

# TECHNISCHE UNIVERSITÄT MÜNCHEN

Lehrstuhl für Sportpsychologie

## **How do elite athletes lead themselves? – Transferring a revised concept of self-leadership to sport psychology**

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Vollständiger Abdruck der von der Fakultät für Sport- und Gesundheitswissenschaft der Technischen Universität München zur Erlangung des akademischen Grades eines

Doktors der Philosophie

genehmigten Dissertation.

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Prüfer der Dissertation:

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Die Dissertation wurde am 17.02.2011 bei der Technischen Universität München eingereicht und durch die Fakultät für Sport- und Gesundheitswissenschaft am 27.10.2011 angenommen.

# Zusammenfassung

Im Mittelpunkt dieser Arbeit steht das Konstrukt Selbstführung. Selbstführung ist innerhalb der Arbeits- und Organisationspsychologie gut etabliert und bezeichnet den gezielten Einsatz von Handlungsstrategien (z.B. Zielsetzung, Selbstbelohnung), die die notwendige Motivation und Selbstinstruktion zum Erreichen persönlicher Ziele sicherstellen (Neck & Houghton, 2006).

Im Kontext des Spitzensports ist das Konstrukt der Selbstführung bisher nicht verankert, obwohl eine Verwendung des Konstrukts aus mehreren Gründen vielversprechend erscheint: Erstens ist zum Erreichen sportlicher Spitzenleistung eine kontinuierliche und in vielen Fällen weitgehend eigenverantwortliche Trainingsgestaltung eine notwendige Voraussetzung. Da das Selbstführungskonstrukt ausschließlich erlern- und trainierbare kognitive und behaviorale Strategien enthält, sind förderliche Effekte im Sinne einer eigenständigen Trainingsgestaltung zu erwarten. Zum Zweiten erscheint effektive Selbstführung hilfreich, um mit ausgewählten Kernproblemen des Leistungssports umgehen zu können. Dazu zählen zum Beispiel die Doppelbelastung von Schule und Leistungssport, sowie der vorzeitige Ausstieg aus dem Leistungssport vor Erreichen des individuellen Leistungshöhepunkts („drop out Phänomen“). Hier erscheint es möglich, dass die Fähigkeit zur Selbstführung, z.B. durch die selbstgewählte Auswahl motivierender Ziele, ein protektiver Faktor sein könnte.

Ziel dieser Arbeit ist es das Konstrukt der Selbstführung auf den Spitzensport zu übertragen. Dazu wurden zwei Studien durchgeführt.

Die erste Studie beleuchtet inwiefern Selbstführung auf Konstruktebene vom verwandten Konstrukt der Volition abzugrenzen ist. Volition beinhaltet bewusste und

unbewusste Prozesse (z.B. Selbstmotivation, Aufmerksamkeitskontrolle), die eine Zielverfolgung auch gegen Widerstände (z.B. Hindernisse) kontinuierlich sicherstellen (Beckmann & Kuhl, 1984). Auf Augenscheinebene weisen Volition und Selbstführung eine inhaltliche Nähe auf, da beide Konzepte strategiebasiert sind und das Erreichen eines Ziels unterstützen. Das Volitionskonzept wurde bereits konzeptionell und diagnostisch auf den Spitzensport transferiert (Wenhold, Elbe & Beckmann, 2009; Beckmann & Wenhold, 2009). Damit stellt die erste Studie eine notwendige Voraussetzung zur gewinnbringenden Übertragung des Selbstführungskonzepts auf den Spitzensport dar. Die Ergebnisse zeigen, dass Selbstführung und Volition einen schwachen bis mittleren Zusammenhang ( $r = .33$ ) aufweisen und damit als weitgehend unabhängige Konstrukte anzusehen sind. Darüber hinaus zeigt die Integration von Volition und Selbstführung in das Rubikonmodell der Handlungsphasen (Beckmann & Gollwitzer, 1987; Heckhausen, 1987b), dass sich beide Konstrukte im Handlungsverlauf funktional ergänzen.

Die zweite Studie präzisiert das Selbstführungskonzept über das Rubikonmodell der Handlungsphasen. Dadurch wurden konzeptionelle Schwachpunkte des bestehenden Selbstführungskonzepts aus der Arbeits- und Organisationspsychologie eliminiert. Auf dieser Grundlage wurde ein Interviewleitfaden entwickelt und strukturierte Interviews mit bereits erfolgreichen Spitzenathleten ( $n = 43$ ) geführt. Dabei wurden die Athleten zu ihren erfolgreich angewendeten Selbstführungsstrategien in kritischen Situationen (z.B. Zielkonflikte, Misserfolg, beharrliche Zielverfolgung) befragt. Die Ergebnisse konkretisieren die globale Fähigkeit zur Selbstführung im Spitzensport auf fünf Bereiche von *Motivation*, *Volition*, *Selbstregulation*, *Ressourcenmanagement* und *Selbstreflexion*. Zudem wurde erstmalig ein empirisches Portfolio an Selbstführungsstrategien generiert, die erfolgreich zur Bewältigung kritischer Situationen im Spitzensport eingesetzt wurden. Dadurch bieten die Ergebnisse erste Anhaltspunkte zur Entwicklung systematischer Edukations- und Interventionsprogramme zur Förderung individueller Selbstführungsfähigkeiten im Spitzensport.

*Schlüsselwörter: Selbstführung, Volition, Rubikonmodell, Spitzensport*

# Abstract

The focal point of this thesis is self-leadership. Self-leadership is a relatively new construct rooted in organizational psychology. Within organizational psychology self-leadership is defined as an inner leading process to achieve self-direction and self-motivation necessary to perform (Neck & Houghton, 2006). The self-leading process is further specified as an intentional use of behavioral and cognitive strategies (e.g., self-reward, goal setting) for effectively leading oneself. Currently research on self-leadership is limited to organizational psychology. However the concept of self-leadership appears intuitively appealing for the field of elite sports for several reasons: First, to reach expert performance in elite sports a continuous engagement in practice activities can be regarded as a necessary precondition. Based on the fact that the concept of self-leadership provides individuals with ready to use strategies to guide behavior, beneficial effects regarding a self-responsible organization of practice and competition seem reasonable. Second, self-leadership ability appears suitable for coping with selected fundamental requirements during an athletic career. As an example, one can refer to the dual career burden young athletes are facing on their way to elite sports or the drop out phenomenon describing abandonment of elite sports before achieving maximum performance. Regarding drop out, it seems reasonable that profound self-leadership skills such as selecting need congruent and highly motivating goals, can be regarded as possible protective factors. Therefore the present research transfers the concept of self-leadership to the domain of elite sports via two studies:

The first study analyzes whether self-leadership maintains construct-specific variance when compared with the similar concept of volition. Volition was introduced

to bridge the gap between choice and action by means of conscious and unconscious strategies such as self-motivation or attention-control (Beckmann & Kuhl, 1984). The conceptualization of self-leadership within work and organizational psychology overlaps with the concept of volition, since it also proposes strategies (e.g., self-cueing) for transferring a once established goal intention into goal-directed behavior. Therefore it is necessary to assess whether the concept of self-leadership exceeds the concept of volition, which is already established in elite sports (Wenhold, Elbe & Beckmann, 2009; Beckmann & Wenhold, 2009). Results showed that self-leadership and volition are distinguishable, albeit weak to moderately correlated concepts ( $r = .33$ ). Moreover using the Rubicon model of action phases (Beckmann & Gollwitzer, 1987; Heckhausen, 1987b) to integrate volition and self-leadership within a coherent theoretical framework revealed that self-leadership supplements volition during goal attainment.

The second study refines the concept of self-leadership using the Rubicon model of action phases. This eliminates current conceptual weaknesses from the construct of self-leadership within organizational psychology. Based on a refined self-leadership conceptualization an interview guide was developed to specify self-leadership ability within elite sports. Already successful elite athletes ( $n = 43$ ) were interviewed to identify self-leading strategies, which they used successfully to cope with critical situations applied within the domain of elite sports (e.g. goal conflicts, setbacks). Results specify that the global ability of self-leadership can be divided in five general dimensions of self-leading strategies labeled *motivational skills*, *volitional skills*, *self-regulation skills*, *resource managing skills*, and *metacognitive skills*. Furthermore an empirically generated set of self-leading strategies was identified which was used successfully to cope with critical situations applied within the domain of elite sports. Therefore the present findings provide a starting point to spur future lines of research particularly in the area of measurement and training of self-leadership in elite sports.

*Key words: Self-leadership, volition, Rubicon model of action phases, elite sports*

# Acknowledgement

My thesis is about self-leadership, so some people might think, that after analyzing self-leadership back and forth for too many years I would have become an expert in leading myself to success. This is wrong. I still consider myself as being a bad self-leader, particularly if I have to deal with something such as doing research which has not become part of my favorite tasks. Nevertheless I managed to finish this thesis which obviously required a lot of self-leading skills such as staying focused or coping with tremendous emotional distress. As I said, I am bad in leading myself so I needed external support to cope successfully with setbacks, time pressure and lack of motivation along the journey of writing my thesis. That's why I want to use this space to express my gratitude to a number of people which helped me to get along.

First of all, with Prof Dr. Jürgen Beckmann and Prof. Dr. Ralf Brand this thesis had two advisors. Jürgen, thank you so much for believing in me when I did not and for your various support during this project from the very first moment. At the beginning I had difficulties to see the benefits resulting from your way of guiding my work but at the end I realized that your trust was essential to become a real self-leader in doing research. Ralf, thank you so much for giving me many opportunities to learn. There are so many things I have learned from you and still can learn. You always supported and inspired me and everytime you gave the right advice at the right time. And by the way, thanks for your patience in the beginning of our collaboration where I tried to set a new record for phd students in designing complicated power point slides.

Second I want to express my deep gratitude to Kai Engbert and Peter Gröpel. Kai, thank you so much for your effort, your thoughts, your teaching in scientific writ-

ing and most importantly for your friendship. This project is partly yours and I look forward to proceed because I know our quest (in research and beyond) will continue. Peter, it was my pleasure having you on the project. Your beautiful style of scientific thinking inspired me and I did my best to integrate your rigid, straightforward thoughts into this thesis.

Third I want to thank the many helping hands to realize this project. I am grateful to the entire team in Munich who provided the atmosphere that this thesis could come to a successful end. Within that team I want to pick out Felix Ehrlenspiel, whose questions, ideas and corrections significantly contributed to improve my work. I do not want to forget to thank Eva Zier and Anika Schoneville. Eva spent endless hours transcribing interviews from participants who deserved my gratitude as well. And Anika's skills in number crunching contributed significantly that the results of this thesis are clear and concise and not just confusing.

Experts in English are probably already annoyed and confused while reading these pages because they had to deal with grammatically wired and sometimes just wrong sentences. This is why I have to thank Barb and Claudia. Both contributed tremendously to polish my English and had a significant impact that others can more easily understand what I am trying to say.

Finally I want to thank my friends for continuously supporting me. There were so many of you finding ways to support me along the way and due to space limitations unfortunately I am not able to express my gratitude to all of you. Therefore I have to pick out some and I want to thank Conny, Basti, Julia, Frank and Joy. Conny for her magical skills in formatting and critical thinking, Basti for being with me whenever I needed him, Julia for listening and offering me a place whenever I was down or felt restive. And last but not least Frank and Joy for kicking my butt that this project finally comes to an end.

But it's not finished before I dedicated this thesis to the two most important people of my life, my parents. I will never be able to repay you properly. I hope I will make you proud.

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# Introduction

This thesis addresses a problem observed within the practice of applied sports psychology. During sports psychological counseling of the DBS Paralympic skiing team<sup>1</sup>, responsible coaches and supervisors complained about a significant lack of personal responsibility among their athletes. Younger athletes in particular have considerable problems with the independent organization of workouts, self-responsible equipment care, and coordination of school/work and sports. Based on this problem, the sports psychologist was confronted with the question of how the athletes' lack of personal responsibility could be improved.

However, prior to planning an intervention to improve individual self-responsibility, systematic sports psychological counseling as scientifically based practice (Beckmann & Elbe, 2008) first requires specifying the problem under investigation. According to Amelang and Schmidt-Atzert (2006), the initial (often non-scientific or non-verifiable) problem by the client (self-responsibility deficits) must be specified in a way that allows later examination. Hence the following initial diagnostic questions result from the present problem:

- What does a lack of self-responsibility in athletes mean?
- What characterizes adequate or even successful self-responsibility?
- What skills, in terms of associated competences, does an athlete who acts self-responsibly have?

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<sup>1</sup> The Paralympic ski team is a very successful national team. It finished several consecutive Paralympics as best nation in alpine skiing for the disabled, and in 2007 multiple gold medal winner Martin Braxenthaler received the Laureus Award, the "Oscar of the sporting world". Since late 2006, the team receives sports psychological counseling from the TU München.

- What skills, in terms of concrete strategies, does an athlete employ to act self-responsibly?

The starting points for answering the initial diagnostic questions regarding associated skills and strategies of successful self-responsibility are provided by the concept of self-leadership from work and organizational psychology. Within organizational psychology self-leadership is already established as a modern leadership approach focusing on followers for several decades (see Neck & Houghton, 2006 for a summary). Self-leadership is defined as an inner leading process to achieve self-direction and self-motivation necessary to perform (Manz, 1986; Neck & Manz, 2007; Müller & Braun, 2009). Moreover this self-leading process is further specified as an intentional use of behavioral and cognitive strategies (e.g., self-reward, goal setting) for effectively leading oneself. Hence an essential characteristic of self-leadership is its strong practice orientation which makes it intuitive appealing for the domain of elite sports (*see 1.1.2 for details*).

However, despite its potential for the field of elite sports research on self-leadership was limited to organizational psychology. Thus the individual self-leadership ability has so far exclusively been characterized in sports through unstandardized observation from coaches and athletes. They describe the global ability of self-leadership as a rather broad area of competence, which, for example, includes the ability to compensate for insufficient motivation or persistently pursue a goal. This leads to a blurred definition, both as a construct and with regard to the level of associated competences and skills. A further difficulty is the fact that associated self-leadership requirements in elite sports have only been documented through anecdotal reports (e.g., the dual burden of school/work and elite sports). It seems very likely that other situations relevant to self-leadership occur in elite sports (e.g., coping with unexpected defeats or setting new goals after a competition highlight). However, these have not yet been systematically recorded. Finally, it is striking that coaches and athletes described primarily adverse components and negative consequences of a lack of self-leadership (e.g., insufficient training). From such anecdotal statements it remains unclear, what qualities characterize an athlete with good self-leadership ability.

## **Objective and design of the present thesis**

This thesis aims to transfer the self-leadership construct to the domain of elite sports. For this, two studies were conducted.

*Study 1* examines differences and similarities between self-leadership (Neck & Houghton, 2006) and volition (Kuhl & Fuhrmann, 1998) by means of a quantitative questionnaire study. The study has the character of a basic scientific research program (Herrmann, 1994), since it clarifies the concept of self-leadership and more clearly demonstrates “what” is genuinely meant by it. *Study 2* examines a refined self-leadership concept to the domain of elite sports by means of a qualitative interview study. The study has the character of a technological research program (Herrmann, 1994), since it describes self-leadership strategies that work best in elite sports.

The structure of this thesis is consistently oriented to the practical research problem and follows the position of critical rationalism, which describes the central role of science to be problem solving (Popper, 1972). It is organized in three sections, labeled as introduction, empirical work (study 1, study 2) and general discussion.

The *introduction* will set the theoretical framework as follows: First it defines the underlying research questions that describe the current deficient state of the observation and practical phenomenon of self-leadership in elite sports (Herrmann, 1994). Second it provides the necessary theoretical background regarding key concepts of self-leadership and volition. Third it identifies weaknesses of the existing self-leadership concept within work and organizational psychology (Neck & Houghton, 2006) and shows that only a theoretically and empirically refined concept ensures useful transfer for sports psychological research and practice.

The *empirical work* contains two studies. The first study comprises a construct comparison between the strategy-based concepts of self-leadership and volition. Construct comparison result in initial conclusions regarding independence and autonomy of self-leadership in relation to volition. The second study theoretically refines the concept of self-leadership by using the Rubicon model of action phases (Heckhausen, 1987b). Based on this, semi-structured interviews were conducted with successful athletes from various individual sports (e.g., golf, alpine skiing, triathlon). The interviews were used to identify successfully employed self-leading strategies. Thus, results pro-

vide an empirical pool of strategies that specify self-leadership ability taking into account sport specific requirements (e.g. coping with unexpected defeats).

Finally, the *general discussion* will evaluate the findings regarding the theoretical and empirical analysis of the construct of self-leadership, and spurs future lines of research.

# 1 Theoretical Background

The beginning of the scientific analysis of the self-leadership phenomenon follows the proposals by Herrmann (1994) regarding the design of research programs. To specify a research program, the underlying research problem first must be explained. Herrmann (1994) calls this the identity-establishing core assumption of the research program.

For the construct of self-leadership this means that it must be stated explicitly, which elements of the current state are regarded as inadequate. Therefore the starting point for the explication of underlying research problems is the description of the practical phenomenon.

To date, self-leadership ability in elite sports has so far exclusively been characterized through unstandardized observation from coaches, staff members and athletes. These rather anecdotal reports mainly focus on aspects of a lack of self-leadership in a way that a lack of self-leadership reveals, among other things, in motivational (“unable to bring oneself to do something”), volitional (“difficulties in persevering during an activity”), and emotional (“intense depressive state in case of an unexpected defeat”) problems of the athlete. This results in the first issue to be researched because self-leadership ability in elite sports is on this base only very vaguely defined. It is therefore necessary to first systematically specify the phenomenon of self-leadership within elite sports. The starting point for specifying individual self-leadership ability in elite sport is the existing self-leadership concept within work and organizational psychology (see Müller & Wiese, 2010 and Neck & Houghton, 2006 for a summary).

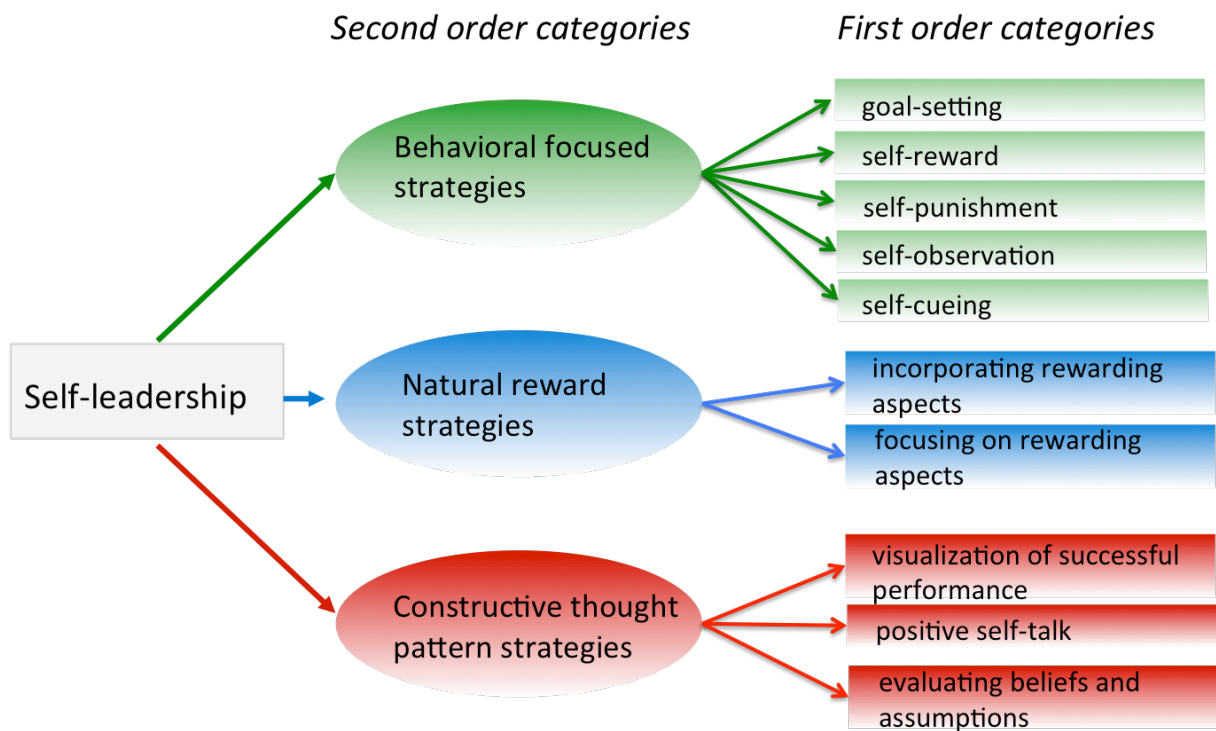


## 1.1 Self-leadership

Self-leadership is defined as an inner leading process to achieve self-direction and self-motivation necessary to perform (Neck & Houghton, 2006). This self-leading process is further specified as an intentional use of self-leading strategies, which can be divided into three general categories labeled *behavior-focused strategies*, *natural reward strategies* and *constructive thought pattern strategies* (Houghton & Neck, 2002). *Behavior-focused strategies* are adapted from the concept of self-management that aims to meet external goals and to facilitate the accomplishment of necessary but possibly unpleasant tasks (Manz & Sims, 1980). These strategies include self-observation, self-goal setting, self-reward, self-punishment and self-cueing. *Natural reward strategies* constitute the first facet through which self-leadership expands self-management. They emphasize the enjoyable aspects of a given task, including efforts to incorporate more pleasant and enjoyable features into a task, changing realizations of the task by focusing on the task's rewarding aspects or purposefully choosing a task that a person enjoys doing (Houghton & Neck, 2002).

*Constructive thought pattern strategies* constitute the second facet through which self-leadership expands self-management, which was limited to behavioral strategies (Manz, 1986). Cognitive strategies are designed to build and maintain functional thinking patterns, including evaluation of beliefs and assumptions, positive self-talk and visualization of successful performance.

Figure 1 shows that the concept of self-leadership is set up hierarchical including second and first order categories. Second order categories represent self-leadership dimensions of behavior-focused strategies, natural reward strategies and constructive thought pattern strategies. First order categories represent attributed ready to use strategies (e.g. self-reward, visualization of successful performance) aiming to positively influence self-motivation and self-instruction.



**Figure 1:** Hierarchical conceptualization of self-leadership (adapted from Houghton & Neck, 2002)

In sum, a strong practice and application orientation characterizes the conceptualization of self-leadership within organizational psychology because individuals receive concrete strategies for promoting motivation and self-instruction (e.g., goal setting, self-reward, self-cueing). In the same vein, Neck and Houghton (2006) characterize self-leadership as a normative<sup>2</sup> concept, as it provides concrete strategies for effective self-leadership. And lastly, self-leadership is conceptualized as an enlargement of self-management (Manz & Sims, 1980). Here, the integration of cognitive elements (e.g. engage in positive self-talk) and the deliberate examination of one's own goals, values and cognitive assessments constitute fundamental facets of self-leadership. The consideration of external and internal standards in relation to existing (work) tasks is thus characteristic for the self-leadership concept, especially in contrast to the related concept of self-management. In comparison to self-management, self-leadership represents a broader concept of self-influence by addressing external and internal stan-

<sup>2</sup> Normative theories are prescriptive and emphasize how something should be done. In contrast, deductive or descriptive theories seek to explain the basic operation of various phenomena, but generally fall short of providing specific normative advice for managing a particular process (Neck & Houghton, 2006).

dards in relation to performed actions (e.g., evaluating personal meaningfulness of a given task). Thus, effective self-leaders know for which reason they are performing a task, rather than feeling obligated to perform it (e.g., through recognizing rewards that result from performing activities themselves).

### 1.1.1 Research on self-leadership

Research on self-leadership is limited to the domain of work and organizational psychology. Three lines of research can be distinguished.

The first line of research focuses on conceptual and theoretical considerations regarding self-leadership (Manz, 1986; Markham & Markham, 1995; Neck, Nouri, Houghton & Godwin, 2003; Neck & Manz, 2007; Neck & Houghton, 2006; Boss & Sims, 2008). Mechanisms how the application of self-leadership strategies affects intended behavior are described and a number of potential outcomes are suggested by the literature.

Regarding mechanisms how self-leadership affects intended behavior Neck, Nouri, Houghton and Godwin (2003) developed a theoretical model highlighting links between self-leadership and goal setting. They suggested that individuals enhance their goal-setting and thus goal achievement via constructive utilization of thought self-leadership such as engaging in positive self-talk or the visualization of successful performance. In the same vein, Boss and Sims (2008) developed a theoretical model how self-leadership can help move the experience of personal failure towards recovery. They suggested that individuals should use a combination of goal-setting and systematic self-evaluation to enhance coping with failure and negative emotions. Within that process systematic self-evaluation involves determining the root cause of failure and ascertaining if there is anything that could have been done to avoid it. Results suggest that a casual attribution of failure should increase perceived control over the situation. This should help to draw the mind away from obstacle thinking towards opportunity thinking which is further facilitated through setting of challenging and reachable goals (Locke & Latham, 2002).

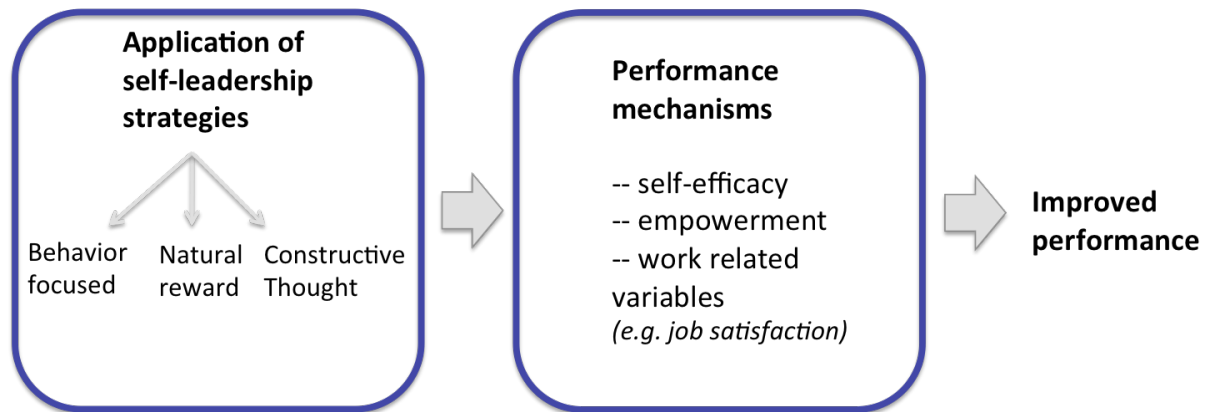
Proposed outcomes to be associated with the application of self-leadership strategies are numerous including psychological empowerment and self-efficacy<sup>3</sup> but mainly related to the organizational context such as job satisfaction and job commitment (see Neck & Houghton, 2006 for a summary). In the following I will focus on psychological empowerment and self-efficacy because both variables are not limited in scope to the domain of work and organizational psychology.

Houghton and Yoho (2005) suggested that individuals engaging in self-leadership often develop a sense of ownership over their tasks and work processes. More precisely they suggested that application of self-leadership strategies might enhance feelings of empowerment by creating perceptions of competence and self-determination. Within that process the behavior-focused strategies of self-observation, self-goal setting and self-reward should increase feelings of competence, while natural reward strategies should increase feelings of purpose (cf. Neck & Manz, 2007).

Increased self-efficacy is the most anticipated self-leadership outcome and regarded as the primary mechanism through which self-leadership affects performance (Manz, 1986; Neck & Manz, 1992, 1996b). This idea was examined by Prussia, Anderson and Manz (1998). They showed that the effect of using self-leadership strategies on academic performance was fully mediated through self-efficacy beliefs. In sum figure 2 illustrates the suggested self-leadership/performance relationship where proposed self-leadership outcomes primarily serve as mediators that affect individual, group and organizational performance.

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<sup>3</sup> Self-efficacy is defined as a person's belief (whether or not accurate) about their capabilities to produce designated levels of performance. Self-efficacy is commonly understood as domain-specific; that is, one can have more or less firm self-beliefs in different domains or particular situations of functioning (Bandura, 1977).



**Figure 2:** Suggested relationship between self-leadership and performance

Empirical research dealing with construct validity of self-leadership is sparse and focused exclusively on investigating relationships between self-leadership to associated personality traits. Here a study from Houghton, Bonham, Neck, and Singh (2004) revealed inconsistent results: First self-leadership and personality were statistically indistinguishable on the construct level but distinct from personality traits of extraversion and conscientiousness on the lowest level of abstraction, representing self-leadership strategies. Based on these findings authors assume that experiences in using self-leadership strategies are essential to delineate self-leadership from personality. Particularly it is suggested that individual self-leadership ability will be shaped primarily by related personality traits (e.g. extraversion/conscientiousness) if a person has not used self-leadership strategies in prior tasks. But this interdependence should decrease with increased experience in the application of self-leadership strategies.

The second line of research focuses on the development of a reliable self-leadership scale (Houghton & Neck, 2002; Müller, 2006; Andressen & Konradt, 2007). With the revised self-leadership questionnaire (RSLQ, Houghton & Neck, 2002) and the German self-leadership questionnaire (GSLQ, Müller, 2005, 2006; Müller, Georgianna & Roux, 2010) currently two rather different scales measuring self-leadership are available within work and organizational psychology.

The RSLQ measures self-leadership ability in a way that is harmonious with the hierarchical conceptualization of self-leadership (see Figure 1). The questionnaire contains three dimensions representing the primary self-leadership categories of behavior-focused strategies, natural reward strategies and constructive thought pattern

strategies. Dimensions are further subdivided to nine sub-scales measuring self-leadership ability with 35 items in total. Sub-scales represent self-leadership strategies to influence behavior (*five sub-scales including goal-setting, self-reward, self-punishment, self-observation and self-cueing*), natural rewards (*one sub-scale including focusing and incorporating natural rewarding aspects into a task*) and thinking (*three subscales including visualization of successful performance, self talk and evaluation beliefs and assumptions*). The RSLQ has already demonstrated sufficient reliability and construct validity and appears to be a reasonably reliable and valid instrument for the measurement of self-leadership (see Houghton & Neck, 2002 for details). Recently the RSLQ was translated into German labeled RSLQ-D (Andressen & Konradt, 2007)<sup>4</sup>.

The GSLQ is a modular instrument and measures self-leadership based on an enlarged conceptual framework. According to Müller (2003) the existing framework of self-leadership (see Figure 1) need to be extended by strategies designed to increase inner transparency, will power regulation, emotional experience and physiological processes. Thus the scope of self-leadership strategies within the GSLQ was widely enlarged to over 100 descriptions of self-leadership strategies on item level. Regarding psychometric properties the GSLQ has demonstrated construct validity with regard to proposed general dimensions of self-leadership and correlated with criterion measures such as entrepreneurial aptitude (cf. Müller, 2006).

The third line of research focuses on empirical research examining self-leadership in organizational settings (Saks & Ashford, 1996; Neck & Manz, 1996a; Houghton & Jinkerson, 2004; Politis, 2006). Saks and Ashford (1996) showed that the application of behavioral focused self-leadership strategies, such as self-reward, was negatively correlated with anxiety and stress level of business new hires. More recently Politis (2006) showed that the use of behavioral self-leadership strategies increase job satisfaction and working performance and supported the theoretical suggestion that job satisfaction mediated the effect of self-leadership strategies on working performance. Regarding thought self-leadership Neck and Manz (1996a) found relationships between a thought-self-leadership training and subsequent levels of both positive affect (enthusiasm) and job satisfaction in a field study with airlines employees. Lastly Houghton and Jinkerson (2004) reported that self-leadership's constructive

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<sup>4</sup> The RSLQ-D is further explained in the first study of this thesis.

thought strategies is related to job satisfaction mediated by the absence of dysfunctional thought processes and by subjective well-being (happiness).

### 1.1.2 The potential of the self-leadership construct for elite sport

Reviewing conceptual set up and research on self-leadership highlights its strong practice and application orientation. This makes self-leadership intuitive appealing for the domain of elite sports. Particularly its anticipated potential can be summarized in four points:

First, self-leadership appears useful for coping with basic requirements of an athletic career. Self-leading strategies (e.g., goal-setting, self-cueing) appear potentially beneficial to align behavior to sport-specific goals. More specifically individual self-leadership ability may support young athletes to pursue a “dual career” between elite sport, school/training and work.

Second, there is the strong practice orientation. Self-leadership focuses on the “how” of systematic behavioral control. People receive concrete strategies for promoting motivation and self-instruction (e.g., goal-setting, self-reward, self-cueing). This supports the sports psychological counseling process, since the athlete can be taught tangible strategies for effective self-leadership.

Third, there is the trainability and changeability. As a strategy-based concept, individual self-leadership ability is defined through concrete skills (e.g., goal-setting, vividly visualization of intended movements). These skills can be trained and altered preferably with customized training programs.

And fourth, the application of self-leading strategies (e.g., evaluating beliefs and assumptions) should lead to an examination of one’s own goals, values and cognitive assessments. This may support the selection of need congruent and highly motivating goals which is a possible protective factor regarding drop-out from elite sports before reaching maximum performance (Wyllemann, Alfermann & Lavalee, 2004).

Although self-leadership holds a strong intuitive appeal for the domain of elite sports the concept has not been without criticisms. The most common criticism of self-leadership is that it is conceptually not distinct from and redundant when compared to similar constructs from motivational psychology such as volition (Markham & Mark-

ham, 1995; Guzzo, 1998). For the intended transfer of the self-leadership concept to elite sports conceptual distinctness to volition is essential, because volition was already successfully established in elite sports (Wenhold, Beckmann & Elbe, 2009; Beckmann & Wenhold, 2009). For this reason the following paragraph introduces the concept of volition briefly.

## 1.2 Volition

In the tradition of Heinz Heckhausen the concept of volition is introduced from an action theory perspective, arguing that motivation (and volition) “*appears to be a force (...) that directs, initiates, amplifies and terminates*” action processes (Heckhausen & Heckhausen, 2006. p.1).

In traditional theories of motivation (Vroom, 1964; Fishbein & Ajzen, 1975) the intention to achieve a goal is seen as an immediate determinant of goal achievement. However, research on the psychology of actions has shown repeatedly that a strong motivation to achieve a certain outcome or engage in a certain behavior is often not suffice for that behavior to be implemented and the goal to be realized (Kuhl, 1983; Heckhausen, 1987; Brandstaetter, Lengfelder & Gollwitzer, 2001; Sheeran, Webb & Gollwitzer, 2005). Therefore it was argued to distinct between motivational (related to goal setting) and volitional processes (related to goal implementation) to improve understanding of successful goal pursuit (see Heckhausen & Heckhausen, 2006 for a summary).

To analyze requirements of goal selection and goal realization in relation to each other the Rubicon model of action phases was developed (Heckhausen, 1987b).<sup>5</sup> The model posits four distinct phases of successful goal pursuit. Postulated action phases differ in terms of the tasks that have to be addressed before the individual can move on to the next phase.

The first phase labeled *predecisional phase* is characterized by deliberation. An individual first has to decide which of his or her wishes to pursue. As individuals normally possess more wishes than they can possibly realize, the task is to evaluate the

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<sup>5</sup> Description of the Rubicon model is abbreviated to highlight most relevant facets for this research. For a detailed explanation of the Rubicon model see Achtziger and Gollwitzer (2009).

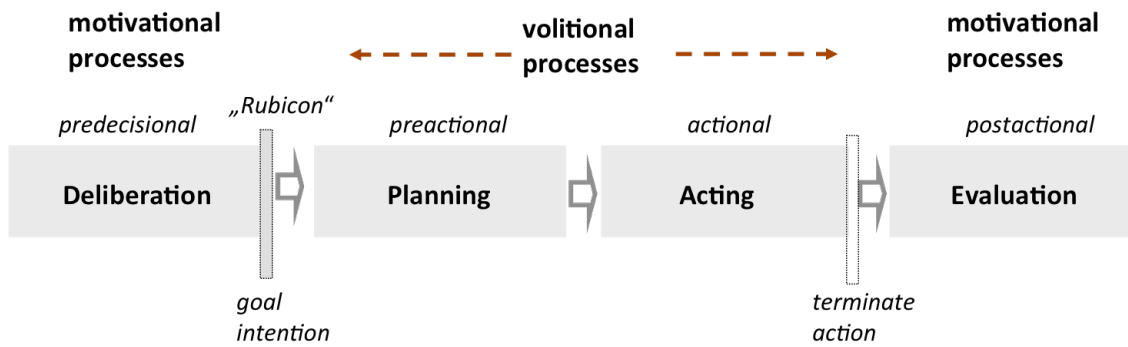


pros and cons of ones wishes. To this end it is postulated that individuals assess the feasibility (i.e. can I achieve the intended outcomes with my own ability?) and desirability (i.e. what are the short and longtime consequences of pursuing this goal?) to decide which of their wishes they really want to pursue. According to the Rubicon model this process of deliberation culminates in *crossing the Rubicon* where a wish is transformed into a firm goal intention. It was shown that forming a goal intention represents a crucial transition point as it causes a change in mindset of a person from deliberative thoughts (impartial analysis of a goal's feasibility and desirability) to implemental thoughts (biased perception in favor to translate the selected goal into action) (see Gollwitzer, 1990 for details).

The second phase labeled *preactional phase* is characterized by planning activities. The task facing individuals in this phase is to decide how to facilitate the achievement of goals by engaging in planning activities (e.g. determining on when, where and how one wants to act towards the goal). The model characterizes this face as volitional indicating that crossing the Rubicon terminates goal deliberation because the individual is now committed to achieve a specific goal state.

The third phase labeled *actional phase* is characterized by initiating goal directed actions. The task facing individuals in this phase is to bring goal-directed actions to a successful end. Shielding current goal intention against competing action tendencies to ensure goal attainment is regarded as a volitional process.

Finally the fourth phase labeled *postactional phase* is characterized by the evaluation of the successfulness of goal attainment. The task facing individuals in this phase is again a motivational one. Achieved outcomes have to be evaluated by looking backwards (i.e. how successfully did I perform the goal-directed behavior?) and forward (i.e. does the desired outcome imply additional actions?). Figure 3 illustrates the Rubicon model highlighting that it defines clear boundaries between motivational and volitional action phases.



**Figure 3:** Rubicon model of action phases (Heckhausen, 1987b)

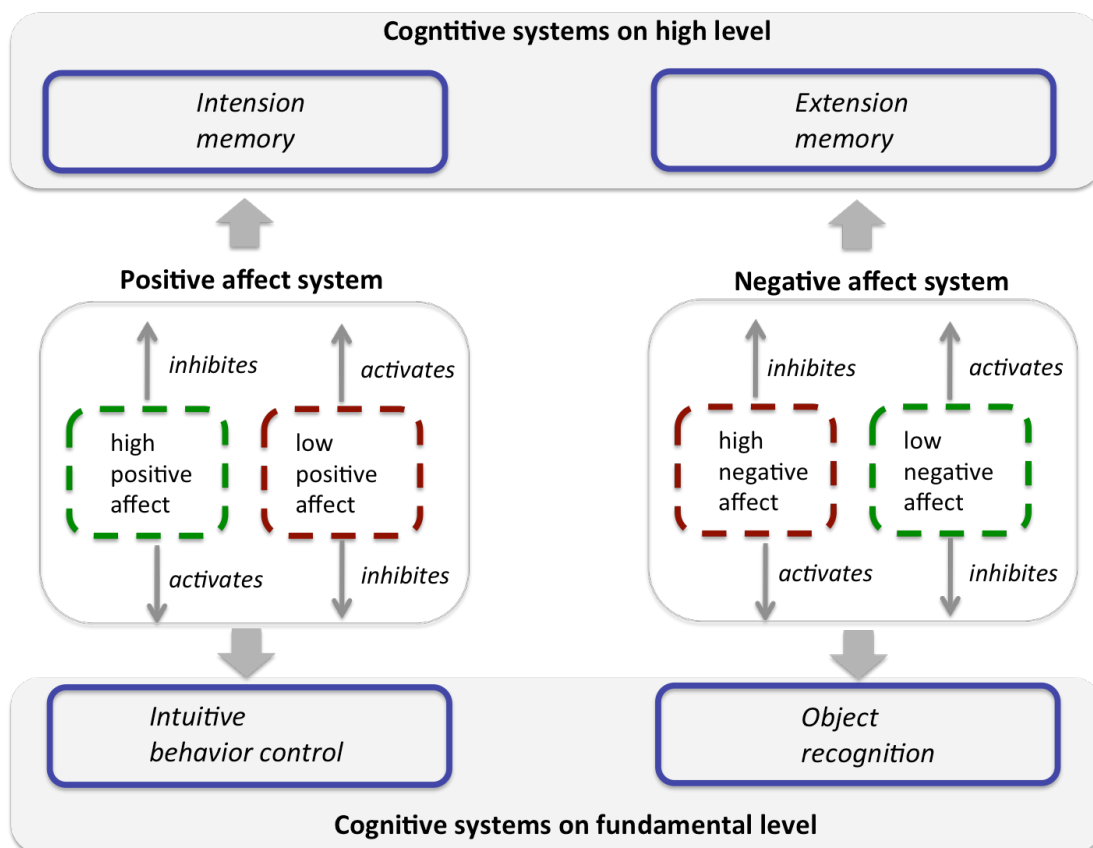
It can be inferred from Figure 3 that a primary function of volitional processes is to bridge the gap between choice and action (Beckmann & Kuhl, 1984). Thus, it was suggested that volitional processes are particularly relevant when routinized activity is impeded (e.g. failure of habitual action patterns) or when goal-directedness becomes salient (e.g. appearance of a challenge) (Beckmann & Kuhl, 1984; Beckmann, 1999).

In an effort to elaborate how volitional processes interact to overcome or to inhibit competing urges or to compensate for insufficient motivation Kuhl introduced the Personality-Systems-Interaction Theory (PSI-Theory; Kuhl, 2001). According to PSI-Theory, volitional functioning can be explained by the interplay of regulatory systems, which can be summarized into two broad levels containing four cognitive systems (Kaschel & Kuhl, 2004):

At the basic level, behavior is guided by two systems labeled object recognition (OR) and intuitive behavior control (IBC). OR is specialized in the detection of failures or discrepancies from given standards whereas IBC is specialized on routines for performing intended actions. Analogous at the higher level, behavior is guided by two cognitive systems labeled intention memory (IM) and extension memory (EM). IM is specialized in sequential analytic processing to maintain the activation of difficult goals and at the same time inhibits premature enactment of these goals, whereas EM is specialized on holistic processing to integrate information originating in different sensory modalities (needs, personal values, implicit motives).

Following Kuhl, Kazén and Koole (2006) the volitional core of PSI-Theory is formed by two assumptions: First, effective volitional functioning depends on a coordinated interplay between the basic and the higher level systems. For example goal

enactment involves an interaction between intention memory, which forms and maintains abstract goal representations, and intuitive behavior control, to translate abstract goals into concrete actions. Similarly, self-development involves an interaction between object recognition, which takes in new (i.e., unexpected or undesirable) experience, and extension memory, to integrate new experiences into extended networks of the person's prior experiences. Second, this coordination process regulating the relative activation or strength of each cognitive system, depends on affect regulation. To this end PSI-Theory distinguishes between positive and negative affect systems, which regulate approach and avoidance behavior. Figure 4 illustrates that positive affect regulation coordinates the interplay of intention memory and intuitive behavior control whereas negative affect regulation coordinates the interplay of object recognition and extension memory (see Kuhl, 2001 for details).



**Figure 4:** A theory of volitional functioning following Personality-System Interaction Theory (Kuhl, 2001)

In sum, affective changes are vital to effective volitional functioning. Therefore it is an important implication of PSI-Theory that efficient affect regulation skills will greatly facilitate behavior-regulation in general.

According to the PSI-Theory volitional processes were decomposed into a broad set of conscious and unconscious strategies that support goal enactment and goal-striving processes (Kuhl & Fuhrmann, 1998). Key volitional strategies include motivation control (i.e., enhancing the subjective attractiveness of an intended action; Beckmann & Kuhl, 1984), emotion control (i.e., disengaging from a sad mood if it renders enactment of an intention difficult; Gross, 1999), attention control (i.e., focusing attention on those aspects relevant for implementing the current intention; Muraven & Baumeister, 2000), self-determination (i.e., choosing and performing self-concordant goals; Kuhl & Fuhrmann, 1998), decision control (i.e., employing mechanisms to arrive at a decision quickly and avoid rumination; Kuhl, 1994) and coping with failures (i.e., disengaging easily from intrusive thoughts and failure rather than persevering about aversive experience; Kuhl, 1994).

Within elite sports the concept of volition is already established. The work of Jürgen Beckmann and colleagues was formative for sports psychological research regarding volition (Beckmann, 1999b; Beckmann, 2001; Elbe, Szymanski & Beckmann, 2005). As an example extensive research resulted in the development of sport specific questionnaires for measuring volitional competences in elite sport (Wenhold, Beckmann & Elbe, 2009; Beckmann & Wenhold, 2009).

### 1.3 Comparing self-leadership with volition

A comparison of self-leadership and volition on a face validity level gives reason to suspect similarities on construct and strategy level. Both concepts aim to influence self-direction and propose partly similar strategies (e.g., self-cueing) for transferring a once established goal intention into goal-directed behavior. To date there is no research that could tell researchers something about the potential overlap between these two constructs. Hence, concept comparison is limited to theoretical considerations, leading to ambiguous results.

On the one hand, it seems reasonable to suspect that self-leadership and volition are indistinguishable on a conceptual level. Both concepts may have similar functions during the goal attainment process (e.g., to ensure goal attainment). In particular, this similarity refers to behavioral strategies of self-leadership (e.g., self-cueing), which aim to accomplish necessary but possibly unpleasant tasks. Similarly, the volitional strategy of attention control can be used to shield a goal intention when the goal set appears less attractive. In addition, conceptual similarities can be identified in intended outcomes because both concepts aim to improve one's motivation and self-direction necessary to perform well.

On the other hand, it seems equally reasonable to suspect that both concepts can be distinguished. At least in part, self-leadership has a different scope compared with volition because proposed self-leadership strategies can be used to assist motivational goal setting and goal evaluation processes. For example, using a strategy such as positive self-talk strengthens individual confidence about set goals and helps to end deliberation processes about goal engagement. In addition, strategies such as self-reward or the evaluation of beliefs and assumptions assist individuals in evaluating the appropriateness of performed actions. Such motivational processes are not contained in volition. In particular, volitional strategies are primarily designed to cope with failure and setbacks, which, in turn, is not contained in self-leadership. Thus, it can be assumed that self-leadership extends volition by a complementary set of strategies, compared with volition, which can be used to assist in goal setting and goal evaluation processes.

## 1.4 Conclusions

### 1.4.1 Critical remarks on the concept of self-leadership

Comparing self-leadership with volition indicates that self-leadership as conceptualized within organizational psychology might lack construct validity. This is in line with major criticism on self-leadership (Markham & Markham, 1995; Guzzo, 1998). As outlined above, self-leadership consists of a broad set of strategies that may be useful in leading to greater personal effectiveness. Many of these self-leadership strategies are founded upon established theories of motivation. Therefore, it becomes a

central question whether self-leadership can be assumed a separate and distinct construct. For this reason the quality of the current self-leadership concept was assessed with regard to construct validity, conceptual development, measurement and empirical foundation.

Existing research on construct validity of self-leadership is sparse and limited to conceptual differences between self-leadership and the self-regulation concept according to Carver and Scheier (1998)<sup>6</sup> and comparisons between self-leadership and personality (Neck & Houghton, 2006; Houghton et al., 2004). Reviewing this research reveals two flaws:

First, taking the self-regulation concept as a comparison construct is questionable, because it focuses on the descriptive explanation of goal directed behavioral control (Carver & Scheier, 1998). In contrast, the self-leadership concept focuses on specific strategies that can be used to effectively control behavior. An adequate comparison construct should have a congruent focus, by also proposing strategies that contribute to effective behavioral control. For this reason, self-leadership is compared to volition which has a congruent focus compared to self-leadership within the first study of this thesis.

Second, empirical findings from Houghton et al. (2004) regarding self-leadership and personality lack methodical rigor in three ways: First, the authors constructed a general personality factor consisting of extraversion, emotional stability, and conscientiousness. Even though such general factors have been proposed (Rushton & Irwing, 2009), they are highly controversial (Ashton, Lee, Goldberg, & de Vries, 2009) and might simply reflect variance due to socially desirable responding (Ziegler & Bühner, 2009). Second, the latent correlation observed between this factor and the general-self-leadership factor is corrected for attenuation. These corrections boost latent correlations strongly if loadings are weak, as was the case in that study (Bühner, Krumm, & Pick, 2005). Third, the authors did not directly test whether a true

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<sup>6</sup> The concept of self-regulation is a broad descriptive explanation for goal-oriented behavioral control. It is assumed that people seek to reduce differences between current activity (current state) and a goal (desired state). According to theory, discrepancies in relation to a specified or desired state are detected analogous to a temperature controller. As a result, respective actions for reducing the difference are taken or the current state is reassessed, leading to reduced requirements (Carver & Scheier, 1998).

correlation exists. Thus, there is ample reason to doubt the conclusions drawn. For this reason, this relationship is reexamined within the first study of this thesis.

Conceptual weaknesses concern the construct of self-leadership and the proposed self-leading strategies. On the construct level, the concept development of self-leadership appears questionable. As a first step, strategies were compiled for the purpose of mapping the intended advancement of self-management into self-leadership (Manz, 1986). This led to the integration of cognitive strategies for the purposeful control of thoughts (e.g., visualization of successful performance), and natural reward strategies for increasing the intrinsic reward<sup>7</sup> of an activity (e.g., focusing one's attention on rewarding aspects of the activity) into existing self-management concepts (Manz & Sims, 1980). In a second step the overarching concept of self-leadership was derived from this combination of different strategies. As a consequence, only the selected strategies have a clear theoretical foundation. The selected strategies for natural reward are based on self-determination theory (Deci & Ryan, 2000), the behavioral strategies are based on theories of self-regulation (Kanfer, 1970a) and the cognitive strategies are based on the fundamental assumption of cognitive behavioral therapy that dysfunctional cognitions can be changed deliberately (Ellis, 1977). This results in a rather eclectic, heterogeneous and not very coherent collection of different theoretical concepts, which together are supposed to legitimize the self-leadership concept. There is no integration of the overarching concept of self-leadership on the basis of a suitable theoretical framework. Thus, self-leadership seems insufficiently integrated as an overall concept with regard to established theories of motivation and volition psychology, such as action control theory (Kuhl, 1987) or the Rubicon model of action phases (Heckhausen, 1987b).

Additionally, the deliberate examination of one's own standards of action (e.g. goals and values) is inadequately implemented in a conceptual sense. First, only two of nine proposed strategies (self-observation and evaluation of own beliefs and assumptions) address this aspect of self-leadership. Second, the intended self-reflexive nature of these strategies is inadequately represented on a measurement level. This is illus-

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<sup>7</sup> Intrinsically motivated actions are completed for their own sake and require no external rewards. In contrast, extrinsically motivated actions are performed to achieve a reward (e.g. money) distinguishable from the performed action (Rheinberg, 2006).

trated by a sample item for the *self-observation* strategy from the revised self-leadership questionnaire (RSLQ-D, Andressen & Konradt, 2007) (*“es interessiert mich, wie gut ich in meiner Arbeit bin”*). This conceptual weakness appears significant, since the self-reflexive character represents a fundamental aspect of self-leadership in contrast to self-management (Manz, 1986).

On item level of the RSLQ-D an additional conceptual weakness of the existing self-leadership concept becomes clear. At the level of the proposed strategies, concrete skills are partially mixed with rather stable behavioral tendencies. Cognitive strategies thus contain mainly trainable skills. This is illustrated by a sample item for the strategy of visualizing successful performance from the RSLQ-D (*“bevor ich eine Aufgabe angehe, stelle ich mich vor, wie ich sie erfolgreich ausführe”*). In contrast, behavior-oriented strategies primarily describe a general disposition to a specific behavioral tendency. This is illustrated by the sample item for the strategy of goal-setting from the RSLQ-D (*“ich denke oft über Ziele nach, die ich mir für die Zukunft setzen will”*).

Conceptually, the requirement to describe consistently concrete strategies for effective self-leadership was not implemented for all facets of self-leadership. This appears significantly serious, as it weakens the practice-oriented nature and thus the main unique feature of the self-leadership concept compared with other self-influence concepts (e.g., self-regulation; Zimmermann, 2000).

At the strategy level researchers disagree regarding the proposed self-leadership strategies. As a result, a broad portfolio of different behavioral and cognitive strategies is described. As an example Müller (2006) integrates planning strategies as well as time management strategies into the concept, which were not considered within the original self-leadership concept (Houghton & Neck, 2002). This leads to an unclear and confusing specification of the self-leadership concept, as there is no unified theoretical framework to guide the classification and selection process of proposed self-leading strategies. Moreover theoretical and empirical criteria are lacking that could justify the inclusion or exclusion of proposed strategies.

On a measurement level the revised self-leadership-questionnaire (RSLQ-D, Andressen & Konradt, 2007) and the German Self-leadership Questionnaire (GSLQ, Müller, 2005, 2006; Müller, et al., 2010) have been proposed. Scales differ widely in



content, e.g., regarding self-leadership strategies, and conceptually, e.g., regarding answering scales and item number indicating researchers disagreement concerning the nature and structure of self-leadership. This makes evident that methodological weaknesses are linked to conceptual weaknesses (see above) because measures of self-leadership have been developed on the basis of a theoretically weak and inconsistent concept. Furthermore from a methodological point of view the RSLQ-D as well as the GSLQ discloses weaknesses. Concerning the RSLQ-D a study from Andressen and Konradt (2007) indicates that the scale needs revision, with regard to a very homogeneous item formulation and inadequate internal consistency for the subscale of natural reward strategies ( $\alpha = .45$ ). Concerning the GSLQ the widely enlarged conceptualization of self-leadership on a strategy level needs an equivalent counterpart on a theoretical level. In other words, a theoretical or empirical rationale should be given to justify the selection process of proposed self-leading strategies. In particular it should be stated explicitly which strategies (e.g. receiving external support) are outside of scope of self-leadership. Otherwise there is a risk that conceptual clarity is further reduced and the construct degenerates to a storage basin for all possible self-influence strategies.

As a relatively young concept, self-leadership is still insufficiently empirically validated within work and organizational psychology. Much of the existing research is theoretical in nature (Neck, Steward & Manz, 1995; Neck, Nouri, Houghton & Godwin, 2003). Empirical studies aiming to classify the concept of self-leadership theoretically and analyzing its postulated effectiveness for promoting motivation and self-instruction are sparse. So far, the effectiveness of proposed self-leadership strategies with regard to working performance and job satisfaction has only been demonstrated in isolated cases and exclusively on the level of proposed general categories, such as behavioral or cognitive self-leadership (Neck & Houghton, 1996a; 1996b; Frayne & Geringer, 1994). Empirical data showing significant positive correlations between global self-leadership ability and postulated outcome variables (e.g. job satisfaction; numbers of goals reached) is currently missing.

In sum, conceptual, measurement and empirical weaknesses of the current self-leadership conceptualization lead to the following research problems:

- In the context of existing theories of motivation and volition psychology the self-leadership concept appears insufficiently constrained.
- The overall concept of self-leadership lacks a coherent theoretical framework.
- The self-reflexive character of self-leadership (e.g., examination of one's own beliefs and assumptions) is inadequately implemented in a conceptual sense.
- The strategy-based character of the concept was not consistently implemented on a measurement level.
- Inclusion or exclusion criteria of proposed self-leadership strategies are unclear.
- Due to theoretical and measurement-related problems, proposed self-leadership measures appear to require revision.
- The empirical validation of proposed self-leadership strategies appears inadequate.

Furthermore, there are additional more application oriented research problems that concern the initial transfer of the self-leadership concept to the area of elite sports. These include the following:

- Associated self-leadership requirements in elite sport are unclear and not systematically recorded.
- It remains unclear whether the proposed self-leadership strategies are also effective in elite sport and whether additional sport-specific strategies are employed.

#### **1.4.2 Defining a research agenda on self-leadership**

Reviewing self-leadership with regard to conceptual development, measurement and empirical foundation revealed that a beneficial transfer of self-leadership to elite sports requires two consecutive steps:

First it should be assessed whether self-leadership exceeds the conceptual similar concept of volition. As discussed it is unclear whether self-leadership is independent

from volition. Overlaps between constructs appear reasonable on a face validity level, however, to date no empirical research supports or refutes this assumption. Comparing self-leadership to volition should be regarded as a precondition for transferring the concept of self-leadership to elite sports due to the fact that volition is already well established in elite sports (Wenhold, Beckmann & Elbe, 2009; Beckmann & Wenhold, 2009). To this end construct comparison clarifies benefits and knowledge gain for sport psychological research and practice from transferring self-leadership to elite sports. Moreover examining self-leadership and volition from a construct validation perspective avoids unwarranted substantive conclusions, an erroneous body of research, and inadequate applications of the constructs (Diefendorff, Hall, Lord & Stream, 2000).

Second self-leadership ability in elite sports should be empirically analyzed. This includes two steps: First a reconceptualization of self-leadership using the Rubicon model of action phases (Heckhausen, 1987b) to eliminate current conceptual weaknesses. And second interviewing already successful athletes to identify an empirically generated set of self-leading strategies to cope with critical situations (e.g. setbacks, goal conflicts) in elite sports.

The following empirical work implements these steps via two studies. Studies revise self-leadership on theoretical and empirical grounds in order to ensure useful transfer for sports psychological research and practice.

## 2 Self-Leadership and Volition – Distinct and Potentially Supplemental constructs?

As discussed within the theoretical framework of this thesis conceptual similarities have lead to questions about whether self-leadership and volition are unique and independent constructs. Thus, criticism has been raised that the concept of self-leadership may be redundant in relation to the concept of volition (Markham & Markham, 1995), albeit researchers in the field argue that the distinct nature of self-leadership is primarily based on its unique set of self-leading strategies (Neck & Houghton, 2006). Until now, this suggestion has lacked empirical support because no empirical research has been done to assess whether these self-leadership strategies maintain construct-specific variance when compared with similar strategy-based concepts, e.g., volition (Kuhl & Fuhrmann, 1998). For this reason, the present study applies the following methodological strategy to examine self-leadership and volition from a construct validation perspective:

First, exploratory factor analysis (EFA) was used to determine the possible overlap between self-leadership and volition. Second, confirmatory factor analyses was used (CFAs) to evaluate whether results obtained by EFAs can be confirmed. Third, latent regression analysis was used to assess discriminant validity by analysing correlations of self-leadership and volition related to associated personality traits (the Big Five personality traits as proposed by McCrae & Costa, 1999).

## 2.1 Methods

### 2.1.1 Participants

Three hundred and twenty students (186 women and 134 men) took part in the study. Their mean age was 24.2 years ( $SD = 4.5$ ). All subjects participated voluntarily and signed a letter of consent to participate. They were told that the data obtained would be used exclusively for research purposes and recorded in such a manner that participants cannot be identified, directly or through identifiers linked to the subject. Therefore, approval by an institutional ethics board was not applicable. At the end of the study, participants were given 10 euros for their contribution.

### 2.1.2 Measures

Self-leadership, volition, and personality were measured with validated questionnaires. Psychometric properties of all scales used are listed in Table 1.

*Self-leadership strategies.* — Self-leadership was measured by using the Revised Self-Leadership Questionnaire (RSLQ; Houghton & Neck, 2002). The rationale for selecting the RSLQ in favour for the German self-leadership questionnaire (GSLQ, Müller, 2005, 2006) is due to the fact that the RSLQ-D is based upon self-leadership theory, which the GSLQ is partially not (Andressen & Konradt, 2007). The German version from Andressen and Konradt (2007), labeled RSLQ-D, was used which consists of 27 items in nine subscales. The subscales are as follows: *self-goal setting* (example item: “I establish specific goals for my own performance”), *self-reward* (“When I have successfully completed a task, I often reward myself with something I like”), *self-punishment* (“I tend to be tough on myself in my thinking when I have not done well on a task”), *self-observation* (“I pay attention to how well I’m doing my work”), *self-cueing* (“I use written notes to remind myself of what I need to accomplish”), *focusing thoughts on natural rewards* (“I seek out activities in my work [school] that I enjoy doing”), *visualizing successful performance* (“I visualize myself successfully performing a task before I do it”), *self-talk* (“Sometimes I talk to myself [out loud or in my head] to work through difficult situations”), and *evaluating beliefs and assumptions* (“I think about and evaluate the beliefs and assumptions I hold”). Participants responded by using a 5-point

Likert-type scale from 1 (*not at all accurate*) to 5 (*completely accurate*). In the present study, all but the focusing on natural rewards subscale ( $\alpha = .45$ ) showed sufficient internal consistency reliability ( $\alpha > .70$ ). This resembles prior findings (Andressen & Konradt, 2007).

**Table 1:** Psychometric Properties of Scales to Measure Self-Leadership, Volition, and Personality.

<i>Theoretical mapping</i>	<i>Scales</i>	<i>Number of items</i>	<i>M</i>	<i>SD</i>	<i><math>\alpha</math> (scale)</i>
Self-leadership	Self-goal setting	3	3.71	0.64	0.71
	Visualization of successful performance	3	3.31	0.83	0.81
	Self-talk	3	3.32	0.79	0.77
	Evaluating beliefs and assumptions	3	3.43	0.67	0.72
	Self-observation	3	3.90	0.60	0.71
	Self-cueing	3	3.37	1.05	0.83
	Self-punishment	3	3.76	0.79	0.83
	Focusing on natural rewards	3	3.80	0.57	0.45
	Self-reward	3	3.71	0.96	0.94
Volition	Self-motivation	4	2.56	0.55	0.77
	Self-determination	4	2.75	0.52	0.71
	Self-relaxation	4	2.35	0.58	0.78
	Attention control	4	2.42	0.78	0.92
	Coping with failure	12	4.59	2.73	0.73
	Decision control	12	5.58	3.12	0.77
Personality	Openness	5	4.00	0.67	0.71
	Consciousness	4	3.72	0.62	0.72
	Extraversion	4	3.82	0.82	0.80
	Agreeableness	4	3.09	0.71	0.74
	Neuroticism	4	2.98	0.84	0.75

*Volitional strategies.* — The volitional strategies under investigation were motivation control, emotion control, attention control, self-determination, decision control, and coping with failure. The respective scales were taken from two questionnaires: the Volition Components Inventory (VCI; Kuhl & Fuhrmann, 1998) and the Action Control

Scale (ACS-90; Kuhl, 1994). Consisting of four items each, the subscales of the VCI are as follows: *motivation control* (example item: "I am capable of finding the pleasant aspects of an initially unpleasant activity"), *emotion control* ("I can reduce my tension level if it becomes disturbing"), *attention control* ("When I want to concentrate on something my thoughts often wander"), and *self-determination* ("I feel that most of the time I really want to do the things I do"). Participants responded to all items by using a 4-point Likert-type scale from 1 (*I completely disagree*) to 4 (*I completely agree*). In the present study, internal consistency reliability of all scales was greater than  $\alpha > .70$ . This resembles prior findings (Kuhl & Fuhrmann, 1998; Fröhlich & Kuhl, 2003).

The ACS-90 subscales measuring *decision control* and *coping with failure* consisted of 12 items each. Items describe stressful situations accompanied by two alternative ways of coping with each situation. Participants are asked to select the response that best resembles their personal way of coping with the situation. An example item of the decision-related dimension is, "When there are two things that I really want to do, but I can't do both of them: (a) I quickly begin one thing and forget about the other thing I couldn't do" (high decision control), or (b) "It's not easy for me to put the thing that I couldn't do out of my mind" (low decision control). An example item of the failure-related dimension is, "When I am told that my work has been completely unsatisfactory: (a) I don't let it bother me for too long" (high coping with failure), or (b) "I feel paralyzed" (low coping with failure). In the present study, both decision- and failure-related dimensions showed adequate internal consistency reliability of .77 and .73 respectively. This resembles prior findings (Diefendorff et al., 2000).

*Personality.* — Personality traits were measured with an abridged version of the Big Five inventory (BFI-K; Rammstedt & Oliver, 2005). The BFI-K consists of 21 items that measure personality with five subscales, following the five factor model of personality (McCrae & Costa, 1999). Therein, extraversion (example item: "I see myself as someone who is talkative"), neuroticism ("I see myself as someone who is depressed, blue"), conscientiousness ("I see myself as someone who does a thorough job"), and agreeableness ("I see myself as someone who is helpful and unselfish with others") are measured with four items, whereas openness to experience ("I see myself as someone

who is original, comes up with new ideas”) is measured with five items. Participants responded by using a 5-point Likert-type scale from 1 (not at all true) to 5 (completely true). In the present study, internal consistency reliability of all scales was greater than  $\alpha > .70$ . This resembles prior findings (Rammstedt & Oliver, 2005).

### **2.1.3 Statistical Analyses**

Data were analyzed in three steps. First, an EFA with maximum likelihood method and promax rotation was used to explore whether the two concepts can be differentiated. EFA was performed with half of the total sample to cross-validate results with CFAs. As the primary goal of the study was to investigate to what extent self-leadership and volitional subscales overlap, subscale scores were used for the analysis. To determine the number of factors to be extracted, the minimum average partial was applied (MAP) test (O’Connor, 2000).

Second, the model suggested by the EFA was specified and tested with AMOS 17, which calculated a CFA with the other half of the sample. Two alternative models implied by theoretical considerations regarding relationships between self-leadership and volition were also tested to see if the model identified in the EFA has the best fit.

Third, latent regression analysis was performed to assess whether individual self-leadership and volitional competence are distinct from associated personality traits of the Big Five.

## **2.2 Results**

### **2.2.1 Exploratory Factor Analysis (EFA)**

Statistical prerequisites for conducting an EFA were fulfilled (Bartlett’s test of sphericity,  $\chi^2 = 737.00$ ,  $df = 105$ ,  $p < .01$ ; Kaiser-Meyer-Olkin measure of sampling adequacy = .81). The MAP test suggested a two-factor solution, which explained 43.9% of the total variance. Table 2 shows that Factor 1 mainly encompasses the respective self-leadership subscales, whereas Factor 2 assembles all volitional subscales.



**Table 2:** Factor Structure of Self-Leadership and Volitional Strategies.

<i>Theoretical mapping</i>	<i>Scales</i>	<i>Factor 1</i>	<i>Factor 2</i>	<i>h<sup>2</sup></i>
Self-leadership	Self-goal setting	<b>.77</b>	.06	.61
	Visualization of successful performance	<b>.72</b>	.01	.53
	Self-talk	<b>.72</b>	-.06	.50
	Evaluating beliefs and assumptions	<b>.60</b>	-.07	.35
	Self-observation	<b>.52</b>	.02	.27
	Self-cueing	<b>.49</b>	-.02	.24
	Self-punishment	<b>.43</b>	<b>-.27</b>	.20
	Focusing on natural rewards	<b>.36</b>	<b>.23</b>	.23
	Self-reward	<b>.21</b>	.08	.06
Volition	Self-motivation	.19	<b>.73</b>	.64
	Self-determination	.16	<b>.65</b>	.50
	Self-relaxation	-.14	<b>.61</b>	.34
	Coping with failure	<b>-.29</b>	<b>.58</b>	.33
	Decision control	.10	<b>.49</b>	.27
	Attention control	-.04	<b>.45</b>	.19

$N = 320$ . Extraction method: maximum likelihood. Rotation method: Promax with Kaiser normalization. Highest factor loadings and substantial double loadings are printed in bold.  $h^2$  = communality.

Communalities of subscales, ranging from .06 (self-reward) to .64 (self-motivation), pointed to the possibility that several subscales (e.g., focusing on natural rewards; attention control) are not represented well by the two-factor solution. Consequently, an alternative three-factor solution was tested, which is consistent with the eigenvalue-greater-than-one test. Factor loadings displayed an increase of overlapping variance between factors, resulting in an ambiguous pattern matrix. The added factor could not be interpreted as unique because of multiple double loadings. Therefore, it was concluded that the two-factor solution is more appropriate to examine the extent to which self-leadership and volitional strategies overlap because the pattern matrix reveals more consistent and clearer interpretable factors.

Consistent with the theoretical assumption that there should be empirical overlap between self-leadership and volitional strategies, the pattern matrix shows substantial double loadings between the two factors. Using Kline's (1997) recommended critical value of .20 as a cut off, self-punishment, focusing on natural rewards, and cop-

ing with failure were identified as showing substantial double loadings, indicating overlapping variance between factors. The correlation between the two factors extracted was moderate ( $r = .33$ ), which means that the two factors indeed overlap for a few subscales but also have sufficient specific variance. Thus, EFA suggests self-leadership and volition can be modeled with two correlated factors.

### 2.2.2 Confirmatory Factor Analysis (CFA)

The purpose of the CFA was to cross-validate the EFA model more rigorously and to compare it with a one-factor model and a two-factor model.

Model 1 specified self-leadership and volition as loading on a single latent variable (g-factor), proposing that self-leadership and volition are indistinguishable constructs. Model 2 suggested that self-leadership and volition are distinct (i.e., uncorrelated) constructs, with all self-leadership subscales loading on a latent variable labeled self-leadership and all volitional subscales loading on a latent variable labeled volition. Within the measurement model, double loadings were specified from EFA results (self-punishment, focusing on natural rewards, and coping with failure). Model 3 mirrored Model 2 but included a correlation between the two latent variables. This model is fully in line with the EFA results reported earlier.

Goodness of fit of the models to the data was evaluated by using the chi-square statistic and the comparative fit index (CFI), the standardized root mean square residual (SRMR), and the root mean square of approximation (RMSEA). Because chi-square is affected by violations of multivariate normality in our data (multivariate kurtosis = 12.55, critical ratio = 4.97), a Bollen-Stine bootstrap correction (1,000 bootstrap samples) was performed. Multiple fit indices were used because they provide a more conservative and reliable evaluation of the solution. Following recommendations of Beauducel and Wittmann (2005), acceptable model fit is defined by the following criteria: CFI > .95, SRMR < .8, and RMSEA < 0.06. Note that the CFI tends to incorrectly reject trait models with low loadings, making less strict cutoffs necessary (Beauducel & Wittmann, 2005). To ascertain the best fitting model, additionally Akaike's information criterion (AIC) was estimated. Table 3 summarizes the fit indices for all three models.

**Table 3:** Summary of Fit Indices of Tested CFA Models.

<i>Model</i>	$\chi^2$	<i>df</i>	<i>CFI</i>	<i>SRMR</i>	<i>RMSEA</i>	<i>AIC</i>
					<i>(90% CI)</i>	
1	428.29*	90	.47	.149	.15 (.139-.169)	610.55
2	217.05*	86	.80	.107	.098 (.082-.114)	285.06
3	203.75*	85	.82	.081	.094 (.077-.110)	273.75
Invariance testing Configural	380.76*	70	.84	.075	.062 (.054-.071)	520.76
Measurement weights	397.12*	53	.84	.079	.059 (.051-.068)	503.12
Structural covariances	402.20*	50	.84	.079	.059 (.051-.067)	502.20
Measurement residuals	427.87*	35	.83	.08	.058 (.051-.066)	497.87

\* $p < .001$ . ML = Maximum likelihood. CFI = comparative fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; CI = confidence interval; AIC = Akaike's information criterion.

One double loading found in the EFA was not significant (motivation control on self-leadership), whereas all other loadings were significant. As can be seen in Table 3, all  $\chi^2$  values turned out to be significant ( $p < .001$ ), indicating model misfit. However, the fit indices show that model misfit was not large. Model 3, replicating EFA results, performed best in comparison. The latent correlation was .37. This finding validates results obtained by EFA and indicates that self-leadership and volition share empirical overlap on a scale level, but should be regarded as conceptually distinguishable constructs. To achieve the best power for the next analysis, it was tested whether both subsamples can be combined with a multiple group invariance test (Byrne, 2004). With this approach, four types of invariance were tested: configural (the same measurement and structural model is used in both samples), measurement weights (corresponding loadings are equal in both samples), structural covariance (the covariance between the latent variables is equal), and measurement residual invariance (subscales have equal measurement error). Because all models are nested, they can be compared by using  $\chi^2$  difference tests. Results show that no model significantly dif-

ferred from a model by simply assuming configural invariance (see Table 3). Thus, the samples were merged again.

### 2.2.3 Latent Regression Analyses

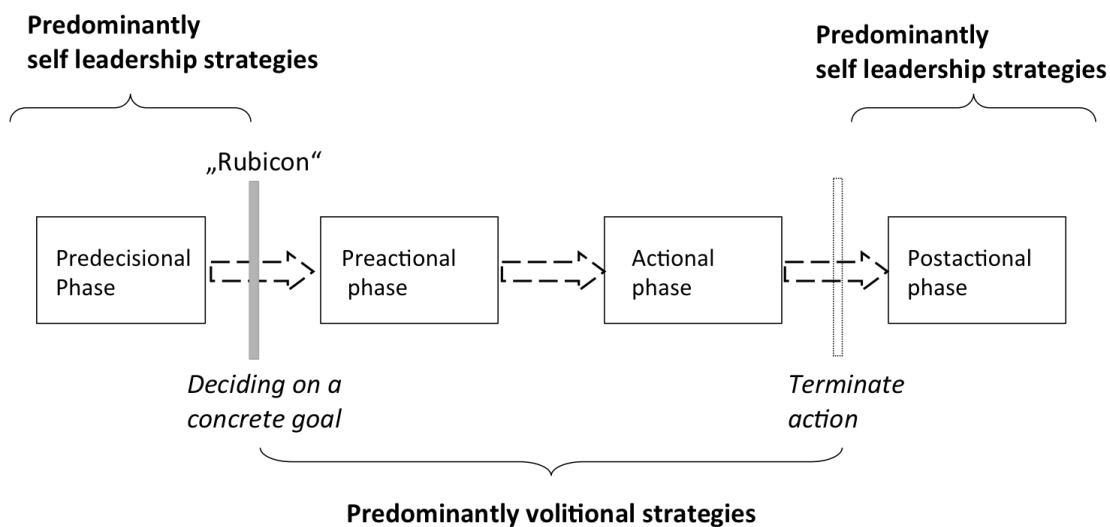
Within the latent regression model, volition and self-leadership were regressed on the Big Five. Results showed that Neuroticism ( $\beta = -.59^{***}$ ), Openness ( $\beta = .19^{***}$ ), and Conscientiousness ( $\beta = .50^{***}$ ) explained a large part of volition ( $R^2 = .64$ ). For self-leadership, the same predictors had significant regression weights, Neuroticism ( $\beta = .16^{**}$ ), Openness ( $\beta = .21^{***}$ ), and Conscientiousness ( $\beta = .44^{***}$ ), which explained a considerably smaller part of self-leadership ( $R^2 = .31$ ). The latent correlation controlling for the Big Five amounted to .61. Clearly, a suppression effect occurred. Thus, self-leadership is primarily related to Conscientiousness, whereas volition is primarily related to emotional stability (reverse pole of Neuroticism). Hence, the results obtained point to self-leadership and volition showing different outside correlations with the Big Five personality traits. Moreover, neither one could fully be explained by the Big Five.

## 2.3 Discussion

The study shows that self-leadership and volition are distinguishable constructs. Results of EFA revealed that subscales can be identified as two correlated factors interpretable as self-leadership and volition. Results of CFA confirm that a two-factor model fits best. Latent regression analyses reveal differential correlation patterns with the Big Five personality traits. In this regard, conscientiousness accounted most for self-leadership, whereas emotional stability accounted most for volition. In summary, this study provides empirical evidence that self-leadership and volition are distinguishable, albeit moderately correlated concepts. The magnitude of empirical overlap between self-leadership and volitional strategies as measured is smaller than expected.

This result can be explained by the fact that self-leadership and volitional strategies serve different functions within goal attainment. Whereas self-leadership strategies assist the motivational processes of goal setting and goal evaluation, volitional strategies support primarily the goal striving process. This result is in line with

the theory of volitional functioning assuming that all volitional strategies share two similar functions: First, they are beneficial for overcoming barriers or difficulties, and second, they are beneficial for ensuring goal striving processes. Thus the results point to the possibility that the two concepts should be portrayed as supplemental to each other. For example, self-leadership strategies are primarily beneficial for creating goal intention, whereas volitional strategies ensure that this goal intention is transformed into behavior, particularly when difficulties appear. Thus, results suggest to soften the assumption that self-leadership comprises a unique construct (Neck & Houghton, 2006) in that self-leadership is supplemental to volition. Supplemental aspects of self-leadership compared with volition become evident when both concepts are regarded from a meta-perspective on action phases, e.g., in light of the Rubicon model (Beckmann & Gollwitzer, 1987; Heckhausen & Gollwitzer, 1987).



**Figure 5:** Interaction of self-leadership and volitional strategies within the goal attainment process using the Rubicon model of action phases.

Volitional strategies may be used predominantly when goal pursuit becomes demanding, which is likely in the preactional and the actional phases (Gollwitzer, 1991). For example, the volitional strategy *decision control* supports the end of planning activities and the commitment to begin acting when possible action alternatives are numerous and the risk to ruminate is high. *Attention control* and *coping with fail-*

ures are needed during the actional phase to focus on a task and to cope with unexpected defeats and difficulties. In contrast, self-leadership strategies may be used predominantly when goals are set and evaluated, which takes place in the predecisional and the postactional phases. For example, *focusing on natural rewards* or *visualization of successful performance* both facilitate the decision-making process and enhance the motivation to set a goal. Similarly, self-leadership strategies such as *self-reward* or the *evaluation of beliefs and assumptions* both facilitate evaluation of successfulness of goal attainment.

The assumption that self-leadership and volitional strategies can be used in different action phases should not tempt one, however, to constrain the use of self-leadership or volitional strategies to these specific phases exclusively. Either self-leadership (e.g., focusing on natural rewards) or volitional strategies (e.g., motivation control) can be used to compensate for insufficient motivation and to facilitate accomplishment of necessary but unpleasant tasks, as shown through a moderate correlation (.33) between constructs.

However, low communalities of subscales (e.g., self-reward or attention control) indicate that several subscales are represented inadequately through the corresponding latent factor. A possible explanation for self-leadership subscales might be that they are not deduced from a consistent theoretical framework.

A possible explanation for volitional subscales might be that existing measures mix volitional abilities and volitional strategies. Volitional abilities indicate whether a person is able to use volition when necessary. For example, attention control is captured as completely reversed with items such as “When I want to concentrate on something my thoughts often wander.” The subscale assesses whether an individual is able to control attention or not. Volitional strategies indicate what a person does to apply volition. For example, motivational control is captured with items such as “When I am performing a difficult task, I intentionally focus on positive aspects.” The subscale assesses a strategy because ready-to-use advice on how to enhance the attractiveness of performed actions can be inferred.

## Conclusion and prospective steps

Showing that self-leadership is conceptually distinguishable from volition is paramount for clarifying its distinctive nature. Thus it can be concluded that the concept of self-leadership may have potential for further elaboration beyond organizational psychology, particularly in applied domains such as clinical or sports psychology, because it provides individuals with ready-to-use strategies to guide behavior.

As discussed demonstrating that on a conceptual level self-leadership is worthy of its own standing compared to volition is a prerequisite to ensure beneficial transfer from self-leadership to the domain of elite sports. However, partly results (e.g., low commonality of self-leadership subscales) point to conceptual and measurement weaknesses within the existing self-leadership concept. Furthermore several conceptual weaknesses of self-leadership (e.g. inconsistent conceptual development; lack of coherent theoretical framework) have been addressed (*see 1.4.1 for details*).

For this reason self-leadership must be complemented not just on theoretical grounds, but also on empirical grounds, before being transferred to elite sports. To this end self-leadership was conceptually refined and expanded in detail, both theoretically and empirically, by the following qualitative interview study. This includes two steps:

In the first step, self-leadership was refined using the Rubicon model (Heckhausen, 1987b) to eliminate current conceptual weaknesses. In the second step, semi-structured interviews were conducted with successful athletes from various individual sports (e.g., golf, alpine skiing, triathlon). The interviews were used to identify successfully employed self-leading strategies. The results provide an empirical pool of strategies that specify self-leadership ability taking into account sport specific requirements (e.g. coping with unexpected defeats). The application of this explorative methodology follows recommendations by Kellmann, Beckmann and Kopczyński (2006) who refer to the specific internal and external framework conditions of sport, and who recommend the development of sport-specific theory, diagnostics and intervention.

### 3 Understanding Self-Leadership in Elite Athletes – A Qualitative Approach

The present study serves three objectives: First to improve the current conceptualization of self-leadership, second to set up a consistent framework that can be used to examine self-leadership in elite sports and third to enlarge the empirical foundation of self-leadership research by conducting interviews with elite athletes. More specifically semi-structured interviews with successful athletes, including world champions and Olympic medalists, in individual sports were conducted to identify empirically a set of self-leading strategies that can be used in sport psychology counseling to support upcoming athletes.

#### **Revising Self-Leadership from an Action Perspective**

Self-leadership was refined from an action theory perspective using the Rubicon model of action phases (Heckhausen, 1987b). As already discussed within the theoretical framework of this thesis the Rubicon model divides human actions on a horizontal path into four phases: deliberating, planning, acting, and evaluating. However, recent research in motivational psychology suggests that individuals are likely to struggle in the execution of an action, even though this action is implied by a chosen goal (Achtziger, Gollwitzer, & Sheeran, 2008; Bayer, Gollwitzer, & Achtziger, 2010). Because this situation is of special interest in sports (e.g., having the goal to win an international competition but skipping practice to meet friends), action initiation was treated as a separate fifth phase in this study. The Rubicon model describes action



requirements for each of the action phases (e.g., establishing preferences, planning). Those requirements were taken as a starting point and further expanded by requirements that are based on more recent research stimulated by the Rubicon model (e.g., coping with failure, compensating insufficient motivation; Brandstätter, 2003; Kehr, 2004; Kuhl, 2000). Requirements for self-leadership in elite sports can be described by aligning specific action requirements with five consecutive action phases: Within the *deliberating* phase, one has to establish clear preferences, commit to them, and form a goal intention. In addition, one must check whether the goal intention is concordant with one's personal needs and preferences. Within the *planning* phase, multiple actions have to be planned because most goal states (e.g., to win a competition) cannot be achieved in a single step. The *action initiation* phase includes creating a positive attitude towards the action through self-motivation and emotion control. The *acting* phase subsumes the requirements of staying focused and being persistent in goal striving, especially when confronted with setbacks. And finally, the *evaluation* phase subsumes the three requirements of goal evaluation, coping with failure, and goal detachment. In summary, in terms of the Rubicon model, athletes must translate their wishes (e.g., to become an Olympic champion) into plans (performing extra training sessions, changing priorities in life), implement corresponding actions (e.g., going running after each practice session), shield themselves from alternative tendencies that pop up (e.g., going to a party instead of practicing), and finally, evaluate the successfulness of goal attainment (e.g., using a practice log to keep track of running times).

The Rubicon model can be used to describe what needs to be done (requirements) to lead to goals such as elite performance in sports, whereas self-leadership, describes how these goals can be achieved through the intentional use of motivational and volitional strategies (skills). The Rubicon model furthermore allows one to combine the concept of self-leadership with existing research on volition. It can cope with three aspects of the current conceptual weaknesses of the self-leadership concept: First, the selection process of proposed self-leading strategies can be based on a consistent and empirically sound framework. Second, theoretically deduced action requirements define inclusion and exclusion criteria for possible self-leading strategies. Third, separating behavioral dispositions, specifying what a person is able to do (e.g.,

self-motivation) from corresponding strategies, and specifying what a person really does (e.g., self-reward), eliminates the mixing of dispositions and strategies.

### 3.1 Methods

Whereas prior research on goal-oriented behavior within the field of sport psychology has focused predominantly on the development and use of questionnaires with closed answering scales (e.g., Wenhold, Elbe, & Beckmann, 2009), the present study applied a qualitative research method to describe and understand self-leadership in elite athletes. This method enhances previous lines of research in at least three ways:

- (1) Prior unknown strategies used by the athletes can be identified. Identifying these strategies is not possible in closed-item questionnaires in which athletes respond only to a fixed set of strategies.
- (2) Self-leadership strategies are empirically assessed in the same field in which they are applied. Moreover, by interviewing highly successful athletes, it is more likely to find those strategies that work best in the field of elite sports. In contrast, strategies proposed in item-response questionnaires are primarily theoretically deduced and their ecological validity may appear questionable.
- (3) Interviewing elite athletes enables an in-depth examination of the used strategies. This analysis includes specifying what a person really does (e.g., setting goals, engaging in self-talk). Most of the existing self-report measures in sport psychology indicate only whether or not an athlete judges himself or herself successful in applying certain strategies. To derive a set of self-leadership strategies that can be used in sport psychology counseling, it is crucial to generate a set of strategies that are graspable and can be taught to younger athletes.

#### 3.1.1 Participants

Participants were 43 elite athletes (24 male, 19 female) from 14 different sports (golf, kayaking, gymnastics, freestyle skiing, climbing, windsurfing, judo, bad-

minton, taekwondo, fencing, snowboarding, shooting, speed skating, and triathlon), with an age range from 16 to 44 years ( $M = 25.2$ ,  $SD = 5.4$ ). Thirty-four of them were currently participating in competitions, whereas nine had already stopped competing. All of them had been nominated for an extended national team membership for at least one year of their career, and 27 participants were current national team members. Nineteen participants had achieved outstanding international success (including World and European champions and Olympic medalists) and 10 had achieved major national success (national champion titles).

### 3.1.2 Interview Guide

Interviews followed an interview guide.<sup>8</sup> The guide was developed from the revised conceptualization of self-leadership as described earlier. Each interview section was structured in the same way: First, scenarios describing hypothetical situations relevant for the self-leadership requirements of the respective phase were given (Watson & Cox, 1996). In accordance with the requirements of self-leadership in elite sports, eleven scenarios were developed. The wording of the scenario was open to simplify the adaptation of the scenario to the participant's experience and to stimulate the participant's knowledge and experiences. All scenarios were approximately equal in length and setup. For example, a scenario aligned to the deliberation phase for assessing a given intention had the following format:

*Most of the time you may have numerous intentions. Sometimes these intentions contradict (e.g., practice more vs. meeting with friends) and it is not possible to pursue both. In case you are not sure which intention is the most valuable, you start to deliberate and don't know how to decide.*

Second, each scenario was followed by a screening question. Participants were asked whether or not they had already experienced the scenario described. If so, they were asked to recall this situation as vividly as possible in order to recall the experience and to remember self-leading strategies that they had successfully applied in the

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<sup>8</sup> A copy of the interview guide is attached within the Appendix.

past. If they had not experienced the scenario, participants were asked to remember self-leading strategies that they had applied to avoid this situation.

Third, participants were asked which self-leading strategies they would generally regard as beneficial to cope well with the corresponding scenario (e.g., “Which strategies have you already used successfully to prioritize different intentions?”). In addition, they were asked to give advice about helpful self-leading strategies to another athlete (e.g., “Imagine an athlete who doesn’t know how to prioritize different intentions at all. Which strategies would you recommend to assist him or her?”).

### **3.1.3 Procedure and Data Collection**

Prior to the study, pilot interviews not included in the final sample were done to improve the interview guide, mainly by improving the comprehensibility of scenarios and corresponding questions. The interviewer was trained in qualitative research and interview techniques, as outlined by Rubin and Rubin (2005). Special emphasis was placed on avoiding leading questions and fostering neutrality and rapport throughout the interview.

All interviews were conducted face to face. One investigator interviewed all participants at the investigator’s office or in an adequate room at the training site of the athlete. Interviews lasted from 45 to 90 min. Social desirability was reduced by in-advance briefing of all participants about the goals of the investigation. The briefing highlighted that the study aimed to gather insights about the self-leading strategies that the athletes had intuitively applied in the past. Participants were informed that the study did not aim to assess their current performance level or differentiate between “right or wrong” strategies. All subjects participated voluntarily and signed a letter of consent to participate. They agreed to the recording of their interview and were informed that all information would be used exclusively for research purposes and recorded in such a manner that participants cannot be identified, directly or through identifiers linked to the subject. Therefore, approval by an institutional ethics board was not applicable.

The interviewer aimed to enhance credibility and authenticity of the participants’ responses. To do so, the interviewer listened to the athlete actively, asked for

details and clarification, and moved the conversation forward by building on what each person had to share. Although the investigator was neutral regarding the content of the interview, he cared about the willingness of the participants to share their perceptions and experiences. Words of support helped the participants to feel that their information was valuable, to create a positive context, and to motivate participants to express their views.

### **3.1.4 Data Analyses**

The full verbatim transcription of 43 recorded interviews resulted in 650 pages of text. Using MAXQDA software (2007) for qualitative analysis, a four-step hierarchical content analysis (Gould, Jackson, & Finch, 1993; Patton, 1990) was performed as follows:

- (1) For each interview, two expert raters with several years of experience in sport psychology counseling identified participants' quotes. A quote was defined as describing an intuitively applied self-leading strategy to cope with motivational and volitional requirements (see Interview Guide subsection). Quotes varied in length from several words (e.g., "setting goals") to a sentence (e.g., "I anticipate how good it feels when practicing is done").
- (2) Following the guidelines by Coté and Salmela (1994), similar self-leading strategies were identified and assigned to higher order categories (e.g., goal setting, self-knowledge). Category formation was based on findings from sport and motivational psychology or directly induced from participants' quotes (Coté & Salmela, 1994; Coté, Salmela, Baria, & Russell, 1993). Data were analyzed through an iterative process between the interviewer and coders to develop an inductive category system, with the participants' quotes on the lowest level of abstraction and the five general self-leadership dimensions on the highest level. Identified categories were validated communicatively between the two coders and the interviewer, which is regarded as the method of choice to attain reliability and validity in qualitative data analyses (Morse, Barrett, Mayan, Olson, & Spiers, 2002). The superordinate goal was to reach triangular consensus between coders and interviewer about category formation.

- (3) Two independent raters reanalyzed the interview transcripts using the inductive category system. Thus, participants who intuitively applied self-leading strategies (see Step 1) were aligned to higher order categories (see Step 2). To evaluate the quality of the category system, interrater agreement was assessed using Cohen's kappa.
- (4) Finally, to validate results and to analyze whether the use of self-leading strategies differs within the course of action, the identified strategies were quantitatively<sup>9</sup> mapped alongside the action phases of the Rubicon model.

## 3.2 Results

Results are presented in two sections. The first section describes self-leadership ability in individual sports from a content perspective. The section answers the question "What is it?" and specifies the sport-specific competencies and corresponding strategies of the construct. The second section describes self-leadership ability in individual sports from a functional perspective. The section answers the question "How do successful athletes lead themselves?".

### 3.2.1 Self-Leadership in Individual Sports: What Is It?

Data aggregation resulted in the development of an inductive category system. This system<sup>10</sup> comprised five levels. A representative quote and a corresponding self-leading strategy formed the first and second levels. Higher order themes and general competencies representing results of data aggregation formed the third and fourth levels. The development of these levels resulted in a precise description of self-leadership dimensions on the fifth and highest level of abstraction (see Table 4 for details). On the highest level of data aggregation, five dimensions of self-leadership were found: motivational skills, volitional skills, self-regulation skills, resource managing skills, and metacognitive skills. In the following subsections, these five dimensions of

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<sup>9</sup> Numbers assigned serve as quantitative indicators to facilitate data interpretation about the use of self-leading strategies within stages of action.

<sup>10</sup> A copy of the category system is attached within the Appendix.

self-leadership are described in more detail and corresponding interview quotations for illustration are provided.

### **Motivational skills**

Motivational skills were used to energize and guide behavior. Participants named 71 different strategies that they had used (e.g., setting milestones, focusing on personal strength, visualizing successful performance). As an example for all other dimensions, Table 4 illustrates how those strategies were inductively organized into two general competencies labeled goal setting and self-motivation.

**Table 4:** Inductively Developed Category System Representing the Motivational Skills Dimension of Self-Leadership.

<b>Representative quote</b>	<b>Representative strategy</b>	<b>First-order theme</b>	<b>Competence</b>
<i>"I think from competition to competition"</i>	Setting milestones	Goal definition	
<i>"Establish top priorities"</i>	Establishing a hierarchy of goals	Goal evaluation	Goal setting
<i>"To close my eyes and visualize the goal I have set"</i>	Visualizing goals and visions clearly	Visualization of goals	
<i>"Writing down what I want to achieve"</i>	Signing goals set (self-agreement)	Goal commitment	
<i>"Reward myself with things or activities I like"</i>	Self-reward	Behavioral reinforcement	
<i>"I tell myself that I can do it"</i>	Engaging in positive self-talk	Cognitive reinforcement	Self-motivation
<i>"Enjoy the atmosphere at competition site"</i>	Focusing on natural rewards	Situational reinforcement	
<i>"Belief that I am capable of doing this"</i>	Believing in own ability to succeed in reaching a goal	Self-efficacy	

Regarding the general competence of goal setting, 28 strategies were summarized into four first-order themes labeled goal definition, goal evaluation, visualization of goals, and goal commitment. Goal definition included strategies such as setting specific and realistic goals or setting milestones to divide a desired end state (e.g., winning

an international competition) into manageable action steps. One athlete described such strategies as follows:

*“Basically the goal is set from highlights within the season, such as the European Championships. But at the beginning of the season, this goal seems to be way ahead. So I think from competition to competition in order to be prepared.”*

Goal evaluation included strategies such as establishing a hierarchy of goals or evaluating the desirability and feasibility of goals. Here athletes indicated that they analyze costs and benefits related to goal attainment. To do this, one participant proposed:

*“I make a table with two columns. In the left column, I note positive aspects of the goal. And in the right column, I note negative aspects of the goal.”*

Lastly, participants clearly visualized the goals that they set and they intentionally strengthened individual goal commitment. Strategies included writing goals down or recognizing efforts already made for goal attainment:

*“I established a personal hierarchy of goals and communicated to friends and coaches that becoming a national team member is currently my top priority.”*

Concerning self-motivation, 43 strategies were summarized into four first-order themes labeled behavioral reinforcement, cognitive reinforcement, situational reinforcement, and self-efficacy. Reinforcement strategies are used to compensate insufficient motivation for goal achievement. Here athletes named behavioral strategies (e.g., self-reward, trying something new in practice), cognitive strategies (e.g., focusing on positive aspects of the task, remembering success), and situational strategies (e.g., enjoying the atmosphere at the competition site, watching other athletes competing). Clearly, self-efficacy, defined as belief in one’s own ability to succeed in reaching a specific goal (Bandura, 1977), did not represent a strategy. However, the athletes



named strategies that they used successfully to strengthen self-efficacy beliefs (e.g., recognizing progress, using positive body feedback). One athlete described his strategy to increase self-efficacy this way:

*“I focus on my strengths, remembering that they helped me to cope with a similar situation in the past.”*

### **Volitional skills**

Volitional skills were used to transfer a goal intention (“I want to engage regularly in endurance training”) into goal-directed behavior (“engaging in endurance training twice a week”). In the data set, participants named 33 strategies used to support goal-striving processes (e.g., building implementation intentions, setting assignments for goal achievement, making appointments). These strategies were inductively organized into two general competencies: planning and self-control.

*Planning* (18 strategies) summarizes two first-order themes: define a roadmap for goal achievement and allocate time and resources. To define a roadmap for goal achievement, participants proposed contrasting their current situation with their desired situation. Other strategies ranged from quite simple (e.g., defining a clear kickoff point) to relatively complex planning activities (e.g., adjustment of practice to competition highlights). Partial overlap to the aforementioned strategy of milestone setting became evident; for example, one participant remarked that “breaking up a complex problem into concrete assignments” would also be helpful. The theme of allocating time and resources included strategies such as using a calendar to note private and sport-related appointments or using to-do lists to keep track of daily duties. Mainly, these strategies could be summarized under the heading of time management (Macan, 1996):

*“I put up a big calendar. At first I entered seasonal highlights like the tournaments of the master series. Secondly, I entered private appointments which were already fixed and unchangeable like the wedding of my*

*brother. And third I blocked specific time periods for high-intensity training in order to prepare for the main events."*

*Self-control* (15 strategies) summarizes the two first-order themes of self-discipline and self and social pressure. Competence definition and deduction of corresponding first-order themes was based on Kuhl's conceptualization of self-control (Kuhl, 2000). Accordingly, all strategies were used to protect a set goal from competing intentions and personal needs. Self-discipline was less strategy based than the previously mentioned competencies. Most important, participants noticed that "being persistent" is the essential characteristic of that theme. Therefore, a basic facet of that competence was more of an attitude than a strategy, as highlighted with the following quote:

*"Abandonment of practice activities earlier than planned is just not an option. Whenever you start something, you need to finish it, regardless of whether you like it or not."*

However, participants mentioned several strategies to foster self-discipline (e.g., defining rules and regulations in advance, remembering goals set). Strategies aligned to the theme of self-discipline and social pressure were designed to increase the urge to act towards desired goal states. For example, this included visualizing negative consequences resulting from not performing an intended action or intentionally thinking of strong opponents.

### ***Self-regulation skills***

Self-regulation skills were used to regulate personal states in order to compete at maximum capacity. Participants named 77 strategies successfully used to regulate personal states (e.g., blocking negative thoughts, sticking to a game plan, focusing attention, using mental imagery of intended movements and actions). These strategies were organized into five general competencies of appropriate management of emotions, thoughts, behavior, attention, and arousal.

*Emotion management* (23 strategies) summarizes two first-order themes: acceptance of negative emotions and emotion control. Acceptance of negative emotions included strategies such as separating emotions from the task. In addition, the following quote shows that some athletes try to recognize negative affective states rather than to suppress them:

*“Frustration is part of the game. Way more often you lose as you win. You can’t change it, so you have to learn how to deal with it. I tell myself that negative emotions are just part of the game. It’s the way it is and it is better to accept it, than trying to control it.”*

Emotion control included strategies to control or reduce negative affective states such as intentionally taking a break to calm down, expressing negative emotions, or refocusing on the task. Partial overlap with thought-management competence exists (see the following description) because participants also named cognitive strategies (e.g., rationalizing negative emotions) as a method of controlling emotions.

*Thought management* (35 strategies) summarizes three first-order themes: cognitive restructuring, controlling negative thoughts, and mental imagery. Cognitive restructuring changed dysfunctional thoughts and beliefs (e.g., “If I fail, I will lose the respect of my coach”) into functional thinking patterns (e.g., “My coach recognizes my effort. So if I fail, I am out of the competition but still respected as a person”). Participants named a wide variety of strategies, including rationalization or reframing of negative thoughts. Both strategies are reflected within the following quote:

*“Checking the draw and noticing that the next opponent is strong isn’t always a bad thing. At the same time, it is a chance to prove my abilities and it is a kind of justification for working hard in practice. And if I try my best and it’s not enough, it is not the end of world, it is just losing in competition.”*

In accordance with basic principles of rational emotive behavior therapy (Ellis, 1977), negative thoughts were tolerated but challenged and substituted for more functional thinking. In contrast, strategies to control negative thoughts were targeted at blocking negative thinking. Predominantly imaginative strategies were proposed, such as visualizing a stop sign or imagining a worry box to lock in all negative thoughts. Mental imagery strategies aimed to vividly reproduce former experiences, including relevant movements and emotional states (Holmes & Collins, 2001).

*Behavioral management* (five strategies) summarizes strategies that aimed to maximize performance by organizing behavior into a comprehensive plan. Behavioral management is reflected in the following quote:

*“On race days I pay attention that my activities follow an exact order. This includes having breakfast early to reach the competition site before the crowd. At the competition site, I watch out for a quiet place to warm up and concentrate. Right before the race, I go back to the competition site to hear the crowd to get ready to race.”*

Again, partial overlap with the strategies mentioned earlier exists because pre-performance routines often included a combination of physical and mental strategies (e.g., warming up in conjunction with visualization and positive self-talk).

*Attention management* (six strategies) is equivalent to the first-order theme of concentration, which refers to the ability to focus on performance-related cues (e.g., movement, task) while at the same time blocking distracting cues (e.g., opponents, noise; Weinberg & Gould, 2007). Strategies included avoiding social comparisons within competition or refocusing attention on the next movement after a mishit.

*Arousal management* (eight strategies) is equivalent to the first-order theme of arousal modulation. Strategies proposed included efforts to modify overarousal through applying relaxation techniques such as progressive muscle relaxation, as well as efforts to modify underarousal by watching other players competing or listening to

favorite music. Within these psyching-up strategies (Suinn, 1987), participants also named vivid visualization of success, indicating partial overlap with the previously described strategies of mental imagery.

### ***Resource managing skills***

Resource managing skills allowed the individual to identify and use internal and external resources to compete at maximum capacity. Participants named 31 strategies to manage internal and external resources effectively (e.g., taking a timeout to recover, meeting with people outside the field of sports, asking for feedback), which were inductively organized into two general competencies labeled environmental management and recovery management.

*Environmental management* (17 strategies) summarizes two first-order themes: using external support and creating a performance-supportive environment. Intentionally asking for external support or communicating about problems (e.g., failures and setbacks) with the coach or other staff members (e.g., a sport psychologist) was a dominant strategy named by athletes to cope with a wide variety of motivational and volitional requirements. To arrange an environment in which to compete at maximum capacity, participants named strategies such as intentionally selecting practice partners or communicating the requirements of elite sports (e.g., practicing several hours each day) to friends outside of their sport. This strategy aimed to establish understanding about what is required to participate in elite sports. For example, one participant mentioned this strategy to solve a goal conflict as follows:

*“Invitations on Friday night are the worst because competition usually starts early Saturday morning. So it’s sometimes hard to decline, but all of my friends know that my dream is to compete at the Olympics, so they understand that skiing is currently top priority.”*

*Recovery management* (14 strategies) summarizes two first-order themes: taking time off outside of sports and satisfying needs outside of sports. The definition of competence and the deduction of corresponding first-order themes was based on a

conceptualization of recovery as a proactive self-initiated engagement in recovery activities (Kellmann, 2002). Accordingly, all strategies aligned to first-order themes can be used to reestablish psychological and physiological resources. Participants suggested intentionally taking a break or relaxing as frequently used strategies to recover. In addition, they named purposeful actions (e.g., keeping schedules flexible, meeting with friends, going to a party) to satisfy needs outside of sports from time to time. The underlying idea of intentionally using these strategies is to have fun to maintain motivation. This idea is reflected in the following quote:

*“Of course practicing is essential, but it is important to keep some buffer time for private purposes such as meeting with friends. If it’s all about practice, it’s hard to keep up motivation in the long run. From time to time, you need to recognize that there is a life outside of sports where it’s more about having fun than having success (...) This helps me a lot to stay motivated.”*

### **Metacognitive skills**

Metacognitive skills were used to intentionally engage in introspection and retrospection to understand one’s thoughts, feelings, and behaviors. Participants named 32 strategies used to effectively engage in self-monitoring (e.g., reflect on goals set, making notes for practice and competition, using benchmarks to evaluate performance). These strategies were organized into two general competencies: self-clarification and self-evaluation.

*Self-clarification* (10 strategies) summarizes the first-order themes self-awareness and self-knowledge. Self-awareness refers to the athlete’s ability to reconcile current and future situations in accordance with personal preferences. This is in accordance with a recent conceptualization of motivational competence (Rheinberg & Engeser, in press). Self-knowledge was less strategy based than the previously mentioned competencies. It is conceptualized as having mature insights into personal skills, strengths, and weaknesses. Trying to make self-congruent decisions about set goals is reflected in the following quote:

*“Of course the knowledge and advice of my coach is essential to set the right goals. But on the other hand, it is necessary to keep decision autonomy (...). I evaluate carefully if I feel comfortable with the goal set and ask myself: Do I really believe in it, or is it primarily my coach who believes in it?”*

*Self-evaluation* (22 strategies) summarizes the first-order themes performance monitoring and performance evaluation. Performance monitoring included strategies to monitor performance status and goal progress. The participants named, for instance, using a practice log and writing down positive and negative aspects after a competition as a behavioral strategy. Performance evaluation included imaginative (e.g., mentally rehearsing performance in competition), cognitive (e.g., separating performance from results), and behavioral (e.g., specifying goals in measurable terms or using them as a landmark) strategies. In addition, performance was assessed by using strategies of social comparison (e.g., using opponent performance as a benchmark for own performance). One athlete summarized this notion relative to these strategies in the following way:

*“Right away I have a certain feeling telling me how I did. But I noticed that this isn’t always reliable. So I started to compare my performance with performances from opponents within my performance range. In addition, I ask my coach how he rates my performance to gain another perspective.”*

### **3.2.2 Self-leadership in Individual Sports: How Do Successful Athletes Lead Themselves?**

Two independent raters assigned participants’ quotes to 13 different categories representing general competencies of self-leadership. Alignment of participants’ quotes with general competencies of self-leadership ensures sufficient proximity to primary data and prevents raters from information overload. Interrater reliability between the two raters was  $\kappa = .62$ . Taking into account that raters had to map quotes to relatively complex categories (e.g., self-motivation, self-clarification), this result indicates good reliability of the category system (Wirtz & Caspar, 2002). In cases of dis-

agreement between the raters, the quotes were presented to a third rater for an informed consent decision.

To analyze the use of self-leadership strategies within the course of action, all strategies were quantitatively mapped to the phases of the Rubicon model (Table 5). To clarify the results, self-leadership competencies (e.g., goal setting, self-motivation) were aggregated again to dimensions (e.g., motivational skills).

**Table 5:** Percentages and absolute number (*n*) of Self-Leadership dimensions within action phases.

<b>Self-leadership dimension</b>	<b>Action phase</b>				
	<i>Deliberating</i>	<i>Planning</i>	<i>Action initiation</i>	<i>Acting</i>	<i>Evaluating</i>
Motivational skills	43% ( <i>n</i> = 96)	37% ( <i>n</i> = 41)	30% ( <i>n</i> = 85)	36% ( <i>n</i> = 75)	24% ( <i>n</i> = 55)
Volitional skills	12% ( <i>n</i> = 27)	21% ( <i>n</i> = 23)	16% ( <i>n</i> = 45)	12% ( <i>n</i> = 25)	4% ( <i>n</i> = 9)
Self-regulation skills	4% ( <i>n</i> = 10)	4% ( <i>n</i> = 4)	29% ( <i>n</i> = 82)	31% ( <i>n</i> = 64)	21% ( <i>n</i> = 49)
Resource managing skills	24% ( <i>n</i> = 54)	21% ( <i>n</i> = 23)	16% ( <i>n</i> = 45)	16% ( <i>n</i> = 33)	18% ( <i>n</i> = 41)
Metacognitive skills	17% ( <i>n</i> = 38)	19% ( <i>n</i> = 21)	8% ( <i>n</i> = 22)	6% ( <i>n</i> = 12)	32% ( <i>n</i> = 74)
Sum of strategies used	100% ( <i>n</i> =225)	100% ( <i>n</i> = 112)	100% ( <i>n</i> = 279)	100% ( <i>n</i> = 209)	100% ( <i>n</i> = 228)

Table 5 shows the percentages and absolute number (*n*) of strategies used for every action phase. The proportion is calculated on the basis of frequencies of the self-leading strategies used divided by the sum of strategies used in each action phase.

Motivational skills were frequently used throughout the action process. Corresponding behavioral and cognitive strategies (e.g., self-reward, visualizing success) seem to be generally effective in fostering motivation and aligning behavior with sport-specific goals.

Similarly, volitional skills were used throughout the action process except within the evaluation phase. Two findings resulted from analysis of frequencies compared with motivational skills: First, participants named fewer volitional strategies,



which aimed to align behavior to set goals, compared with motivational strategies, which aimed to energize behavior towards goals. Second, compared with motivational strategies, volitional strategies were more clearly linked to specific action phases. This becomes particularly evident within the action initiation phase.

Self-regulation skills seemed to be most relevant after a goal was set. Here, self-regulation skills supported the initiation of goal-directed actions, ensured that an athlete stayed focused on implied actions, and assisted in goal evaluation.

Resource managing skills were most frequently used within the deliberation phase. However, a balanced frequency pattern suggests that corresponding strategies (e.g., using external support) were generally effective in coping with most of the requirements within the entire action process.

In contrast, metacognitive skills were more selectively used primarily within the evaluation phase. Thus, it is suggested that self-monitoring skills are most frequently used if an individual is confronted with making a choice regarding goal pursuit, planning, and goal evaluation. If choices are made (e.g., because the goal is set or performance evaluation is fixed), self-monitoring skills are less frequently used to support the action process.

In summary, results indicate that the use of self-leadership strategies differs within the course of action. Motivational and resource managing skills turned out to be generally effective within the entire action process, whereas self-regulation and metacognitive skills were more dominantly used within the acting and the evaluating phases.

### 3.3 Discussion

The present study introduces a theory-based (Rubicon model of action phases; Heckhausen, 1987b) modified concept of self-leadership to elite sports. By interviewing highly successful athletes, an empirically generated set of self-leading strategies was identified and aggregated into an inductive category system. On the highest level of aggregation, five general dimensions of self-leading strategies were defined: motivational skills, volitional skills, self-regulation skills, resource managing skills, and

metacognitive skills. The distribution of self-leading strategies across action phases indicated that the use of these strategies differs within the course of action.

The findings extend previous research on self-leadership in several ways: First, self-leadership was theoretically modified and related to established concepts in motivational psychology (cf. Heiss, Ziegler, Engbert, Gröpel & Brand, 2010). Second, self-leadership requirements for elite sports and corresponding self-leading strategies of elite athletes were specified, representing the first empirically collected sample of self-leading strategies. Third, the development of a theoretically and empirically sound structure of self-leadership validates and extends prior research on the construct. Fourth, data allows inferences to be made regarding when each self-leading strategy is used (i.e., at which phase of the action process) and which type of strategy is used. Fifth, to transfer self-leadership to sports, a unique sample of successful elite athletes was interviewed. This is important because the strategies presented are not suggestions of what could possibly be done; rather, they illustrate what highly successful athletes really do to stay focused and motivated. This qualifies the results to be directly used in sport psychology counseling, as well as in educational programs.

The present study introduces a modified concept of self-leadership on the basis of self-leadership as developed in organizational psychology (Neck & Houghton, 2006). In particular, the present findings highlight the important distinction between a person's ability to do something (e.g., self-motivation) and a strategy, a specific skill a person is able to use (e.g., recognizing natural rewarding aspects). This distinction was ignored in the original concept of self-leadership, resulting in mixed behavioral dispositions (competencies) and cognitive strategies (skills). The relevance of a clear focus on strategies becomes evident in sport psychology counseling: Whereas a strategy can be practically taught and changed by coaching an athlete, an ability cannot be as easily transferred into a psychological intervention.

Findings represent a set of ready-to-use self-leading strategies. It is evident that some of the categories identified resemble those postulated in organizational psychology. This is true, for instance, for nonspecific strategies such as self-reward, visualization of successful performance, and goal setting. Other strategies, such as self-observation and self-cueing, can be integrated into the proposed dimensions of metacognitive or volitional skills. However, the qualitative and empirical approach of the

present study led to a far more elaborate and larger set of self-leading strategies. A large subset of the strategies identified considerably extends the scope of self-leadership within organizational psychology. Findings suggest that self-leadership should be expanded to strategies that use external support and resources (e.g., asking for feedback). These strategies were not in scope of the original concept of self-leadership. One could speculate about whether this was due to the limitation of the behavior under control of the individual or to differences in the settings of elite sports and business.

Moreover, self-leadership as defined in organizational psychology represents a normative concept in which individuals are given prescriptions (e.g., setting goals, using self-talk, visualizing successful performance) about cognitions and behavior that is supposed to foster effective self-leadership (Neck & Houghton, 2006). This system results in “recipes” about how to lead oneself that are far too simple, necessarily focusing on a limited number of behavioral and cognitive strategies. Intuitively appealing, such a method reveals several limitations. First, the range of strategies is necessarily limited, which also limits the scope of self-leadership. Second, the individual is put into a passive position of either following prescriptions or denying them. And third, a differential approach to self-leadership, with strategies tailored to individual needs and preferences, is missing.

In contrast, self-leadership within elite sports as examined in this study represents a descriptive concept, summarizing and categorizing strategies that successful athletes have applied. These findings do not prescribe the use of a specific set of self-leading strategies. Rather, they describe a wide range of strategies as a resource pool and suggest different behavioral alternatives for effective self-leadership. As a consequence, the individual is put into an active position of choosing and selecting the strategy that best meets needs and preferences. Therefore, self-leadership in elite sports is conceptualized more towards a differential approach, including strategies that are tailored for the individual. This approach leads to a wider concept for emotional strategies or resource management skills. Moreover, the strategies were identified in the same field in which they will potentially be used. Even though it is not possible to infer that a given strategy will help all athletes, it was aimed to find specific and ecologically valid strategies by interviewing successful elite athletes.

Contrasting results with the conceptualization of volition within sport psychology revealed similarities because both constructs propose self-influence strategies that aim to improve the self-direction necessary to perform well. Study 1 showed that self-leadership and volitional strategies are distinguishable and only moderately ( $r = .33$ ) correlated (Heiss et al., 2010). The present findings support this view, again indicating a broader scope of self-leadership compared with volition. In accordance with Kuhl's (2000) conceptualization, the primary scope of volition in elite sports is to overcome difficulties of goal striving. To this end, specific volitional competencies were proposed (e.g., emotion control, attention control), all aiming to ensure goal-striving processes. Apparently, self-leadership contains similar facets and can be used in the same way. Therefore, the essential character of volition is a part of self-leadership. However, motivational and self-monitoring facets expand self-leadership from volition. For example, using a self-leading strategy such as "listening how I feel with the goal set" may help to reprioritize goals, particularly goals that are primarily socially determined and externally regulated (Deci & Ryan, 2000). These additional facets of self-leadership may help to diminish hazards of rigid use of volition, which is called self-control (Kuhl & Fuhrmann, 1998). Converging evidence shows that individuals who constantly overemphasize goals and ignore deeper needs and preferences may suffer from impaired well-being and alienation (Deci & Ryan, 2000; Beckmann, 1998b).

In addition, the findings can be used to enhance research on sport-specific measures of volitional abilities, such as the volitional components questionnaire (Wenhold et al., 2009). This questionnaire measures whether or not a person is able to successfully use volition when necessary. However, the corresponding volitional strategies, indicating ready-to-use advice about what needs to be done to apply volition, are not identified. In sport psychology counseling, this omission raises a number of problems because, given a certain result, what an athlete did (or did not do), and which strategies could be suggested for performing better remains unclear.

The present findings can also be linked to research focusing on athletes' psychological skills during practice and competition (Weinberg & Gould, 2007). In particular, higher order themes aligned to self-regulation skills of self-leadership (e.g., emotion management, attention management, arousal management) show similarities to subscales in existing psychometric assessment, such as the test of performance strate-

gies (TOPS; Thomas, Murphy, & Hardy, 1999) or the athletic coping skill inventory (ASCI; Smith, Schutz, Smoll, & Ptacek, 1995). Because findings were derived from expert sources, whereas the TOPS and ASCI subscales were derived from theory, similarities confirm construct validity of the corresponding subscales. Thus, measures such as TOPS and ASCI may be useful to detect facets of self-leadership ability (e.g., self-regulation skills). However, they are not able to assess the full range of self-leadership abilities, especially regarding resource management or metacognitive skills. Moreover, these questionnaires tend to intermix skills (e.g., vivid visualization of intended movements), underlying competencies necessary for applying these skills (e.g., mental imagery), and successful application of skills (e.g., “during competition I am able to visualize intended movements”). In sport psychology counseling, TOPS and ASCI can therefore only provide diagnostic hints about what goes wrong when an athlete is not able to perform well. Neither instrument is able to specify the problem in terms of strategies and, more important, does not suggest interventions or strategies to help the athlete to perform better. The set of self-leading strategies in the present study, in contrast, allows sport psychologists and athletes to choose interventions that fit sport-specific self-leadership requirements.

The distribution of self-leadership strategies within the course of action generally fit the assumptions from the Rubicon model of action phases. This distribution refers to a frequent use of metacognitive skills within the evaluation phase or of motivational skills within the deliberation phase. However, the use of motivational and volitional skills was not limited to intended action phases, and athletes used motivational and volitional strategies throughout the action process. This finding can be explained by the function of the Rubicon model within this research. The Rubicon model was used as a theoretical framework to revise the self-leadership concept and to structure the interview guide in consecutive sections. Other assumptions of the model, such as the action process being a fixed one-way street, were not considered. Consequently, the interview guide presented typical situations for corresponding action requirements (e.g., deliberation of goals) to participants who successfully recalled the application of self-leading strategies to cope with these situations. However, participants were not instructed to use the same personal experience to run through all consecutive action phases, but were allowed to use different personal experiences to identify self-leading

strategies in the face of differing motivational and volitional requirements. This procedure was used because of major criticism about the Rubicon model in that the description of human action processes as fixed one-way streets inadequately represents the complexity of human action processes (Kornadt, 1988; Puca, 2004).

An essential merit of the present research is its systematic setup following the Rubicon model. The Rubicon model was used for revising the self-leadership concept, to derive the interview guide and to integrate results. Data integration allows systematic transfer from intuitive knowledge of expert sources in order to analyze the use of self-leading strategies within stages of action. This conceptual revision eliminates current conceptual weaknesses of self-leadership and can be regarded as a prerequisite for the empirical study of self-leadership. Moreover, using qualitative methods is regarded as major strength of the present research. This extends existing research in sport psychology that focuses predominantly on the development of self-report measures with closed answering scales. Finally, the selected sample allowed, for the first time, an empirical assessment of self-leading strategies in the same field to which they are applied.

However, some limitations of the study need to be addressed. First, identified self-leading strategies were based on the personal experiences of the athletes. This method limits the conclusions regarding the successful implementation of those strategies. Thus, findings should tempt one to infer neither that all strategies proposed are necessary to become an effective self-leader nor that they guarantee successful self-leadership. Rather, it is hypothesized that, depending on personal needs, experiences, and preferences, a different combination of self-leading strategies leads to effective self-leadership in elite sports. Further research should focus on differential approaches to self-leadership, elaborating on tailoring self-leading strategies to individual needs and preferences. In addition, clarifying the relationships between self-leading strategies and successful self-leadership in elite sports should be a primary concern of future research efforts. For example, such research could include determining the level of contribution of different self-leading strategies to successful self-leadership. This would allow identification of a possible core group of self-leading strategies for successful self-leadership. Second, structuring the interview guide alongside the Rubicon model may lead to priming regarding proposed self-leading strategies from partici-

pants. However, results indicate that all self-leading strategies were used throughout the action process, which points to the possibility that the suggested strategies of the participants were not systematically biased from using the Rubicon model as a general framework.

## General Discussion

This thesis transfers a revised concept of self-leadership to the domain of elite sports. Within work and organizational psychology, self-leadership is already well-established as a modern leadership concept focusing on followers (Neck & Houghton, 2006). The possibility of transferring it to elite sports primarily results from its highly practical conceptualization, suggesting tangible strategies (e.g., goal-setting, self-reward) for effective self-leadership. However, theoretical and empirical limitations show that the existing self-leadership concept needs revision. Thus, in order to make it transferable to sports psychology, the self-leadership construct was defined more precisely and extended both theoretically and empirically. Overall the findings can be summarized in three points.

First, the comparison between self-leadership as proposed within organizational psychology (Neck & Houghton, 2006) and volition (Kuhl & Fuhrmann, 1998) reveals that the two constructs are distinguishable, albeit weak to moderately correlated concepts ( $r = .33$ ). Interpreting data from an action theory perspective using the Rubicon model points to the possibility that self-leadership and volition should be portrayed as supplemental to each other. For example cognitive elements of self-leadership (e.g. vividly visualizing of successful outcomes; positive self-talk) assist goal-setting processes in case if a person is undecided whether or not to commit to a certain goal. Thus, self-leadership has partly a clear motivational function because proposed strategies can be used to come up with a highly motivating and stable goal intention, whereas volitional strategies (e.g. attention control; coping with failure) ensure that this goal intention is transformed into behavior, particularly when difficulties



appear. However, delineating self-leadership from volition through constraining the use of self-leadership or volitional strategies to motivational respectively volitional phases of the Rubicon model would overstretch results. For example Beckmann and Kuhl (1984) point out that similarly to self-leadership the use of volitional strategies is beneficial in all phases of the action process in order to strengthen a current goal intention (*preintentional*) or to end intrusive and perservating thoughts after failure (*postintentional*). Therefore an alternative possibility is suggested to delineate self-leadership from volition. Delineation refers to conceptual differences between constructs focusing on differing aspects what needs to be done to ensure effective self-leadership respectively effective volitional functioning.

Regarding volition, implications of PSI-Theory suggest that affect regulation is essential for effective volitional functioning. For example, to apply the volitional strategy of self-determination person's authentic needs, interests and values (represented in extension memory) need to be matched with explicit, possible externally regulated, goal intentions (represented in intention memory). Following PSI-Theory matching requires affective balance (i.e., middle level of positive and negative affect) to ensure information exchange between intention and extension memory. From this two points can be inferred: First volition encompasses partly unconscious processes and second access and effectiveness of volitional processes depend heavily on the regulation of positive and negative affect. Consequently, coaching or intervention of volitional effectiveness should focus on affect regulation (cf. Kuhl, 2001; Kuhl et al., 2006).

Regarding self-leadership individuals control their behavior, influence and effectively lead themselves through the intentional use of emotional, cognitive and behavioral strategies. For example, using a self-leadership strategy such as self-observation, heightens a person's self-awareness to identify specific behaviors that should be changed, enhanced or eliminated. This self-assessment assures accurate information regarding current behavior and performance level and assists individuals to more effectively set behavior-altering goals for themselves (cf. Neck & Houghton, 2006). From this two points can be inferred: First self-leadership encompasses tangible strategies for promoting motivation and self-instruction and second access and effectiveness of self-leadership depend heavily on knowledge and practice of proposed self-leading strategies. Consequently coaching or intervention of self-leadership effective-

ness should focus on educating and practicing self-leadership skills preferably with customized training programs. To highlight distinguishable facets, Table 6 compares self-leadership with volition.

**Table 6:** Comparing self-leadership as conceptualized within organizational psychology with volition.

	<b>Self-leadership</b>	<b>Volition</b>
Theoretical framework	<i>Inconsistent</i> – proposed strategies are based on several theories from motivational psychology (e.g. SDT, Deci & Ryan, 2000)	<i>Consistent</i> – Personality-System-Interaction-Theory (Kuhl, 2001)
Characteristic	<i>Normative</i> – giving ready to use advice how to promote motivation and self-instruction	<i>Descriptive</i> – describing conscious and unconscious strategies/processes to support goal enactment and goal-striving
Primary function	<i>Goal setting</i> – strengthens individual confidence about set goals and helps to create a firm goal intention	<i>Goal striving</i> – ensures that a goal intention is transformed into behavior, particularly when difficulties appear (e.g. obstacles; failure)
Trainability/Changeability	<i>Direct</i> – practicing self-leadership strategies	<i>Indirect</i> – practicing affect regulation

Second, the construct of self-leadership was specified in terms of action theory and incorporated via the Rubicon model in the context of established theories of motivation and volition psychology. Integrating self-leadership into the Rubicon model of action phases allows better differentiation of the interactions between self-leadership and volition within the goal attainment process. This integration clarifies self-leadership's function during goal attainment, is a first step in defining the concept's standing within motivational psychology, and provides a valuable framework to spur future research. More precisely the integration of self-leadership into the Rubicon model combines the "what" (requirement) and the "how" (tangible skill) of goal-directed behavioral influence. This led to two advantages: First, the selection process of self-leading strategies is based on the basis of established theories for each of the action phases. Second, self-leadership received a coherent theoretical foundation from

which self-leadership requirements in the area of elite sports can be systematically derived.

And finally, interviews with successful individual athletes revealed that the global ability of self-leadership in elite sports consists of the five dimensions of *motivation, volition, self-regulation, resource management* and *self-reflection*. These strategies were already successfully applied from elite athletes as coping strategies for critical situations (e.g., goal conflicts, setbacks, insistent pursuit of goals) in elite sports. For the first time this leads to an empirical generated portfolio of self-leading strategies.

### Strengths of the present research

Strengths of the present research result from a scientific perspective regarding an empirical knowledge gain in comparison to previous research within (sports) psychology (Lakatos, 1976). Four strengths can be identified:

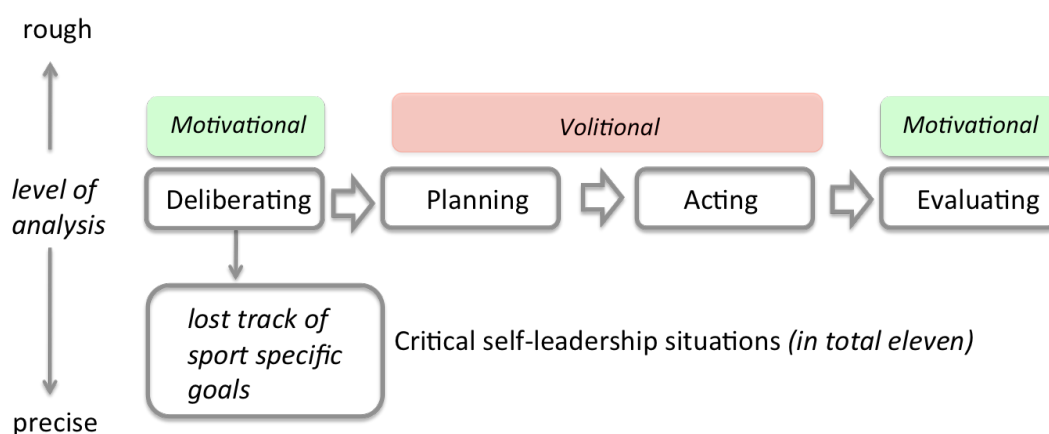
First, there is the design of the second study. This concerns the use of an explorative qualitative methodology and the Rubicon model as a theoretically coherent framework. This combination results in a significant knowledge gain with regard to data interpretation, since the results were not only described, but also systematized and theoretically constrained.

Second, there is the consistent strategy orientation. This means that a consistent differentiation was made between skills in terms of concrete action recommendations for effective self-leadership (e.g., engage in positive self talk), and abilities in terms of required competency (e.g., self-motivation). This specifies and expands upon existing approaches for detection volitional and psychological competences in elite sports (Wenhold, Elbe & Beckmann, 2009; Smith, Schutz, Smoll & Ptacek, 1995; Thomas, Murphy & Hardy, 1999). Furthermore, initial recommendations for developing measures and training programs to promote individual self-leadership ability can be derived on the basis of a consistent strategy orientation.

Third, there is the large number of empirically recorded action strategies that have already been successfully employed in elite sports. This is important because the strategies presented are not suggestions of what could possibly be done; rather, they illustrate what highly successful athletes really do to stay focused and motivated. This

qualifies the present results to be directly used in sport psychology counseling, as well as in educational programs. In addition, measures for promoting individual self-leadership competence can be individualized and tailored to the needs and resources of the athlete. This expands upon prior approaches examining deliberate self-influencing in elite sports (e.g., volition), since previously the combination of proposed strategies was less individualized and mainly theory driven (Wenhold, Elbe & Beckmann, 2009).

Fourth, there is the consistent use of the Rubicon model as a theoretical framework across all studies. The Rubicon model can be used for categorizing and structuring the captured self-leading strategies. For the first time, this allows a chronological arrangement of self-leading strategies in the course of action. Additionally, the model improves the differential diagnosis of individual self-leadership ability. Existing self-leadership resources (in what area of action does the athlete already have tangible self-leading strategies?) and potentially problematic self-leadership areas (what area of action is still in need of strategies?) can be identified. The level of the analysis can be freely chosen depending on individual need for counseling and prior knowledge of the athlete. It ranges from a dichotomous split (motivational vs. volitional) to a precise identification of critical self-leadership situations within a specific action phase (see Fig. 6).



**Figure 6:** Using the Rubicon model to identify a personal profile of individual strength and weaknesses in self-leadership.

Finally, the model can be used as a guideline for the development of intervention programs to promote individual self-leadership abilities. Accordingly, training

modules can be arranged chronologically and designed congruently with regard to the respective action requirements. This results in theory-driven intervention programs that are recommendable for sports psychological practice (Beckmann & Elbe, 2008), but have so far only been implemented in isolated instances (Gardner & Moore, in press).

### Limitations of the present research

Limitations of the present research result from restrictions regarding conceptual aspects of the studies and aspects concerning generalization of the present results. The use of the Rubicon model can also be critically examined (Konradt, 1988). There are many alternative models of behavior control (Zimmermann, 2000; Carver & Scheier, 1998; Kuhl, 2001) and some focus more on contrasting a desired state with the current state (Carver & Scheier, 1998). It seems reasonable that these models are also suitable to elite sports, since a comparison between the current and the desired state is already a well-established element in the context of regular meetings between coach and athlete regarding season planning and goal-setting. However, the Rubicon model has already been used several times as a suitable framework for describing courses of action in elite sports (Höhner & Willimczik, 1998). Additionally, Nitsch (2004) points out that the action theory perspective contained in the Rubicon model should constitute a guiding framework for sports psychological research and intervention. In terms of critical rationalism (Popper, 1972), this results in a goal for future research projects, to compare different models for goal-directed behavior control with regard to their explanatory value in the context of elite sports.

Moreover, from a conceptual perspective it must be critically noted that the first study, concerned with the existing self-leadership concept from work and organization psychology, used a concept that had significant theoretical and diagnostic weaknesses. This reduces the reliability of conclusions drawn about the independence of self-leadership and volition. However, it should be noted that the revised self-leadership concept in elite sports does not seek separation of the concepts, but rather a consolidation and specification of self-leadership and volition. The results from the second study support this theory-based description. It was shown that volitional com-

petences are an element of global self-leadership ability, and thus suggest that self-leadership should be regarded as being a more comprehensive concept that comprises both motivational processes of goal selection and volitional processes of goal achievement. This parallels current considerations concerning extensions of the self-leadership concept from work and organizational psychology (Müller, 2006; Müller et al., 2010).

Limitations on the generalization of the present results concern the empirically identified pool of self-leading strategies. Here it should be noted that the identified strategies are based on individual experiences of the interviewed athletes in dealing with situations critical for success in elite sports (e.g., goal conflict, setbacks). The extent to which this can be generalized into broadly applicable guidelines for effective self-leadership in elite sports should be empirically examined in the future. This point is especially critical if one relates the present findings directly to the efficiency and success of effective self-leadership. So identifying a wide range of self-leading strategies should not tempt one, however, to deduce that the application of proposed strategies constitutes a universal formula for successful self-leadership within elite sports. This generalization appears far too simple particularly with regard to empirical findings analyzing the recovery of elite athletes as a process of self-regulation (Beckmann & Kellmann, 2004). Instead, it should be empirically tested whether the successful application of proposed strategies could also depend on dispositional factors (e.g. individual tendency of action and state orientation). Furthermore, the empirically identified pool of self-leading strategies in elite sports should be compared to strategies proposed within the German Self-leadership Questionnaire (GSLQ, Müller et al., 2010) to assess construct validity.

Lastly, the identified pool of sport-specific self-leading strategies is limited to conscious strategies that can be used intentionally. Taking into account that volitional competence, for example, explicitly includes subconscious processes (Kuhl, 2001), it appears reasonable that self-leadership could also have preconscious, possibly also subconscious, elements. Prior research findings support this assumption and point out that this comprises primarily motivational competences, such as achieving congruence between implicit and explicit motive systems through the purposeful selection of

need-congruent goals or the detachment of goals that are primarily socially determined and externally regulated (Beckmann, 2003; Brandstätter, 2003; Kehr, 2004).

However, an assessment of the present findings should take into account the selective sampling procedure and the chosen scenario technique as part of the interview guide within the second study (Wason & Cox, 1996). The sample of the second study contains only experts (successful athletes in individual sports), and the developed scenarios confront participants with a situation they experienced themselves in which they had to employ self-leading strategies. Both factors strengthen the validity of the present results. In addition findings regarding the usability of heuristics<sup>11</sup> can be used to strengthen the validity of the present results (Gigerenzer & Todd, 1999). The present self-leading strategies in elite sports have similarities to heuristics, as they also define general, simple, and applicable action strategies to lead themselves. Comprehensive empirical data show that people in suboptimal decision-making settings (e.g., time or information deficits) prefer simple heuristics to a comprehensive analytical conclusion, which is more functional for coping with the situation (Todd & Gigerenzer, 2000). In this regard, these findings support the assumption that the present results could possibly be generalized into broad guidelines for actions of effective self-leadership in elite sports. However, whether this applies to all identified strategies or only for some specific areas of self-leadership should be empirically examined in future studies.

Lastly, from a superordinate perspective of the research program, there is a lack of more experimentally oriented methods, which, for example, examine the assumption that self-leadership supplements volition during goal attainment (see Study 1). This assumption would lead one to expect that the solution of a motivational problem (e.g., selecting need-congruent goals) is more strongly associated with self-leadership skills than that of a volitional problem (e.g., overcoming obstacles in the course goal pursuit). A corresponding research program should serve as an additional link between the first and second study. This would fulfill the demand for a theoretical

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<sup>11</sup> Heuristics are simple, efficient rules, which have been proposed to explain how people make decisions, come to judgments, and solve problems, typically when facing complex problems or incomplete information (see Todd & Gigerenzer, 1999 for a summary)

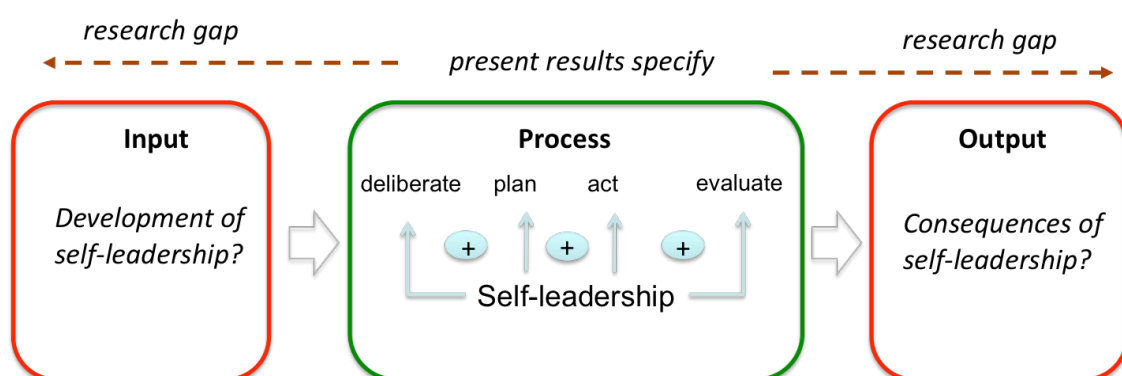
and empirical definition of self-leadership as a necessary prerequisite for transfer to another area of application (in this case elite sports; cf. Study 1).

However, it should be noted that the implementation of a quantitative first study and a qualitative second study about the same phenomenon (self-leadership) reduces systematic errors and thereby increases the validity of present results. According to the principle of triangulation (Olson, 2004), the strengths of each respective approach can compensate for the limitations of the other approach.

### Future directions

The present results provide promising starting points in three areas for intensifying research activities on self-leadership in elite sports: theory, diagnostics, and intervention.

On a theoretical level, the present thesis defines a process model of self-leadership. It details which strategies contribute to the promotion of motivation and assertiveness in different action phases in elite sports. The integration of this level of analysis into an input-process-output model demonstrates the need for research on possible factors of development (input) and consequences (output) of successful self-leadership (see figure 7).



**Figure 7:** *Input – Process – Output model to identify possible areas for future research in self-leadership in elite sports.*

The question of what factors promote the development of individual self-leadership ability has not yet been answered. An analogy to the basic model of motiva-

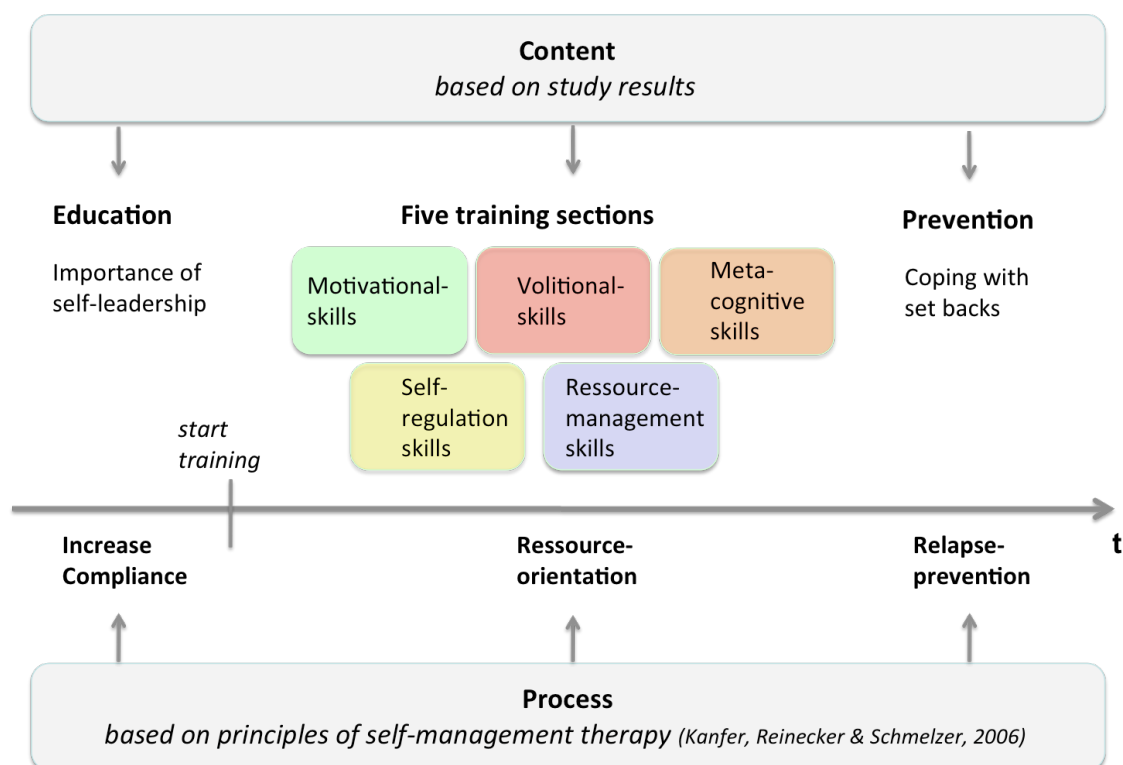


tional psychology (Rheinberg, 2006) could be employed for systematizing the numerous influencing factors. Accordingly, the interaction of personal and situational factors results in beneficial conditions for self-leadership. With regard to personal factors, the present results suggest that conscientiousness and a tendency toward action orientation (Beckmann, 1994) may be beneficial for the development of self-leadership. Two questions arise concerning situational factors: First, what conditions promote self-leadership? Second, what leadership behavior promotes self-leadership? Both questions are very important in elite sports, as coaches and staff members expect concrete pointers from applied sports psychologists concerning what they can do and how they should behave to promote individual self-leadership among their athletes. Work and organizational psychology provides initial pointers concerning such beneficial conditions. Müller (2003) assumes that the development of individual self-leadership requires an environment that offers room for development, provides options and gives reasons for utilizing one's own potential. Within work and organizational psychology, interactional management approaches are primarily discussed as being beneficial to promote self-leadership behavior; for example, the concept of super-leadership (Manz & Sims, 2001), which promotes the application of self-leading strategies by shaping the environment and providing direct instructions to lead yourself effectively. There is also the concept of transformational leadership (Bass, 1985). Transformational leadership principles (for a summary see Bass & Avolio, 1994) aim to maximize performance by ensuring that people are committed beyond their own interests to the welfare of their work group and the organization. The question of what leadership approach is particularly effective at promoting personal responsibility and self-leadership in the context of elite sports is an interesting issue for further research.

Similarly, the question regarding the consequences of successful self-leadership also remains largely unanswered. To date, it is unclear in what way and to what extent self-leadership influences athletic performance. Previous research within work and organizational psychology indicate an indirect self-leadership/performance relationship with self-efficacy regarded as the primary mechanism through which self-leadership affects performance (*see 1.1.1 and Figure 2 for details*). However it is likely that the greatly expanded self-leadership concept in elite sports comprises other beneficial side effects (e.g., improvement of the balance between recreation and stress).

Future research should therefore focus on the development of suitable approaches that model the relationship between self-leadership and athletic performance more clearly. In this context the question concerning possible negative consequences of self-leadership would be likewise interesting. It is reasonable to suspect that individual facets of self-leadership (e.g., satisfy needs outside of sports) may not have exclusively positive effects with regard to the promotion of athletic performance. Furthermore, questions on the role of self-leadership in team sports would also be worth further investigation.

At the diagnostic level, the present results offer a solid foundation for developing a psychometric questionnaire for standardized recording of self-leadership ability. Here the large number of empirically identified strategies can be used for compiling an item pool. On the level of intervention, the present results provide starting points for developing and systematizing educational and training programs. Together with principles from self-management therapy (Kanfer, Reinecker & Schmelzer, 2006), these can be combined into a coherent and practical training program for promoting self-leadership in elite sports (see Figure 8).



**Figure 8:** Using empirical results and theoretical foundations of self-management therapy to conceptualize interventions to enhance individual self-leadership ability.

Figure 8 illustrates that principles from self-management therapy can be used for designing the training process, while the present results should be used for designing the training content. However, both on a diagnostic and on an intervention level one must consider that the identified strategies are based on the professional athletes' individual experiences in dealing with situations vital for success in elite sport (e.g., goal conflicts, failures, initiation of actions). Therefore, before designing a questionnaire or developing a training program, the relationship between the application of different self-leading strategies and athletic success should be analyzed in more detail.

## Summary and conclusion

For the first time, this thesis transfers the construct of self-leadership to the domain of elite sports. The implementation follows an innovative approach for the following reasons:

The existing self-leadership concept from work and organizational psychology was theoretically and empirically refined. The Rubicon model of action phases (Heckhausen, 1987b) defines self-leadership as an inner leading process aiming to control motivation and action deliberately. An action perspective was used as the basis for analyzing the processes of performance goal setting, action initiation, and behavior assessment to derive sports-specific requirements for self-leadership in elite sports. The qualitative interview study with successful elite athletes specifies skills and strategies of individual self-leadership ability and illustrates the demarcation from the dominant research practice within sports psychology. Here, comparable self-influence phenomena (e.g., volition or psychological skills) were primarily captured by questionnaires with closed answering scales. These approaches can be reasonably expanded through the explorative and discovery-oriented methodology of the present thesis. Moreover, the present results provide promising starting points for sport-specific recording and promotion of individual self-leadership ability.

The present work thus proves to be of practical use for both research-oriented and applied sports psychologists. The transfer of a theoretically and empirically refined self-leadership concept opens promising research areas in the fields of theory, diagnostics, and intervention. The great number of identified self-leading strategies also

enables practical and purposeful promotion of individual self-leadership ability, presumably leading to positive effects with regard to the long-term and autonomous performance development of the athletes.

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# Appendix

Appendix A (study 1)

## **Zusammenhänge zwischen Selbstführung, Selbststeuerung & Persönlichkeit**

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**Liebe Teilnehmerin, lieber Teilnehmer,**

herzlichen Dank, dass Sie sich an unserer Studie beteiligen.

Im Folgenden finden Sie verschiedene Fragebögen, die die Zusammenhänge zwischen Selbstführung, Selbststeuerung und Persönlichkeit beleuchten.

Selbstführung- und Selbststeuerungskompetenz sind inhaltlich miteinander verwandt.

Dies führt dazu, dass einige der folgenden Fragen sehr ähnlich sein werden.

Bei allen nachfolgenden Fragen gilt:

- 1.) Es gibt **keine richtigen oder falschen Antworten!**
- 2.) Bitte antworten Sie möglichst wahrheitsgemäß und **lassen Sie keine Aussage aus**, da wir nur vollständig bearbeitete Fragebögen auswerten können.

Das Ausfüllen aller Fragen dauert ca. 45 Minuten.

#### **Unser Dank**

➤ **Eine kleine Aufwandsentschädigung in Höhe von 10€**

Für Ihre Unterstützung möchten wir uns bei Ihnen mit 10€ bedanken. Den Betrag erhalten Sie nach dem Ausfüllen aller Fragebögen vom Versuchsleiter.

➤ **Eine Versuchspersonenstunde** (bestätigt von Dr. Matthias Ziegler, LMU)

Ihre Daten werden anonym und streng vertraulich behandelt sowie ausschließlich zu wissenschaftlichen Forschungszwecken verwendet.

**Vielen Dank für Ihre Teilnahme!**

**Inwieweit treffen die folgenden Aussagen auf Sie persönlich zu? Wählen Sie dazu bitte die entsprechende Kategorie und kreuzen Sie sie rechts neben der jeweiligen Aussage an.**

Ein Beispiel:

Ich verbringe gerne Zeit mit anderen.....

sehr unzutref- fend	eher unzu- treffend	weder noch	eher zutreffend	sehr zutreffend
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Kreuzen Sie z. B. das 2. Kästchen an, wenn Sie meinen, dass diese Aussage eher unzutreffend für Sie ist.

	sehr unzutref- fend	eher unzutref- fend	weder noch	eher zutreffend	sehr zutreffend
1. Ich bin eher zurückhaltend, reserviert.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Ich neige dazu, andere zu kritisieren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Ich erledige Aufgaben gründlich.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Ich werde leicht deprimiert, niedergeschlagen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Ich bin vielseitig interessiert.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Ich bin begeisterungsfähig und kann andere leicht mitreißen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Ich schenke anderen leicht Vertrauen, glaube an das Gute im Menschen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Ich bin bequem, neige zur Faulheit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Ich bin entspannt, lasse mich durch Stress nicht aus der Ruhe bringen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Ich bin tiefsinnig, denke gerne über Sachen nach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Ich bin eher der „stille Typ“, wortkarg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Inwieweit treffen die folgenden Aussagen auf Sie persönlich zu? Wählen Sie dazu bitte die entsprechende Kategorie und kreuzen Sie sie rechts neben der jeweiligen Aussage an.**

	sehr unzutreffend	eher unzutreffend	weder noch	eher zutreffend	sehr zutreffend
12. Ich kann mich kalt und distanziert verhalten.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Ich bin tüchtig und arbeite flott.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Ich mache mir viele Sorgen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Ich habe eine aktive Vorstellungskraft, bin fantasievoll.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Ich gehe aus mir heraus, bin gesellig.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Ich kann mich schroff und abweisend anderen gegenüber verhalten.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Ich mache Pläne und führe sie auch durch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Ich werde leicht nervös und unsicher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Ich schätze künstlerische und ästhetische Eindrücke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Ich habe nur wenig künstlerisches Interesse.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Achtung neues „vierstufiges“ Antwortformat:

Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen auf Ihre **momentane Situation** zutreffen:

	<i>Trifft auf mich zu:</i>			
	gar nicht	etwas	über- wiegend	ausge- sprochen
1) Bei fast allem, was ich im Alltag tue, spüre ich, dass ich es freiwillig tue.	( 1 )	( 2 )	( 3 )	( 4 )
2) Wenn mein Durchhaltevermögen nachlässt, weiß ich meist ganz genau, wie ich meine Lust an der Sache verstärken kann.	( 1 )	( 2 )	( 3 )	( 4 )
3) Nervosität kann ich ganz gezielt abbauen.	( 1 )	( 2 )	( 3 )	( 4 )
4) Wenn ich viele Dinge erledigen muss, mache ich mir einen Zeitplan (d.h., ich lege fest, was ich wann tue).	( 1 )	( 2 )	( 3 )	( 4 )
5) Um mich zu motivieren, stelle ich mir oft vor, was passiert, wenn ich eine Sache nicht rechtzeitig erledige.	( 1 )	( 2 )	( 3 )	( 4 )
6) Wenn etwas getan werden muss, beginne ich damit ohne Zögern.	( 1 )	( 2 )	( 3 )	( 4 )
7) Ich schiebe unangenehme Dinge oft auf.	( 1 )	( 2 )	( 3 )	( 4 )
8) Meine Gedanken schweifen oft ganz unwillkürlich von der Sache ab, mit der ich mich gerade beschäftige.	( 1 )	( 2 )	( 3 )	( 4 )
9) Nach unangenehmen Erlebnissen komme ich oft über eine ganze Zeit nicht mehr aus dem Grübeln heraus.	( 1 )	( 2 )	( 3 )	( 4 )
10) Wenn ich traurig bin, verliere ich das Gespür für das, was ich wirklich will.	( 1 )	( 2 )	( 3 )	( 4 )
11) Mein Verhalten erscheint oft widersprüchlich, weil immer wieder eine andere Seite von mir hervortritt.	( 1 )	( 2 )	( 3 )	( 4 )



Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen auf Ihre **momentane Situation** zutreffen:

	<b>Trifft auf mich zu:</b>			
	<b>gar nicht</b>	<b>etwas</b>	<b>über- wiegend</b>	<b>ausge- sprochen</b>
12) Ich fühle mich meist im Einklang mit mir selbst.	( 1 )	( 2 )	( 3 )	( 4 )
13) Bei einer schwierigen Tätigkeit kann ich gezielt auf die positiven Seiten schauen.	( 1 )	( 2 )	( 3 )	( 4 )
14) Ich kann mich auch in einem Zustand starker innerer Anspannung schnell wieder entspannen.	( 1 )	( 2 )	( 3 )	( 4 )
15) Bevor ich mit einer Sache anfangen, gehe ich die Einzelheiten erst einmal gedanklich durch.	( 1 )	( 2 )	( 3 )	( 4 )
16) Wenn ich eine unangenehme Pflicht erledigen muss, stelle ich mir oft vor, wie schlimm ich mich fühle, wenn ich sie nicht rechtzeitig erledigt habe.	( 1 )	( 2 )	( 3 )	( 4 )
17) Wenn eine Aufgabe erledigt werden muss, packe ich sie am liebsten sofort an.	( 1 )	( 2 )	( 3 )	( 4 )
18) Ich nehme mir öfters Dinge vor und komme dann doch nicht dazu.	( 1 )	( 2 )	( 3 )	( 4 )
19) Oft muss ich an Dinge denken, die mit dem, was ich gerade tue, gar nichts zu tun haben.	( 1 )	( 2 )	( 3 )	( 4 )
20) Wenn etwas Schlimmes passiert ist, dauert es sehr lange, bis ich mich auf etwas anderes konzentrieren kann.	( 1 )	( 2 )	( 3 )	( 4 )
21) Wenn ich unter Druck gerate, spüre ich oft gar nicht richtig, was ich selbst will.	( 1 )	( 2 )	( 3 )	( 4 )
22) Andere halten mein Verhalten zuweilen für widersprüchlich.	( 1 )	( 2 )	( 3 )	( 4 )

Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen auf Ihre **momentane Situation** zutreffen:

	<i>Trifft auf mich zu:</i>			
	<i>gar nicht</i>	<i>etwas</i>	<i>über- wiegend</i>	<i>ausge- sprochen</i>
23) Ich fühle mich in den meisten Situationen ganz frei, so zu handeln, wie ich es möchte.	( 1 )	( 2 )	( 3 )	( 4 )
24) Ich kann mich meist ganz gut motivieren, wenn der Durchhaltewille nachlässt.	( 1 )	( 2 )	( 3 )	( 4 )
25) Ich kann übermäßige Erregung sehr gut abbauen.	( 1 )	( 2 )	( 3 )	( 4 )
26) Bevor ich eine umfangreiche Arbeit beginne, lege ich fest, wie ich vorgehe.	( 1 )	( 2 )	( 3 )	( 4 )
27) Oft spornt mich die Angst vor einem Fehlschlag an, mich ganz besonders anzustrengen.	( 1 )	( 2 )	( 3 )	( 4 )
28) Viele Dinge gelingen gut, weil ich sie kraftvoll anpacke.	( 1 )	( 2 )	( 3 )	( 4 )
29) Ich schiebe viele Dinge vor mir her.	( 1 )	( 2 )	( 3 )	( 4 )
30) Ich muss oft aus heiterem Himmel an Dinge denken, die gar nicht zur Sache gehören.	( 1 )	( 2 )	( 3 )	( 4 )
31) Wenn ich in eine schlechte Stimmung gerate, komme ich da ganz schwer wieder heraus.	( 1 )	( 2 )	( 3 )	( 4 )
32) Wenn etwas schiefgegangen ist, verliere ich oft den Kontakt zu meinen Gefühlen.	( 1 )	( 2 )	( 3 )	( 4 )
33) Ich empfinde an vielen Tagen das Gegenteil von dem, was ich vorher gefühlt habe.	( 1 )	( 2 )	( 3 )	( 4 )
34) Meist handle ich in dem Bewusstsein, das, was ich tue, selbst zu wollen.	( 1 )	( 2 )	( 3 )	( 4 )

Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen auf Ihre **momentane Situation** zutreffen:

	<b>Trifft auf mich zu:</b>			
	<b>gar nicht</b>	<b>etwas</b>	<b>über- wiegend</b>	<b>ausge- sprochen</b>
35) Wenn eine Sache langweilig wird, weiß ich meist, wie ich wieder Spaß daran finden kann.	( 1 )	( 2 )	( 3 )	( 4 )
36) Ich kann meine Anspannung lockern, wenn sie störend wird.	( 1 )	( 2 )	( 3 )	( 4 )
37) Bevor ich eine neue Sache in Angriff nehme, mache ich mir meist einen Plan.	( 1 )	( 2 )	( 3 )	( 4 )
38) Oft komme ich erst dadurch in Gang, dass ich mir vorstelle, wie schlecht ich mich fühle, wenn ich eine Sache nicht tue.	( 1 )	( 2 )	( 3 )	( 4 )
39) Wenn etwas zu erledigen ist, beginne ich am liebsten sofort damit.	( 1 )	( 2 )	( 3 )	( 4 )
40) Oft fange ich mit einer Sache an, ohne sie zu beenden.	( 1 )	( 2 )	( 3 )	( 4 )
41) Meine Gedanken treiben oft von der Sache weg, auf die ich mich eigentlich konzentrieren möchte.	( 1 )	( 2 )	( 3 )	( 4 )
42) Sorgenvolle Gedanken werde ich schlecht wieder los, wenn sie einmal da sind.	( 1 )	( 2 )	( 3 )	( 4 )
43) Unter Belastung verliere ich den Zugang zu meinen Gefühlen.	( 1 )	( 2 )	( 3 )	( 4 )
44) Ich habe sehr widersprüchliche Seiten.	( 1 )	( 2 )	( 3 )	( 4 )

Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen **im Allgemeinen** auf Sie zutreffen:.

	Stimmt nicht	Stimmt kaum	Stimmt eher	Stimmt genau
1) Wenn sich Widerstände auftun, finde ich Mittel und Wege, mich durchzusetzen.	( 1 )	( 2 )	( 3 )	( 4 )
2) Die Lösung schwieriger Probleme gelingt mir immer, wenn ich mich darum bemühe.	( 1 )	( 2 )	( 3 )	( 4 )
3) Es bereitet mir keine Schwierigkeiten, meine Absichten und Ziele zu verwirklichen.	( 1 )	( 2 )	( 3 )	( 4 )
4) In unerwarteten Situationen weiß ich immer, wie ich mich verhalten soll.	( 1 )	( 2 )	( 3 )	( 4 )
5) Auch bei überraschenden Ereignissen glaube ich, dass ich gut mit ihnen zurechtkommen kann.	( 1 )	( 2 )	( 3 )	( 4 )
6) Schwierigkeiten sehe ich gelassen entgegen, weil ich meinen Fähigkeiten immer vertrauen kann.	( 1 )	( 2 )	( 3 )	( 4 )
7) Was auch immer passiert, ich werde schon klarkommen.	( 1 )	( 2 )	( 3 )	( 4 )
8) Für jedes Problem kann ich eine Lösung finden.	( 1 )	( 2 )	( 3 )	( 4 )
9) Wenn eine neue Sache auf mich zukommt, weiß ich, wie ich damit umgehen kann.	( 1 )	( 2 )	( 3 )	( 4 )
10) Wenn ein Problem auftaucht, kann ich es aus eigener Kraft meistern.	( 1 )	( 2 )	( 3 )	( 4 )

Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen auf Ihre **momentane Situation** zutreffen:

	<i>Trifft auf mich zu:</i>				
	<b>gar nicht</b>	<b>selten</b>	<b>teils teils</b>	<b>häufig</b>	<b>immer</b>
1.) In Situationen, in denen ich auf Probleme treffe, prüfe ich, ob meine Überzeugungen angemessen sind.	(1)	(2)	(3)	(4)	(5)
2.) Zur Erledigung meiner Aufgaben mache ich mir regelmäßig Pläne.	(1)	(2)	(3)	(4)	(5)
3.) Manchmal diskutiere ich schwierige Probleme mit mir selbst, bevor ich Sie angehe.	(1)	(2)	(3)	(4)	(5)
4.) Es interessiert mich, wie gut ich in meiner Arbeit bin.	(1)	(2)	(3)	(4)	(5)
5.) Ich neige dazu, hart zu mir selbst zu sein, wenn ich eine Aufgabe nicht gut gemacht habe.	(1)	(2)	(3)	(4)	(5)
6.) Bevor ich eine Arbeitsaufgabe angehe, stelle ich mir vor, wie ich sie erfolgreich durchführe.	(1)	(2)	(3)	(4)	(5)
7.) Ich mache mir in Regel bewusst, wie gut ich gerade in meiner Arbeit bin.	(1)	(2)	(3)	(4)	(5)
8.) Wenn ich etwas gut gemacht habe, belohne ich mich mit einem besonderen Ereignis wie einem guten Essen, Kino, Einkaufsbummel, etc.	(1)	(2)	(3)	(4)	(5)
9.) Ich plane gezielt Tätigkeiten, die mir Spaß machen.	(1)	(2)	(3)	(4)	(5)
10.) Ich arbeite auf spezifische Ziele hin, die ich mir selbst gesetzt habe.	(1)	(2)	(3)	(4)	(5)
11.) Wenn ich etwas nicht gut gemacht habe, bin ich sehr unzufrieden mit mir selbst.	(1)	(2)	(3)	(4)	(5)

Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen auf Ihre **momentane Situation** zutreffen:

	<i>Trifft auf mich zu:</i>				
	gar nicht	selten	teils teils	häufig	immer
12.) Wenn ich eine Arbeitsaufgabe erfolgreich abgeschlossen habe, belohne ich mich mit etwas, das mir Spaß macht.	(1)	(2)	(3)	(4)	(5)
13.) Ich benutze Notizen und Listen, um mich auf die Dinge zu konzentrieren, die ich erreichen muss.	(1)	(2)	(3)	(4)	(5)
14.) Ich suche mir meinen eigenen Lieblingsweg, um Dinge zu erledigen.	(1)	(2)	(3)	(4)	(5)
15.) Wenn ich eine Aufgabe besonders gut gemacht habe, gönne ich mir etwas.	(1)	(2)	(3)	(4)	(5)
16.) Ich denke oft über die Ziele nach, die ich mir für die Zukunft setzen will.	(1)	(2)	(3)	(4)	(5)
17.) Ich denke über meine Überzeugungen und Sichtweisen nach und beurteile sie.	(1)	(2)	(3)	(4)	(5)
18.) Manchmal stelle ich mir vor, wie ich wichtige Arbeitsaufgaben erfolgreich ausführe.	(1)	(2)	(3)	(4)	(5)
19.) Für mich ist es wichtig zu wissen, wie gut ich in meiner Arbeit bin.	(1)	(2)	(3)	(4)	(5)
20.) In schwierigen Situationen diskutiere ich mit mir selbst, um mit ihnen fertig zu werden.	(1)	(2)	(3)	(4)	(5)
21.) In schwierigen Situationen denke ich über meine eigenen Überzeugungen und Sichtweisen nach.	(1)	(2)	(3)	(4)	(5)
22.) Ich setze mir ständig spezifische Ziele für meine eigene Arbeitsleistung.	(1)	(2)	(3)	(4)	(5)

Bitte geben Sie in folgendem Fragebogen an, inwieweit die hier aufgelisteten Aussagen auf Ihre **momentane Situation** zutreffen:

	<i>Trifft auf mich zu:</i>				
	<b>gar nicht</b>	<b>selten</b>	<b>teils teils</b>	<b>häufig</b>	<b>immer</b>
23.) Wenn ich kann, versuche ich an meiner Arbeit Vergnügen zu finden, anstatt sie einfach fertig zu bekommen.	(1)	(2)	(3)	(4)	(5)
24.) Wenn ich schlechte Arbeit geleistet habe, neige ich dazu, mich selbst zu kritisieren.	(1)	(2)	(3)	(4)	(5)
25.) Manchmal male ich mir die erfolgreiche Durchführung einer Arbeitsaufgabe aus, bevor ich sie angehe.	(1)	(2)	(3)	(4)	(5)
26.) Ich benutze schriftliche Notizen, um mich daran zu erinnern, was ich erreichen muss.	(1)	(2)	(3)	(4)	(5)
27.) Bei schwierigen Aufgaben sage ich mir zunächst selbst, was ich als nächstes zu tun habe.	(1)	(2)	(3)	(4)	(5)

Bitte beantworten Sie die folgenden Fragen, indem Sie immer diejenige der beiden Antwortmöglichkeiten ankreuzen, von der Sie spontan meinen, dass sie am ehesten auf Sie zutrifft.

Dabei kann es sowohl vorkommen, dass Sie beide Antworten für unzutreffend halten, als auch umgekehrt - dass beide Antworten bisweilen auf Sie zutreffen. Sie sollten sich aber immer für diejenige der beiden Antworten entscheiden, die am ehesten auf Sie zutrifft.

Beispiel:

Wenn ich abends richtig durstig bin, dann

- A. trinke ich gern ein Glas Bier
- B. lösche ich meinen Durst mit Sprudel

Entscheiden Sie sich durch Ankringeln von entweder A oder B. Das eingekreiste A im folgenden bedeutet, dass es auf Sie eher zutrifft, dass Sie ein Glas Bier trinken, wenn Sie abends durstig sind, als ein Glas Sprudel.

**Bitte kreisen Sie zu jeder Frage immer diejenige der beiden Antwortmöglichkeiten (A oder B) ein, die für Sie eher zutrifft.**

- 1) Wenn ich etwas Wertvolles verloren habe und jede Suche vergeblich war, dann
  - A. kann ich mich schlecht auf etwas anderes konzentrieren
  - B. denke ich nicht mehr lange darüber nach
- 2) Wenn ich vier Wochen lang an einer Sache gearbeitet habe und dann doch alles misslungen ist, dann
  - A. dauert es lange, bis ich mich damit abfinde
  - B. denke ich nicht mehr lange darüber nach
- 3) Wenn ich bei einem Wettkampf öfter hintereinander verloren habe, dann
  - A. denke ich bald nicht mehr daran
  - B. geht mir das noch eine ganze Weile durch den Kopf



**Bitte kreisen Sie zu jeder Frage immer diejenige der beiden Antwortmöglichkeiten (A oder B) ein, die für Sie eher zutrifft.**

- 4) Wenn mir ein neues Gerät versehentlich auf den Boden gefallen ist und nicht mehr zu reparieren ist, dann
- A. finde ich mich rasch mit der Sache ab
  - B. komme ich nicht so schnell darüber hinweg
- 5) Wenn ich jemanden, mit dem ich etwas Wichtiges besprechen muß, wiederholt nicht zu Hause antreffe
- A. geht mir das oft durch den Kopf, auch wenn ich mich schon mit etwas anderem beschäftige
  - B. blende ich das aus, bis die nächste Gelegenheit kommt, ihn anzutreffen
- 6) Wenn ich nach einem Einkauf zu Hause merke, daß ich zuviel bezahlt habe, aber das Geld nicht mehr zurückbekomme,
- A. fällt es mir schwer, mich auf irgendetwas anderes zu konzentrieren
  - B. fällt es mir leicht, die Sache aus dem Kopf zu schlagen
- 7) Wenn meine Arbeit als völlig unzureichend bezeichnet wird, dann
- A. lasse ich mich davon nicht lange beirren
  - B. bin ich zuerst wie gelähmt
- 8) Wenn ich mich verfare (z.B. mit dem Auto, mit dem Bus, usw.) und eine wichtige Verabredung verpasse,
- A. kann ich mich zuerst schlecht aufraffen, irgendetwas anderes anzupacken
  - B. lasse ich die Sache erst mal auf sich beruhen und wende mich ohne Schwierigkeiten anderen Dingen zu
- 9) Wenn mir etwas ganz Wichtiges immer wieder nicht gelingen will, dann
- A. verliere ich allmählich den Mut
  - B. vergesse ich es zunächst einmal und beschäftige mich mit anderen Dingen

**Bitte kreisen Sie zu jeder Frage immer diejenige der beiden Antwortmöglichkeiten (A oder B) ein, die für Sie eher zutrifft.**

- 10) Wenn mich etwas traurig macht, dann
- A. fällt es mir schwer, irgendetwas anderes zu tun
  - B. fällt es mir leicht, mich durch andere Dinge abzulenken
- 11) Wenn einmal sehr viele Dinge am selben Tag mißlingen, dann
- A. weiß ich manchmal nichts mit mir anzufangen
  - B. bleibe ich fast genau so tatkräftig, als wäre nichts passiert
- 12) Wenn ich meinen ganzen Ehrgeiz daran gesetzt habe, eine bestimmte Arbeit gut zu verrichten und es geht schief, dann
- A. kann ich die Sache auf sich beruhen lassen und mich anderen Dingen zuwenden
  - B. fällt es mir schwer, überhaupt noch etwas zu tun
- 13) Wenn ich weiß, daß bald etwas erledigt werden muß, dann
- A. muß ich mir oft einen Ruck geben, um den Anfang zu kriegen
  - B. fällt es mir leicht, es schnell hinter mich zu bringen
- 14) Wenn ich nichts Besonderes vorhabe und Langeweile habe, dann
- A. kann ich mich manchmal nicht entscheiden, was ich tun soll
  - B. habe ich meist rasch eine neue Beschäftigung
- 15) Wenn ich ein schwieriges Problem angehen will, dann
- A. kommt mir die Sache vorher wie ein Berg vor
  - B. überlege ich, wie ich die Sache auf eine einigermaßen angenehme Weise hinter mich bringen kann

**Bitte kreisen Sie zu jeder Frage immer diejenige der beiden Antwortmöglichkeiten (A oder B) ein, die für Sie eher zutrifft.**

- 16) Wenn ich ein schwieriges Problem lösen muß, dann
- A. lege ich meist sofort los
  - B. gehen mir zuerst andere Dinge durch den Kopf, bevor ich mich richtig an die Aufgabe heranmache
- 17) Wenn ich vor der Frage stehe, was ich in einigen freien Stunden tun soll,
- A. überlege ich manchmal eine Weile, bis ich mich entscheiden kann
  - B. entscheide ich mich meist ohne Schwierigkeit für eine der möglichen Beschäftigungen
- 18) Wenn ich eigentlich zu Hause arbeiten müßte, dann
- A. fällt es mir oft schwer, mich an die Arbeit zu machen
  - B. fange ich meist ohne weiteres an
- 19) Wenn ich sehr viele wichtige Dinge zu erledigen habe, dann
- A. überlege ich oft, wo ich anfangen soll
  - B. fällt es mir leicht, einen Plan zu machen und ihn auszuführen
- 20) Wenn ich zu zwei Dingen große Lust habe, die ich aber nicht beide machen kann, dann
- A. beginne ich schnell mit einer Sache und denke gar nicht mehr an die andere
  - B. fällt es mir nicht so leicht, von einer der beiden Sachen ganz Abstand zu nehmen
- 21) Wenn ich etwas Wichtiges, aber Unangenehmes zu erledigen habe, dann
- A. lege ich meist sofort los
  - B. kann es eine Weile dauern, bis ich mich dazu aufraffe

**Bitte kreisen Sie zu jeder Frage immer diejenige der beiden Antwortmöglichkeiten (A oder B) ein, die für Sie eher zutrifft.**

- 22) Wenn ich vorhabe, eine umfassende Arbeit zu erledigen, dann
- A. denke ich manchmal zu lange nach, womit ich anfangen soll
  - B. habe ich keine Probleme loszulegen
- 23) Wenn ich vor einer langweiligen Aufgabe stehe, dann
- A. habe ich meist keine Probleme mich an die Arbeit zu machen
  - B. bin ich manchmal wie gelähmt
- 24) Wenn ich unbedingt einer lästigen Pflicht nachgehen muß, dann
- A. bringe ich die Sache ohne Schwierigkeiten hinter mich
  - B. fällt es mir schwer, damit anzufangen
- 25) Wenn ich ein neues interessantes Spiel gelernt habe, dann
- A. habe ich bald auch wieder genug davon und tue etwas anderes.
  - B. bleibe ich lange in das Spiel vertieft.
- 26) Wenn ich für etwas mir Wichtiges arbeite, dann
- A. unterbreche ich gern zwischendurch, um etwas anderes zu tun.
  - B. gehe ich so in der Arbeit auf, daß ich lange Zeit dabei bleibe.
- 27) Wenn ich einen interessanten Film sehe, dann
- A. bin ich meist so vertieft, daß ich gar nicht auf den Gedanken komme, zu unterbrechen.
  - B. habe ich zwischendurch trotzdem manchmal Lust, zu unterbrechen und etwas anderes zu machen.

**Bitte kreisen Sie zu jeder Frage immer diejenige der beiden Antwortmöglichkeiten (A oder B) ein, die für Sie eher zutrifft.**

- 28) Wenn ich mich lange Zeit mit einer interessanten Sache beschäftige (z.B. ein Buch, eine Bastelarbeit o.ä.), dann
- A. denke ich manchmal darüber nach, ob diese Beschäftigung auch wirklich nützlich ist.
  - B. gehe ich meist so in der Sache auf, daß ich gar nicht daran denke, wie sinnvoll sie ist.
- 29) Wenn ich einen interessanten Artikel in der Zeitung lese, dann
- A. bin ich meist sehr in das Lesen vertieft und lese den Artikel zu Ende.
  - B. wechsele ich trotzdem oft zu einem anderen Artikel, bevor ich ihn ganz gelesen habe.
- 30) Auf einer Urlaubsreise, die mir recht gut gefällt,
- A. habe ich doch nach einiger Zeit Lust, etwas ganz anderes zu machen.
  - B. kommt mir bis zum Schluß nicht der Gedanke, etwas anderes zu machen.
- 31) Wenn ich mit einem Nachbarn über ein interessantes Thema rede, dann
- A. entwickelt sich leicht ein ausgedehntes Gespräch.
  - B. habe ich bald wieder Lust, etwas anderes zu tun.
- 32) Wenn ich mit einer interessanten Arbeit beschäftigt bin, dann
- A. suche ich mir zwischendurch gern eine andere Arbeit.
  - B. könnte ich unentwegt weitermachen.
- 33) Wenn ich mich auf einer Party mit jemandem über ein interessantes Thema unterhalte, dann
- A. kann ich mich für lange Zeit in das Thema vertiefen.
  - B. wechsele ich nach einiger Zeit gern zu einem anderen Thema.

**Bitte kreisen Sie zu jeder Frage immer diejenige der beiden Antwortmöglichkeiten (A oder B) ein, die für Sie eher zutrifft.**

- 34) Wenn ich bei netten Menschen zu Besuch bin, dann
- A. können viele Stunden vergehen, ohne daß ich an andere Dinge denke.
  - B. habe ich auch bald wieder Lust, etwas ganz anderes zu tun.
- 35) Wenn ich etwas Interessantes lese, dann
- A. beschäftige ich mich zwischendurch zur Abwechslung auch mit anderen Dingen.
  - B. bleibe ich oft sehr lange dabei.
- 36) Wenn ich versuche, etwas Neues zu lernen, das mich sehr interessiert,
- A. vertiefe ich mich für lange Zeit in diese Sache.
  - B. unterbreche ich gern nach einiger Zeit, um mich anderen Dingen zuzuwenden.

## **Interviewleitfaden**

### **Einführung & Instruktion**

Vielen Dank, dass Du an unserer Befragung zur Selbstführung im Leistungssport teilnimmst. Unter Selbstführung versteht man die Fähigkeit, sich für langfristige Ziele zu motivieren und diese konsequent zu verfolgen. Dabei helfen Strategien, wie zum Beispiel die Auswahl von motivierenden Zielen und die Ausrichtung des Umfeldes auf diese Ziele hin. Im folgenden Interview möchten wir gerne mehr über Deine bewusst oder unbewusst eingesetzten Selbstführungsstrategien wissen. Dabei gibt es natürlich keine richtigen oder falschen Antworten, sondern uns ist wichtig Deine individuellen Selbstführungsstrategien zu erfahren.

Um Deine Antworten mit denen anderer Sportler vergleichen zu können, müssen wir allen Befragten die gleichen Fragen stellen und werden sie deshalb vorlesen. Das gesamte Interview dauert ca. 45 Minuten und Deine Daten werden natürlich streng vertraulich behandelt, anonymisiert bearbeitet und nicht an Dritte weitergegeben.

Hast Du noch Fragen? Zur Überprüfung und Ergänzung meiner schriftlichen Notizen möchte ich unser folgendes Gespräch gerne aufzeichnen. Bist Du damit einverstanden?

Im ersten Teil unseres Interviews geht es um **Deine Ziele** im Leistungssport.

### Phase des Abwägens

#### Anforderung: Ziel und Motivklärung

#### A.) Einstieg Szenario

*Ziele spielen im Leistungssport eine wichtige Rolle. Nur wenn man seine Ziele klar vor Augen hat kann man auch konsequent darauf hinarbeiten. Manchmal kann es allerdings vorkommen, dass man seine Ziele aus den Augen verliert und gar nicht mehr weiß, wofür man trainiert.*

**Frage 1:** Kennst Du eine solche Situation? (Filterfrage)

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

*Wenn ja:*

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?

**Frage 3:** In der Situation über die wir gerade gesprochen haben:

- a) Wie hast Du Dich gefühlt?
- b) Was hast Du gedacht?
- c) Wie hast Du spontan reagiert?

**Frage 4:** Hat Deine Reaktion dazu geführt, dass Dir Deine sportlichen Ziele wieder klarer waren?

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was ein Leistungssportler denn tun könnte, wenn er seine Ziele aus den Augen verloren hat.

**Frage 5:**

a) Welche Strategien haben Dir in der Vergangenheit geholfen Deine Ziele klar vor Augen zu bekommen?

b) Was würdest Du einem Athleten raten, der in einer Motivationskrise steckt und seine Ziele komplett aus den Augen verloren hat? Welche Strategien könnte er anwenden, um da wieder raus zu kommen?



### Phase des Abwägens

#### Anforderung: Ziele bewerten und sich für ein Ziel entscheiden

#### A.) Einstieg Szenario

Meistens hat man ja verschiedene Ziele (sportliche Ziele, private Ziele etc.). Da kann es vorkommen, dass diese Ziele in Konflikt miteinander geraten (d.h. sie schließen sich gegenseitig aus oder sind nur schwer zu vereinbaren). Wenn man nun unsicher ist, welches Ziel die höchste Priorität hat schwankt man hin und her und kann den Zielkonflikt nicht lösen.

**Frage 1:** Kennst Du eine solche Situation? (Filterfrage)

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

Wenn ja:

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?

**Frage 3:** In der Situation über die wir gerade gesprochen haben:

- a) Wie hast Du Dich gefühlt?
- b) Was hast Du gedacht?
- c) Wie hast Du spontan reagiert?

**Frage 4:** Hat Deine Reaktion dazu geführt, dass Du Dich klar und eindeutig für ein Ziel entscheiden konntest?

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was ein Leistungssportler denn tun könnte, damit er sich klar und eindeutig für ein Ziel entscheidet.

**Frage 5:**

a) Was hat Dir in der Vergangenheit schon geholfen, Dich klar und eindeutig für ein Ziel zu entscheiden und alle Energie darauf auszurichten?

b) Was würdest Du einem Athleten raten, der zwischen verschiedenen Zielen hin und her gerissen ist und sich nicht entscheiden kann?

Im zweiten Teil unseres Gesprächs geht es um darum **wie Du Deine sportlichen Handlungen planst**.

### Phase des Planens

#### Anforderung: Planungsfähigkeit

#### A.) Einstieg Szenario

*Planung wird dann besonders wichtig, wenn man ein langfristiges Ziel (bspw. über eine ganze Saison oder sogar über mehrere Jahre) angehen möchte. Oft hat man hierzu keine Standardlösung parat (Motto: Das mache ich wie immer) und kann daher nicht sofort loslegen. Man muss erst planen und sich überlegen wie gehe ich das an?*

**Frage 1:** *Kennst Du eine solche Situation? (Filterfrage)*

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

*Wenn ja:*

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** *Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?*

**Frage 3:** *In der Situation über die wir gerade gesprochen haben:*

- a) Wie hast Du Dich gefühlt?*
- b) Was hast Du gedacht?*
- c) Wie hast Du spontan reagiert?*

**Frage 4:** *Hat Deine Reaktion dazu geführt, dass Du besser wusstest, wie Du Dein Ziel konkret anpacken kannst?*

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir schon geholfen hat ein langfristiges Ziel zu planen.

**Frage 5:**

*a) Welche Strategien helfen Dir ein langfristiges Ziel zu planen?*

*b.) Was würdest Du einem Athleten raten, der zwar Ziele hat, allerdings überhaupt nicht in der Lage ist diese zu planen? Welche Strategien würden ihm helfen?*

Im dritten Teil unseres Gesprächs geht es darum die **Initiative zu ergreifen**. Das bedeutet, Du setzt das um was Du Dir vorgenommen hast.

### Phase der Handlungsinitiierung

#### Anforderung: Initiative ergreifen

#### A.) Einstieg Szenario

*Manchmal kann es vorkommen, dass man sich ein Ziel setzt (z.B.: „Ich will endlich meine Kondition verbessern“), dieses dann auch noch plant (z.B. „Nächste Woche gehe ich regelmäßig laufen“) und man es trotzdem nicht schafft loszulegen. Mit anderen Worten: Man bleibt buchstäblich auf seinen „guten Absichten“ sitzen.*

**Frage 1:** *Kennst Du eine solche Situation? (Filterfrage)*

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

*Wenn ja:*

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** *Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?*

**Frage 3:** *In der Situation über die wir gerade gesprochen haben:*

- a) Wie hast Du Dich gefühlt?*
- b) Was hast Du gedacht?*
- c) Wie hast Du spontan reagiert?*

**Frage 4:** *Hat Deine Reaktion dazu geführt, dass Du Deine Pläne in Taten umsetzen konntest?*

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir schon geholfen hat Pläne und Absichten in die Tat umzusetzen.

**Frage 5:**

*a) Welche Strategien helfen Dir Deine Pläne in Taten umzusetzen?*

*b) Was würdest Du einem Athleten raten, der sich immer viel vornimmt, es aber nie schafft diesen Plänen auch Taten folgen zu lassen?*

### Phase der Handlungsinitiierung

#### Anforderung: Selbstmotivierung

#### A.) Einstieg Szenario

*Im Leistungssport gibt es meistens bestimmte Trainingsinhalte (bspw. Kraft oder Konditionstraining) die zwar sein müssen, auf die man allerdings zumeist überhaupt keine Lust hast. Damit man regelmäßig, diese lästigen aber notwendigen Trainingsinhalte durchzieht muss man sich selbst anspornen oder salopp gesagt: Man muss sich selbst in den Hintern treten und sich aufraffen.*

**Frage 1:** Kennst Du eine solche Situation? (Filterfrage)

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

Wenn ja:

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?

**Frage 3:** In der Situation über die wir gerade gesprochen haben:

- a) Wie hast Du Dich gefühlt?
- b) Was hast Du gedacht?
- c) Wie hast Du spontan reagiert?

**Frage 4:** Hat Deine Reaktion geholfen, Dich für den ungeliebten Trainingsinhalt zu motivieren?

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir schon geholfen hat Dich selbst zu motivieren.

**Frage 5:**

a) Welche Strategien haben Dir in der Vergangenheit geholfen Dich für ein ungeliebtes Training zu motivieren?

b) Was würdest Du einem Athleten raten, dem es sehr schwer fällt, sich für ein ungeliebtes Training zu motivieren?

### Phase der Handlungsinitiierung

#### Anforderung: Emotionskontrolle – negative Emotionen kontrollieren

#### A.) Einstieg Szenario

*Bisher haben wir ja viel über Gedanken gesprochen und uns sozusagen den Kopf angeschaut. Nun soll es etwas mehr um Deine Gefühlslage gehen, denn Emotionen und das Bauchgefühl spielen eine wichtige Rolle im Leistungssport. Manchmal kann es vorkommen, dass man am Wettkampftag aufsteht und der Bauch signalisiert: „Heute ist nicht mein Tag“. Und umso näher der Wettkampf rückt, desto angespannter wird man und nimmt das schlechte Bauchgefühl immer deutlicher wahr.*

**Frage 1:** Kennst Du eine solche Situation? (Filterfrage)

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

Wenn ja:

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?

**Frage 3:** In der Situation über die wir gerade gesprochen haben:

- a) Wie hast Du Dich gefühlt?
- b) Was hast Du gedacht?
- c) Wie hast Du spontan reagiert?

**Frage 4:** Hat Deine Reaktion geholfen, dass Dein Gefühl besser wurde?

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was man machen könnte wenn negative Emotionen und ein schlechtes Bauchgefühl im Weg stehen.

**Frage 5:**

a) Welche Strategien haben Dir in der Vergangenheit schon geholfen „die Kurve zu kriegen“ und ein anfänglich negatives Gefühl im Bauch zum positiven zu wenden?

b) Was würdest Du einem Athleten raten, der seine Emotionen nicht steuern kann. Das heißt: Wenn er sich zu Beginn des Wettkampfs schlecht fühlt, steckt er in einem Loch und kommt da auch nicht mehr raus. Welche Strategien könnte er anwenden, um in Zukunft seine Gefühlslage besser im Griff zu haben?

Im vierten Teil des Interviews **legst Du los**. Das heißt Du führst Deine sportliche Handlung aus. (*Beispiel aus der Sportart des Athleten nennen → bspw.: „Du fährst Ski“*) Nun geht es darum, was einem da im Weg stehen kann.

### Phase des Handelns

#### Anforderung: Kognitionskontrolle

#### A.) Einstieg Szenario

*Beispielsweise berichten viele Leistungssportler, dass sie in wichtigen Wettkämpfen mit negativen Gedanken zu kämpfen haben. Selbstzweifel (z.B.: „blos nicht versagen“) kommen auf und es fällt schwer konzentriert beim Handeln zu bleiben, da negative Gedanken ablenken und man einfach nicht bei der Sache ist.*

**Frage 1:** Kennst Du eine solche Situation? (Filterfrage)

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

*Wenn ja:*

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?

**Frage 3:** In der Situation über die wir gerade gesprochen haben:

- a) Wie hast Du Dich gefühlt?
- b) Was hast Du gedacht?
- c) Wie hast Du spontan reagiert?

**Frage 4:** Hat Deine Reaktion dazu geführt, dass Du die negativen Gedanken reduzieren konntest?

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir in der Vergangenheit schon geholfen um mit negativen Gedanken besser klar zu kommen. .

**Frage 5:**

- a) Welche Strategien haben Dir in der Vergangenheit schon geholfen mit negativen Gedanken umzugehen?
- b) Welche Strategien haben Dir in der Vergangenheit schon geholfen Dich voll und ganz auf Dein Handeln zu konzentrieren?

### Phase des Handelns

#### Anforderung: beharrliche Zielverfolgung

#### A.) Einstieg Szenario

*Im Leistungssport kann es vorkommen, dass der Wille und das Durchhaltevermögen auf harte Proben gestellt werden. Zum Beispiel muss man bei harten und monotonen Trainingseinheiten die Zähne zusammenbeißen und es kann vorkommen, dass es körperlich und mental so hart und anstrengend wird, dass es sehr schwer fällt bis zum Ende durchzuhalten.*

**Frage 1:** Kennst Du eine solche Situation? (Filterfrage)

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

*Wenn ja:*

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?

**Frage 3:** In der Situation über die wir gerade gesprochen haben:

- a) Wie hast Du Dich gefühlt?
- b) Was hast Du gedacht?
- c) Wie hast Du spontan reagiert?

**Frage 4:** Hat Deine Reaktion dazu geführt, dass Du bis zum Schluss durchhalten konntest?

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir in der Vergangenheit schon geholfen hat Dein Durchhaltevermögen zu stärken, damit Du an einem Ziel dran bleiben konntest, auch wenn es schwierig wurde.

**Frage 5:**

a) Welche Strategien haben Dir in der Vergangenheit schon geholfen, Deine Ziele auch in Situationen zu verfolgen in denen viele andere ans Aufgeben oder an eine Kursänderung denken?

b) Was würdest Du einem Athleten raten, der es nicht schafft über einen längeren Zeitraum an einem Ziel dran zu bleiben? Er ist schnell entmutigt und gibt auf. Welche Strategien könnten ihm helfen an seinem Ziel dran zu bleiben?

Fünfter und letzten Teil unseres Gesprächs. Nun ist das Training oder der Wettkampf vorbei und Du musst Deine eigene Leistung beurteilen.

### Phase des Bewertens

#### Anforderung: Handlungsbewertung

#### A.) Einstieg Szenario

*Stell Dir vor Du musst nach dem Training oder nach dem Wettkampf Deine eigene Leistung einschätzen. Manchmal ist das einfach und eindeutig. Manchmal ist es jedoch auch recht schwierig. Man weiß zunächst überhaupt nicht: War das eine gute Leistung? War das eine schlechte Leistung?*

**Frage 1:** *Kennst Du eine solche Situation? (Filterfrage)*

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

*Wenn ja:*

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** *Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?*

**Frage 3:** *In der Situation über die wir gerade gesprochen haben:*

- a) Wie hast Du Dich gefühlt?*
- b) Was hast Du gedacht?*
- c) Wie hast Du spontan reagiert?*

**Frage 4:** *Hat Deine Reaktion dazu geführt, dass Du Deine Leistung besser einschätzen konntest?*

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir in der Vergangenheit schon geholfen hat Deine Leistung einzuschätzen

**Frage 5:**

- a) Was hat dir in der Vergangenheit schon geholfen, Deine Leistung einzuschätzen?*
- b) Was würdest Du einem Athleten raten, der immer wieder Probleme damit hat seine eigene Leistung einzuschätzen? Welche Strategien könnten ihm helfen?*



### Phase des Bewertens

#### Anforderung: Misserfolgsbewältigung

#### A.) Einstieg Szenario

*Nun möchte ich Dir noch einige Fragen zum Thema Misserfolg stellen, da der Umgang mit Enttäuschungen einfach zur mentalen Seite des Leistungssports dazugehört. Wahrscheinlich hast Du schon gemerkt, dass man je nach Situation unterschiedlich gut mit Misserfolgen klarkommt. Manche Misserfolge kann man gut abhaken und schnell wieder nach vorne blicken. Bei anderen fällt das schon schwerer. Man grübelt über den Misserfolg nach und es fällt einem schwer, wieder nach vorne zu blicken.*

**Frage 1:** *Kennst Du eine solche Situation? (Filterfrage)*

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

*Wenn ja:*

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** *Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?*

**Frage 3:** *In der Situation über die wir gerade gesprochen haben:*

- a) Wie hast Du Dich gefühlt?*
- b) Was hast Du gedacht?*
- c) Wie hast Du spontan reagiert?*

**Frage 4:** *Hat Deine Reaktion dazu geführt, dass Du den Misserfolg besser abhaken konntest?*

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir in der Vergangenheit schon geholfen hat einen Misserfolg hinter Dir zu lassen.

**Frage 5:**

*a) Was hat dir in der Vergangenheit schon geholfen, Misserfolge zu verarbeiten und nach vorne zu schauen?*

*b) Was würdest Du einem Athleten raten, der sich überhaupt nicht von einem Misserfolg lösen kann? Welche Strategien könnten ihm helfen?*

### Phase des Bewertens

#### Anforderung: Zielablösung

#### A.) Einstieg Szenario

Letzte Frage und es geht noch mal um Ziele. Nun allerdings darum Ziele zu wechseln oder auch Ziele aufzugeben. Das kann zum Beispiel dann wichtig sein, wenn klar wird, dass ein Ziel zu hoch gesteckt ist oder wenn man beschließt, „dass es so nicht weiter geht“. Vielen Menschen fällt es allerdings sehr schwer ein Ziel aufzugeben. Sie bleiben mit aller Kraft bei einem Ziel, obwohl es schon längst klüger wäre sich von diesem Ziel zu lösen.

**Frage 1:** Kennst Du eine solche Situation? (Filterfrage)

Antwort ja: weiter bei Frage 2

Antwort nein: weiter bei Frage 5

Erinnere Dich bitte an diese ganz konkrete Situation.  
Hast Du Sie klar vor Augen?

Wenn ja:

#### B.) Exploration der Situation (Verhaltens- und Bedingungsanalyse)

**Frage 2:** Bitte beschreibe diese Situation etwas genauer. Wie kam es dazu? Welche äußeren Faktoren aus Deiner Umgebung (bspw. andere Personen) spielten dabei eine Rolle? Und welche Faktoren bei Dir haben dazu beigetragen?

**Frage 3:** In der Situation über die wir gerade gesprochen haben:

- a) Wie hast Du Dich gefühlt?
- b) Was hast Du gedacht?
- c) Wie hast Du spontan reagiert?

**Frage 4:** Hat Deine Reaktion dazu geführt, dass Du Dich besser von Deinem Ziel lösen und neu orientieren konntest?

#### C.) Erfassung Selbstführungsstrategien

Gut, vielen Dank. Jetzt haben wir uns die Situation und Deine Reaktionen genau angeschaut. Nun möchte ich noch von Dir wissen, was Dir in der Vergangenheit schon geholfen Dich von einem Ziel zu lösen.

**Frage 5:**

a) Was hat dir in der Vergangenheit schon geholfen, Dich von einem nicht mehr realistischen oder erstrebenswerten Ziel zu lösen?

b) Was würdest Du einem Athleten raten, der immer wieder Probleme damit hat sich von nicht mehr realistischen oder erstrebenswerten Zielen zu lösen?

**Induktives Kategoriensystem „Selbstführungsfähigkeit im Spitzensport“**

<b>Kompetenz</b>	<b>Ausgewählte Strategien</b>	<b>Eingesetzte Techniken</b>	<b>Ankerbeispiele (Zitate)</b>
1. Selbstklärung	1.1 auf eigene Bedürfnisse achten	Bauchgefühl wahrnehmen	"in sich hinein spüren" "auf seinen Bauch hören"
	1.2 sich selbst reflektieren	die aktuelle Situation reflektieren reflektieren Trainerentscheidung	"über meine Ziele nachdenken" "mich selbst beobachten"
	1.3 über sich selbst Bescheid wissen	Eigene Stärken kennen Eigene Schwächen kennen Sein Umfeld kennen	Zu wissen, wer mich zu welcher Zeit unterstützen kann" "Wissen, was in einer solchen Situation geholfen hat"
2. Zielsetzung	2.1 Ziele bewerten	Ziele an objektiven Standards überprüfen und bewerten Kosten und Nutzen abwägen Eine Rangfolge der Ziele erstellen Realisierbarkeit überprüfen Wichtigkeit des Ziels überprüfen	„Meine gewählten Ziele analysieren“ „Genau prüfen, was ist wünschenswert, was ist realistisch“ „Eine Zielhierarchie aufstellen und das Chaos im Kopf strukturieren“ "klare Prioritäten setzen"
	2.2 Ziele definieren	klare Ziele setzen Vision definieren Etappenziele setzen	"das Rennen in Etappen aufteilen" „kleine, kurzfristige, erreichbare Ziele setzen“
	2.3 Ziele vergegenwärtigen	Ziel und Vision vor Augen führen Anreiz des Ziels vergegenwärtigen Zielvertrag abschließen	„Das Ziel klar vor Augen haben“ "Einen Vertrag mit sich selbst abschließen"
	2.4 Zielidentifikation stärken	Trainingsdokumentation führen Ziel emotional verankern	„Im Alltag Anker setzen, um mich an das Ziel zu erinnern“

Kompetenz	Ausgewählte Strategien	Eingesetzte Techniken	Ankerbeispiele (Zitate)
3. Planen	3.1 den Weg zum Ziel definieren	Aufgaben zur Zielerreichung definieren Vorsätzen bilden (wenn X dann Y...)	„Ich überlege mir, was ich machen muss, um das Ziel zu erreichen“
	3.2. die zur Verfügung stehende Zeit strukturieren	feste Zeiten festlegen Termine und Wochenplan festlegen	„klare Zeiten für Aktivitäten definieren und diese konsequent einhalten“
	3.3 Umfeldbedingungen beachten	Termine außerhalb des Sports einplanen	„Privatleben und Sport in Einklang bringen“
4. Gedankenmanagement	4.1 unterbrechen negativer Gedanken	Gedankenstopp Sorgenbox	"negative Gedanken ausblenden/verdrängen" " was war, beeinflusst nicht das jetzt“
	4.2 kognitive Umdeutung von Gedanken (Reframing & Relativierung)	Übung als Aufgabe definieren Aufgabe in einen anderen Kontext stellen Relativierung dysfunktionaler Kognitionen	"gegen einen besseren Gegner kann ich nur gewinnen" "Aufregung ist etwas ganz normales“
	4.3 Veränderung Aufmerksamkeitsfokus	auf die positiven Gedanken fokussieren Aufmerksamkeit auf die Tätigkeit lenken	"sich auf die positiven Gedanken konzentrieren"
	4.4 Entkatastrophisierung und Relativierung von Gedanken	Unrealistische Befürchtungen prüfen Relativierung	"das Leben geht weiter“ "es gibt noch wichtigeres als Sport"
	4.5 gedankliche Distanzierung	Ablenkung Information reduzieren	"sich nicht jeden Kommentar anhören" "die Situation von außen betrachten"
5. Emotionsmanagement	5.1 Emotionen wahrnehmen	Positive und negative Gefühle auseinander halten das Bauchgefühl wahrnehmen	„auf meinen Bauch hören“ „genau darauf achten wie ich mich fühle“
	5.2 Emotionen kontrollieren	Handeln Distanz zu Emotionen aufbauen	„ich bin nicht mein Gefühl“ „einfach loslegen“

Kompetenz	Ausgewählte Strategien	Eingesetzte Techniken	Ankerbeispiele (Zitate)
6. Umfeldmanagement	6.1 positives Trainingsumfeld schaffen	Umfeld gezielt aussuchen Umfeld angenehm gestalten	„einen optimalen Rahmen für das Training schaffen“ „genau überlegen, mit wem möchte ich heute trainieren“
	6.2 externe Unterstützung suchen	aktiv Tipps/Feedback einholen Vergleich mit anderen	"Ein Gespräch mit dem Trainer suchen und Feedback bekommen"
	6.3 Verbindlichkeiten schaffen	sich gegenseitig kontrollieren Trainingsgemeinschaften bilden	„sich verabreden“ „Termine ausmachen“
	6.4 Umfeldbarrieren reduzieren	von Umwelteinflüssen abschirmen Transparenz & Verständnis schaffen Sport und Privates trennen	"Alle wissen, dass Wettkampf ist" "Trainingspartner suchen, die Verlockungen reduzieren"
7. Wissen	7.1 Fachwissen	Faktenwissen über Trainingsprozesse	„zu wissen, dass Trainingsprozesse Zeit brauchen“
8. Selbstkontrolle	8.1 sicher entscheiden	bei einer einmal getroffenen Entscheidung bleiben	"die Entscheidung nicht in Frage stellen"
	8.2 diszipliniert sein	klare Prinzipien haben	"nicht nur die schönen Sachen machen" "über meinen Schatten springen"
	8.3 negative Selbstmotivierung	An ein unangenehmes Erlebnis denken Leistungsdruck aufbauen	"sich starke Gegner vorstellen" "an mein schlechtes Gewissen denken"
	8.4 sozialen Druck aufbauen	subjektive Verpflichtung gegenüber Dritten Personen aufbauen	"mich verpflichtet fühlen" "mein Trainer macht mir Druck"

Kompetenz	Ausgewählte Strategien	Eingesetzte Techniken	Ankerbeispiele (Zitate)
9. Selbst motivation	9.1 sich selbst verstärken	Erfolg und Ziel visualisieren sich selbst belohnen Instrumentalität Training positive Selbstgespräche führen	„sich daran erinnern, was man an seiner Sportart toll findet“ „Sinn im Training erkennen“ „Genau zu wissen, deshalb trainiere ich das“ „habe gut trainiert, klappt auch im Wettkampf“
	9.2 Umgebungsfaktoren nutzen	Wettkampfatmosphäre genießen sich mit anderen vergleichen gezielt Vorbilder suchen	„gute Konkurrenten beim Training beobachten“ „mich mit anderen messen“
	9.3 auf natürliche Belohnung fokussieren	ungeliebte Tätigkeit in einen anderen Kontext einbauen trainingsassoziierte Verstärker suchen	„Belohnungsaspekte der Tätigkeit wahrnehmen“ „an äußeren Gegebenheiten erfreuen“
	9.4 Selbstwirksamkeit	Aufmerksamkeit auf Stärken lenken Ressourcen identifizieren auf die eigene Kompetenz vertrauen	„von sich selbst begeistert sein“ „Auf das machbare fokussieren“
10. Akzeptanz & Regeneration	10.1 Akzeptanz / Achtsamkeit	Negative Emotionen nicht bewerten gelassen bleiben & sich Zeit lassen negative Erfahrungen und sich selbst annehmen im Hier und Jetzt sein	„Die Situation akzeptieren wie sie ist“ "Ärger und Enttäuschung zulassen" „Akzeptieren, in Dingen, die keine hohe Priorität haben nicht so gut zu sein“
	10.2 Erholung	Raum für Erholung schaffen gezielt eine Auszeit nehmen/ Abstand nehmen Aktivitäten außerhalb des Sports Spaß finden Pläne flexibel halten	"Aus dem Trott raus kommen" "Zielplanung flexibel lassen" „eine Pause machen“ „die Wettkampfstätte verlassen“ „in mich gehen und zur Ruhe kommen“

Kompetenz	Ausgewählte Strategien	Eingesetzte Techniken	Ankerbeispiele (Zitate)
11. Handlungsmanagement	11.1 Konzentration	auf die Aufgabe konzentrieren Umfeld ausblenden auf die Tätigkeit fokussieren/ irrelevantes ausblenden	"auf die nächste Handlung konzentrieren" „auf die nächste Tätigkeit konzentrieren“
	11.2 Visualisierung	Bewegung und Handlung vorstellen	"Handlung vor innerem Auge sehen"
	11.3 Verhaltensmanagement	Regelmäßigen Rhythmus etablieren Wettkampfstart mental durchgehen Handlungen strukturieren & Routinen etablieren	„einen klaren Wettkampfplan haben“ „den Ablauf beim Start noch mal mental durchgehen“
	11.4 Aktivierungsmanagement	in mich hinein spüren Spannungszustände wahrnehmen Entspannungsübung; Aktivität	"Merken dass das Herz schnell schlägt" „ruhig durchatmen“
12. Evaluation	12.1 Selbstmonitoring	Anforderungen analysieren aktuellen Leistungszustand überprüfen Zielfortschritt reflektieren Kosten Nutzen abwägen (Zielfortführung vs. Zielabbruch) Zielsetzung anpassen	„Inventur und Bestandsanalyse“ „Ursachenerklärung finden“ „mit der eigenen Leistung auseinandersetzen“ „Ein Trainingstagebuch führen“ "was passiert wenn ich dranbleibe, was passiert wenn ich aufhöre“
	12.2 Leistungsbewertung (Evaluation)	Perspektive des Trainers einnehmen Ergebnis und Leistung trennen Wettkampfstätte verlassen Plus/Minus Liste sich Feedback von außen holen sich an anderen Athleten orientierten Videoanalyse	„Ergebnis in den Kontext einordnen“ „nicht nur auf das Ergebnis schauen“ „Ruhe rein bringen“ "meine Leistung mit anderen vergleichen"

# Curriculum Vitae

## **CHRISTIAN HEISS**

geboren am 21. September 1978  
geboren in Freiburg im Breisgau

### **SCHULBILDUNG**

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09.1989 – 06.1998 Abitur am Zinzendorfgymnasium, Königsfeld

### **STUDIUM**

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10.1999 – 04.2005 Diplom-Psychologie an der Universität Koblenz–Landau  
Nebenfach: Wirtschaftswissenschaften

### **BERUFSTÄTIGKEIT**

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11.2005 – 06.2006 Universität Potsdam  
Wissenschaftlicher Mitarbeiter am Lehrstuhl für Sportpsychologie  
07.2006 – 07.2010 Technische Universität München  
Wissenschaftlicher Mitarbeiter am Lehrstuhl für Sportpsychologie  
07.2010 – heute Universität Potsdam  
Wissenschaftlicher Mitarbeiter im Landesteam Sportpsychologie  
Brandenburg

### **WEITERBILDUNG**

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06.2005 – 03.2008 Systemische Therapie und Beratung (SG), MAGST, Mannheim  
10.2006 – 03.2007 Zusatzausbildung Sportpsychologie (asp/bdp), Universität Bochum  
04.2008 Auftragnehmerlizenz der Deutschen Psychologen Akademie (DPA)  
zur berufsbezogenen Eignungsdiagnostik nach DIN 33430



# Eidesstattliche Versicherung

„Ich erkläre hiermit an Eides Statt, dass ich die vorliegende Arbeit selbstständig und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Die aus fremden Quellen direkt oder indirekt übernommenen Gedanken sind als solche kenntlich gemacht. Die Arbeit wurde bisher in gleicher oder ähnlicher Form keiner anderen Prüfungsbehörde vorgelegt und noch nicht veröffentlicht.“

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Christian Heiss