulty Fit Hypothesis
As stated before, the study by Plessner et al. (2009) yielded an unexpected main effect of the chronic focus. The
authors speculated that the low task difficulty rendered penalty kicks as a prevention situation. Hence, independent
of the framing by instruction, chronic preventers might have experienced a fit that led to better performance. In line with this notion, Memmert, Plessner, and Maassmann (2009) showed that, for easy (difficult)
tasks, sportsmen report that they would feel obligation (hope for success)—a state typically experienced in a
prevention (promotion) situation. From this perspective, task difficulty is another variable that shifts the situational
focus. Thus, in an easy task, preventers experience a fit and therefore perform better. By contrast, in a difficult
task, promoters experience a fit and perform better.
The Difficulty Moderates Fit Hypothesis

A second hypothesis is based on the assumption that regulatory fit buffers against negative states and unwanted cognitions (cf. Unkelbach, Plessner, & Memmert, 2009). Experiencing negative states, task takers do not show automatic, spontaneous behaviors, but hasten and become reflective (Schwarz, 2002)—a mode that is thought to hamper penalty performance (e.g., Furley, Dicks, Stendtke, & Memmert, 2012; Jordejt & Hartman, 2008). However, if the chronic focus fits the situation, individuals experience positive affect (Freitas & Higgins, 2002), and the situation just “feels right” (e.g., Higgins, 1997; Unkelbach et al., 2009). Thus, regulatory fit can be regarded as a device for compensating negative states resulting from the pressure to succeed. Crucially, assuming that this pressure is typical of easy rather than difficult tasks, the advantage of regulatory fit should be restricted to the former. Such a perspective fits recent research demonstrating that choking under pressure is restricted to easy tasks, but does not occur in difficult tasks (Reeves, Tenenbaum, & Lidor, 2007). Hence, from the stress-buffer perspective, one would hypothesize that the person-by-instruction interaction is further moderated by task difficulty. The advantage of a fit should reduce as the task becomes more difficult.

Aims of the Present Research

In line with Plessner et al. (2009), we assessed soccer players’ chronic foci, framed the objective as either a promotion or prevention goal, and asked participants to take a series of penalties. Newly, we varied task difficulty by adding a second task requiring players to shoot from a longer distance. Doing so, we not only tested the robustness of regulatory fit effects in sports performance, but also tested the predictions derived from the literature on regulatory fit in sports (Memmert et al., 2009; Unkelbach et al., 2009). Specifically, we tested whether (a) performance also profits from a fit between the chronic focus and task difficulty (person × task difficulty fit hypothesis) and (b) performance profits from a fit between the chronic focus and the instruction if tasks are easy rather than difficult (difficulty moderates fit hypothesis).

Methods

Participants and Design

A squad of highest-level amateur soccer players from the Swiss football association (Schweizerischer Fussball Verband, SFV) took part. This amounts to a convenient sample of 20 players (all male; \( M_{\text{age}} = 22.7; SD = 4.08 \)), equaling the sample size of Plessner et al. (2009). A 2 (instructional focus: promotion vs. prevention) × 2 (chronic focus: promotion vs. prevention) × 2 (task difficulty: easy vs. difficult) design was used. The experimental factor “instructional focus” and the quasi-experimental factor “chronic focus” varied between, and “task difficulty” varied within participants.

Materials and Procedure

Two weeks before the performance test, the chronic focus was assessed by using Plessner et al.’s (2009) scale, which is an adapted version of the general regulatory focus scale (Lockwood, Jordan, & Kunda, 2002). Although the chronic orientations are assumed to be theoretically independent, it has been repeatedly found that the two foci are positively correlated (e.g., Lockwood et al., 2002; Memmert et al., 2009; Plessner et al., 2009). The predictive validity, however, has been demonstrated for the relative chronic focus, that is, the extent to which the promotion orientation exceeds the prevention orientation (e.g., Keller & Bless, 2006). Therefore, following the suggestions by Plessner et al. (2009), prevention scores (\( \alpha = .65 \, M = 3.47; \, SD = .76 \)) were subtracted from the promotion scores (\( \alpha = .84; \, M = 5.15; \, SD = .95 \)) to obtain an index of the relative chronic focus, \( r = .54, \, p < .014 \). Participants were then grouped depending on whether their relative chronic focus was above or below the median. For ease of interpretation, these are subsequently referred to as chronic promoters and preventers. Further, the team’s coach was asked to rate each player’s penalty and free kick skills on a 7-point scale (1 = very bad; 7 = very good).

Performance Tests. According to the coach and a player not taking part in the main study, a distance of 17 m was considered to be difficult but still manageable. A pilot study with 60 active players from the German Football Association (Deutscher Fussballbund, DFB) not only revealed that shooting from 17 m is perceived as more difficult than from 11 m, but that the longer distance was also associated with less tension and pressure, thus meeting the theoretical requirements. Thus, besides the easy task of shooting six times from 11 m, all participants fulfilled the difficult task of shooting six times from 17 m. Participants were told that they would compete against an undisclosed team colleague in taking six penalties (free kicks). The order was counterbalanced between participants.

To manipulate the situational focus, we built on established manipulations (e.g., Förster, Higgins & Idson, 1998) emphasizing either wins or losses. In the promotion condition, an experimenter, unaware of the player’s chronic focus, told the participants: “You play against one of your team colleagues. We don’t tell you who it is. Your goal is to hit more goals than your competitor. If you win you will be rewarded with a free drink.” In the prevention condition, the requirements and the pay-off structure were identical, but were framed as a prevention goal (i.e., focused on loss): “You play against one of your team colleagues. We don’t tell you who it is. Your goal is to miss fewer goals than your competitor. For your participation, you get a free drink. However, if you lose or draw you must give away the drink.” A second experimenter initiated the six penalty shots and counted the number of penalties scored out of the six trials. Afterward, players were told that they had to shoot six free kicks (penalties) and that this competition was
independent of the previous task. Again, to induce either a prevention or promotion focus, the same instructions were given as in the previous task. For the purpose of external validity, the goalkeeper was blind to conditions and did not receive special instructions, but was free to react. At the end of the session, all participants were debriefed in a group and given a nonalcoholic drink.

Results

To test the hypotheses, a 2 (instructional focus) × 2 (chronic focus) × 2 (task difficulty) mixed analysis of covariance (ANCOVA) was conducted, with the latter factor treated as repeated measures. In line with Plessner et al. (2009), penalty- as well as free kick-relevant skills rated by the coach were entered as covariates. Order of task difficulty did not have an influence on the effects; therefore, results are collapsed across this factor.

The analysis revealed a strong main effect of task difficulty, \( F(1, 14) = 19.37, p = .001, \eta^2_p = .58 \), indicating that, as intended, the two tasks differed in difficulty (see Figure 1 for the means). Neither the effect of the instruction, \( F(1, 14) = .81, p = .381 \), nor the chronic orientation, \( F(1, 14) = 1.99, p = .179 \), were significant. In addition, there was no significant interaction between task difficulty and instructional focus, \( F(1, 14) = .10, p = .752 \). More important to our hypotheses, however, the two-way interactions between task difficulty and chronic focus, \( F(1, 14) = .58, p = .461 \), were not significant either. Thus no direct evidence was found for the person × difficulty fit hypothesis. The two-way interaction between chronic focus and instruction was also not significant, \( F(1, 14) = 1.02, p = .330 \), meaning that there was no evidence for a general advantage of fitting instructions to chronic focus. Crucially, the three-way interaction between task difficulty, instructional focus, and chronic focus was significant, \( F(1, 14) = 18.40, p = .001, \eta^2_p = .57 \), suggesting that effects of a fit between instructional framing and chronic focus depend on task difficulty—an effect in support of the difficulty moderates fit hypothesis. For a refined analysis of the different roles of regulatory fit in easy as opposed to difficult tasks, separate analyses were computed for each task.

Easy Task (11 m)

A 2 (chronic focus) × 2 (instructional frame) ANCOVA with the number of scored penalties as a dependent variable was conducted to test the impact of regulatory focus in the easy soccer task. Skills rated by the coach were entered as covariate. Effects of chronic orientation, \( F(1, 15) = 1.61, p = .232 \), and instructional frame, \( F(1, 15) = 1.55, p = .224 \), were not significant, meaning that, different from Plessner et al. (2009), chronic preventers did not outperform promoters but, if anything, this trend reversed. Due to the small effect size, we refrain from a detailed interpretation of this finding. The interaction effect between chronic and instructional focus was significant, \( F(1, 15) = 4.74, p = .046, \eta^2_p = .24 \), replicating the advantage from fitting instructions to chronic focus on penalty taking (Plessner et al., 2009). Penalty-relevant skills, \( F(1, 15) = 1.42, p = .253 \), entered as covariate were insignificant.

Figure 1 — Soccer performance as a function of relative chronic focus (promotion vs. prevention), instructional frame (promotion vs. prevention), and task difficulty (easy vs. difficult). Note. Figure shows means and standard errors, adjusted for covariate influence. Participants profited from a fit between chronic and instructional focus in the easy task (11 m), but not in the difficult task (17 m).
Difficult Task (17 m)

An analogous analysis with the number of goals scored from the long distance used as a dependent variable did not yield significant effects of the chronic focus, \( F(1, 15) = 1.16, p = .299 \), or the instructional frame, \( F(1, 15) = .13, p = .725 \). Their interaction showed a weak, but insignificant, effect, \( F(1, 15) = 2.08, p = .170 \) (Figure 1, dark bars). Coach-rated skills predicted the performance in this task, \( F(1, 15) = 4.02, p = .063, \eta^2_p = .21 \).

Discussion

In the present paper, we tested two different hypotheses of the role of task difficulty on the effect of regulatory fit on soccer performance. No evidence was found for the hypothesis that task difficulty causes a fit with chronic focus: Promoters did not profit from difficult tasks and preventers did not outperform novices in the easy task. By contrast, results from the present experiment revealed that the advantage of fitting instructions to the chronic focus is moderated by task difficulty. A fit between person and instruction increased performance in the easy rather than the difficult task. This finding is in line with an explanation of regulatory fit as a buffer against negative states. Since there is pressure to succeed, a match between chronic and instructional focus can be expected to regulate affect and its negative effects.

At first glance, the results appear to be at odds with previous research demonstrating that, in basketball, novices but not experts profited from a fit when taking 3-point shots (Memmert et al., 2009). However, in this basketball study, novices were asked to score 3 out of 10 trials, but experts were asked to score 6 out of 10. Thus, despite the lower skills, the perceived difficulty of the overall task might have been lower for novices than for experts.

Limitations, Implications, and Future Directions

The first limitation concerns the operationalization of our independent and dependent variables. In line with common practice in research, we opposed promotion versus prevention orientation, both for situational and chronic orientation. Note, however, that at the theoretical level, the two foci are independent (e.g., Higgins, 1997). It is yet unclear whether a fit would also result if people who score high on both chronic promotion and prevention face situations highlighting both losses and wins. As a dependent measure we used a performance test. Whereas this measure is of practical relevance, it tells little about potential mediators. For instance, we cannot state whether fit results in less hastening, or in stronger or more precise shots. In addition, the goalkeeper might mediate effects of fit on performance. Depending on fit, task takers might send different nonverbal signals that the keeper can use to anticipate the shot (cf. Furley et al., 2012). Thus, future investigations might elaborate on the interaction between player and goalkeeper, using zero-acquaintance situations to guarantee that fit effects are not restricted to situations in which players and keepers are familiar with each other.

Finally, one caveat can be seen in the small sample size as well as using median splits to form groups. Due to these factors, the statistical power was small and theoretically meaningful effects may have gone undetected. Specifically, it appears worthwhile to elaborate on whether in difficult tasks there is a disadvantage of regulatory fit. As difficult tasks require more processing effort (cf. Memmert, Hagemann, Althoetmar, Geppert, & Seiler, 2009; Shea & Zimny, 1983), it might be that deeper processing—resulting from non-fit—helps improving performance in difficult tasks. Taken together, the results strengthen RFT (Higgins, 1997) as an account for predicting sports performance but also point out that applicants have to consider further external variables to profit from the framework’s implications in a reliable manner. Future research will have to show the robustness of the results and extend this promising account, using more sensitive measures, including online measures of negative states, or vary pressure orthogonal to task difficulty (cf. Mesagno, Harvey & Janelle, 2011).

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References


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