Self-Management Training (SMT): Theoretical and Empirical Foundations for the Development of a Metamotivational and Metavolitional Intervention Program

Hugo M. Kehr
Macquarie Graduate School of Management

& Lutz von Rosenstiel
University of Munich

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Research Office
Macquarie Graduate School of Management
Macquarie University
Sydney NSW 2109
Australia

Tel  612 9850 9016
Fax  612 9850 9942
Email gsm-research@mq.edu.au
URL http://www.gsm.mq.edu.au/research

Director of Research  Professor John A. Mathews
Manager, Research Office  Ms Kelly Callaghan

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Hugo M Kehr
Professor of Management
Macquarie Graduate School of Management
Macquarie University
Sydney NSW 2109, Australia

Tel  612 9850 9011 (direct)
Tel  612 9850 9016 (switch)
Fax  612 9850 9019
Email hugo.kehr@mgsm.edu.au
Abstract
The democratic plea to provide power to the people is inherently related to the idea of self-management, broadly understood as the ability of an individual to control one’s courses of action. However, existing approaches to self-management are limited insofar as they have not incorporated recent theoretical and empirical advances in research on motivation and volition. In an attempt to overcome this limitation, the present approach to self-management is based on the compensatory model of work motivation and volition (Kehr, in press-b), a theoretical framework that integrates recent research developments in dual system theories of motivation and volitional self-regulation. This paper describes how the compensatory model was used to derive a metamotivational and metavolitional intervention concept and develop a fresh approach to self-management training (SMT).

SMT involves six training modules: (1) goal setting and reducing goal conflicts, (2) increasing awareness of implicit motives, (3) enhancing volition, (4) reducing overcontrol, (5) enhancing organismic congruence and intrinsic motivation, and (6) identifying and overcoming barriers to action. For each module, a literature review is provided, supplemented with illustrative data from recent research with managers, and the intervention goals and methods are explained.

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1. Introduction

“Cui bono?” asked the reviewers from the German Research Foundation, when they evaluated our research proposal about theoretical and empirical examinations of motivational and volitional processes among managers. Shortly after, personnel officers contacted about arranging our empirical studies also asked "Cui bono?". So from the beginning of this research, we were concerned with possible applications. We soon realized that development of a self-management training program might be a suitable response to the understandable call for application of our motivational and volitional research.

This chapter presents the key achievements of our endeavor. We start by reviewing the literature on self-management and self-management training and identifying some limitations of existing approaches. We then sketch the basic version of the compensatory model of work motivation and volition (Kehr, in press-b), a theoretical framework for integrating recent research developments in dual system theories of motivation and volitional self-regulation. This framework is then used to derive the metamotivational and metavolitional intervention concept and develop the Self-Management Training (SMT).

SMT involves six training modules: (1) goal setting and reducing goal conflicts, (2) increasing awareness of implicit motives, (3) enhancing volition, (4) reducing overcontrol, (5) enhancing organismic congruence and intrinsic motivation, and (6) identifying and overcoming barriers to action. We end the chapter with a detailed description of the six training modules. For each module, we provide a literature review, supplemented with illustrative data from our research with managers. We also explain the intervention goals, and describe the methods and didactics used.

2. A Short Literature Review on Self-Management and Self-Management Interventions

From the perspective of motivational psychology (e.g., Heckhausen, 1984), self-management involves the ability to systematically enhance one’s motivation and volition and to overcome barriers to action (Kehr, 2001). With clinical applications in mind, Kanfer and Karoly (1982) proposed a more elaborate definition:

Self-management, while covering a wide range of processes, generally signifies the gradual assumption of control by the individual over cueing, directing, rewarding, and correcting his or her own behavior. The
term suggests active client participation in goal setting and evaluation, in attention to internal and external responses, and in the use of cognitive processes to increase adaptive effectiveness. (p. 576)

Being narrower than the definition of Baltes, Smith, and Staudinger (1992), yet broader than the conceptualizations of Brigham (1982), Carver and Scheier (1982), and Kossek, Roberts, Fisher, and Demarr (1998), this definition fits the theoretical concept underlying our approach to self-management. In particular, Kanfer and Karoly’s (1982) definition differentiates between internal and external processes, combines motivational and volitional elements, and conceptualizes self-regulation as an evolving ability. We adopt it in part because it does not dichotomize “existent” and “non-existent” aspects, which is important for intervention.

Numerous approaches have been proposed for enhancing self-management (e.g., Brigham, 1982; Carver & Scheier, 1982; Hackman, 1986; Kanfer & Schefft, 1988; Manz, 1986; Mills, 1983; Neck & Manz, 1992). An early example is Florin and von Rosenstiel’s (1976) program aimed at increasing self-management among students with test anxiety and achievement deficits. This program embraces ten flexibly combinable modules including time management, goal setting, and cognitive as well as systematic desensitization techniques to counteract test anxiety. The theoretical background for these self-management interventions are Bandura’s (1988, 1989; Bandura & Schunk, 1981) theories on self-regulation, Mahoney’s (1972; Mahoney & Thoresen, 1974) work on self-reinforcement, and Kanfer’s (Kanfer & Gaelick, 1986; Kanfer & Karoly, 1982) cognitive self-management therapy.

Goals of self-management interventions are diverse and include enhancing control of emotional reactions, fear, intrusive thoughts, conflicting live situations, negative self-reactions, and unwanted desires (Kanfer & Karoly, 1982). Such diverse goals require a variety of methods. Karoly (1995) listed over 50 methods for self-management interventions. Most of these self-management interventions combine some of the following elements: goal setting (Bandura, 1988; Locke & Latham, 1990), self-observation and self-reinforcement (Kanfer & Gaelick, 1986), imagination (Meichenbaum, 1978; Neck & Manz, 1992), and cognitive strategies to increase self-efficacy (Bandura & Schunk, 1981; Schwarzer, 1992).

Kanfer and Gaelick (1986) asserted clients, not trainers or therapists, are the most effective agents to change dysfunctional cognitions and behaviors; trainers and therapists should support self-awareness and change by offering guidance and feedback; self-observation and behavior modification is difficult and unpleasant, and thus requires strong training motivation of the client.
and stable alliances between client and trainer; and self-management intervention should not be restricted to resolving specific actual problems, but should aim to increase general competencies.

There has been little work on assessing self-management interventions. Frayne and Latham (1987; Latham & Frayne, 1989) is an oft-cited exception. This study showed that self-management training that integrated Locke and Latham’s (1984) goal setting and Bandura’s (1988, 1989) approach to self-regulation increased job attendance among unionized government employees.

With similar intervention based on goal setting and self-efficacy, Frayne and Geringer (2000) improved objective and subjective job performance of salespeople. In contrast, an intervention on career self-management by Kossek et al. (1998) was unsuccessful and even decreased career-oriented self-management. However, the scope of career self-management, “the degree to which one regularly gathers information and plans for career problem solving and decision making” (Kossek et al., 1998, p. 938), is narrower than the concept of self-management proposed here.

Wexley and Baldwin (1986) demonstrated that cognitive training interventions including goal setting are more successful than training lacking this element. Gist, Bavetta, and Stevens (1990) examined whether this success depends on goal setting per se or on interactions of goal setting with other self-management techniques. The authors concluded that an integrative approach is preferable, particularly for innovative tasks in unstructured environments.

Which elements should be involved in such an integrated approach? Some authors suggest new agendas for self-management to complement existing approaches and overcome their limitations. Kanfer (1990) proposed that self-management interventions should not only support cognitive mechanisms relevant for motivation – virtually all prior approaches include this aspect -, but also focus on affective components of motivational processes. Karoly (1993) suggested internal conflicts should get more attention in endeavors to enhance self-management. Kanfer and Heggestad (1997) say new approaches to self-management should not only involve internal conflicts but also self-regulatory mechanisms of conflict-resolution. They also advocate a differential approach to self-management intervention, with training tailored to the individual client’s personality structure, particularly to the person’s motivational traits and skills (Kanfer & Heggestad, 1997). Recently, Comelli and von Rosenstiel (2001) advocated a comprehensive approach to self-management, which involves, in addition to the concepts cited above, role (re-) interpretation, development of visions, reduction of over-motivation, maintaining equilibrium between job and private life, and workplace redesign.
Earlier approaches to self-management, however, were predominantly concerned with specific psychological phenomena that are easily consciously accessible and affected by straightforward cognitive interventions (e.g., the relatively clear goal construct and goal setting interventions). Some earlier approaches were atheoretical or based on “mini-theories,” resulting in simplistic recipes instead of being founded on a closed body of knowledge suitable for differential intervention.

These early approaches left little room for the observation of affective, subconscious, and dynamic processes, intrapersonal conflicts and corresponding self-regulatory conflict-resolution strategies. One likely reason for the limitations of earlier self-management concepts is that theoretical developments in basic psychological research during the last two decades have not been fully incorporated into applied approaches to self-management. Two key research trends are dual system approaches to motivation (Brunstein, Schultheiss, & Grässmann, 1998; Deci & Ryan, 2000; Emmons & McAdams, 1991; McClelland, Koestner, & Weinberger, 1989) and approaches to volitional self-regulation (Karoly, 1995; Kuhl, 2000; Metcalfe & Mischel, 1999; Muraven & Baumeister, 2000; Sokolowski, 1993). Attempts to develop self-management interventions that overcome the limitations of earlier approaches should be based on a comprehensive model that integrates these two research trends.

3. The Compensatory Model of Work Motivation and Volition

Overview of the Model

The compensatory model of work motivation and volition (Kehr, in press-b) combines two previously unrelated lines of research: the dual system approach to human motivation and research on volitional self-regulation. A detailed description of this model and its precursors can be found in Kehr (1999, in press-b,c). Here, we summarize the model and its background.

Figure 1 illustrates the compensatory model of work motivation and volition in its basic version¹ (see Kehr, 1999, in press-c). Structural components of the model, the implicit motive system and the explicit motive system, are represented as two circles. The dark circle on the right represents the explicit motive system, and the bright circle on the left represents the implicit motive system.

The intersection of the two circles in Figure 1 suggests partial overlap of implicit and explicit motive systems. This intersection is associated with absence of intrapersonal conflict. Hence,
volitional conflict-resolution is unnecessary. Instead, congruence of implicit and explicit motives is associated with intrinsic motivation.

In contrast, the non-overlapping sections of the two circles represent a discrepancy between implicit motives and explicit motives, where volitional regulation is necessary. The two non-overlapping sections in Figure 1 suggest a twofold function of volition. One function of volition supports explicit motives discrepant from implicit needs and motives (this corresponds to the outer sector of the dark circle). The second function of volition suppresses behavioral tendencies from aroused implicit motives incongruent with consciously represented, explicit motives (this corresponds to the outer sector of the bright circle). The following sections explain the components of the model and its functional properties in more detail.

**Implicit and Explicit Motive Systems**

Dual system approaches to human motivation distinguish between implicit and explicit motive systems (Brunstein et al., 1998; Deci & Ryan, 2000; Emmons & McAdams, 1991; McClelland et al., 1989). The distinction can be traced to pioneering work by Lewin (1926), Michotte and Prüm (1910), and Wundt (1896/1907). As early as 1910, Michotte and Prüm, the first experimentors on the issue, contrasted intrinsic motives (motifs intrinsèques) and extrinsic motives (motifs extrinsèques).

Based on extensive earlier work (Koestner, Weinberger, & McClelland, 1991; McClelland, 1985; McClelland, Atkinson, Clark, & Lowell, 1953; McClelland et al., 1989), McClelland (1995) isolated the differences between implicit and explicit motives. Implicit motives are associated with task-intrinsic interest and spontaneous behavior (Koestner et al., 1991). Because implicit motives are not consciously represented (McClelland et al., 1953), assessment requires projective measurement techniques such as the Thematic Apperception Test (TAT; Murray, 1943). According to McClelland (1995), the “big three” implicit motives are power, achievement, and affiliation. The power motive relates to dominance and social control (e.g., a manager having lunch with the CEO). The achievement motive arises when personal performance standards must be met or exceeded (e.g., a worker trying to increase output). Finally, the affiliation motive involves establishing and intensifying social relationships (e.g., an employee extending the break to finish a talk with a new colleague). Researchers also differentiate hope (i.e., approach) and fear (i.e., avoidance) motives (Atkinson, 1964; Higgins, 1998; Kanfer & Heggestad, 1997; Sokolowski,
Schmalt, Langens, & Puca, 2000). Conceptually, implicit motives relate to constructs such as *basic* and *organismic needs* (Ryan & Deci, 2000; Sheldon & Kasser, 1995), *immediate-return needs* (Martin, 1999), and *auto-motives* (Bargh, 1990).

In contrast, *explicit motives* are the reasons people self-attribute for their actions (McClelland et al., 1989). Explicit motives are strongly influenced by social demands (Koestner et al., 1991) and often appear as goals or duties (McClelland et al., 1989). Being consciously accessible, explicit motives can be assessed with questionnaires such as the Personality Research Form (PRF; Jackson, 1984). Among the constructs related to explicit motives, *goals* have received the most attention in the literature (Farr, Hofmann, & Ringenbach, 1993; Hollenbeck & Klein, 1987; Locke & Latham, 1990; von Rosenstiel, Kehr, & Maier, 2000) and hence this chapter primarily focuses on the goal construct.² Here, *explicit goals* represent other constructs rooted in the explicit motive system, such as *strivings* (Emmons, 1986), *intentions* (Gollwitzer, 1993), and *self-concepts* (Markus & Wurf, 1987).

Regarding empirical support for the overlap section in Figure 1, several authors reported small empirical correlations between implicit and explicit motive systems (Brunstein et al., 1998; Cantor & Blanton, 1996; Emmons & McAdams, 1991; King, 1995; Sokolowski et al., 2000). Despite these correlations, there is general agreement that implicit and explicit motives are conceptually distinct and functionally independent (Brunstein et al., 1998; McClelland et al., 1989), because they relate to different aspects of the person (Spangler, 1992). Being largely independent of each other, implicit and explicit motives give rise to behavioral tendencies that may conflict. Accordingly, McClelland et al. (1989) noted, “Whatever the reasons for discordance between implicit and explicit motives, it can certainly lead to trouble” (p. 700).

To-date, there is ample evidence that discrepancies between implicit and explicit motive systems can cause psychological conflicts and may result in impaired psychological well-being and physical health problems (Brunstein et al., 1998; Kehr, in press-a; McClelland et al., 1989; Ryan & Deci, 2000; Ryan, Sheldon, Kasser, & Deci, 1996). In contrast, congruence of implicit and explicit motive systems is intrinsically motivating, free of conflict, and fulfilling, hence establishing preconditions for happiness, well-being, and health (Brunstein et al., 1998; Deci & Ryan, 2000; Kehr, in press-c; Mischel, 1999; Ryan & Deci, 2000; Sheldon & Elliot, 1999; Sheldon & Kasser, 1995).
The larger the discrepancy between implicit and explicit motives (i.e., the smaller the overlap of the circles in Figure 1), the more behavioral conflict and dysfunctional consequences one may expect. Simply put, the less I know about my deeper needs and implicit motives, the higher the chances I will develop goals discrepant from my deeper needs and suffer from resulting conflicts.

**Volitional Regulation**

How do people handle and resolve such behavior-related conflict? Here, volitional self-regulation comes into play. Several researchers analyzed action-related, intrapersonal conflict and volitional conflict-resolution strategies that may resolve such conflict (Ainslie & Haslam, 1992; Bazerman, Tenbrunsel, & Wade-Benzoni, 1998; Kehr, in press-c; Kuhl, 1985, 2000; Kuhl & Goschke, 1994; Loewenstein, 1996; Metcalfe & Mischel, 1999; Mischel, Cantor, & Feldman, 1996; Sokolowski, 1993). The idea common to most volitional regulation approaches is that intrinsically motivated behavior (i.e., behavior in accord with basic needs and motives; Deci & Ryan, 2000) does not need volitional regulation (Karoly, 1995). In contrast, volition is needed to act against intrinsically motivated behavioral tendencies or to act in the absence of intrinsic motivation (Kehr, in press-c; Kuhl & Goschke, 1994; Sokolowski, 1993). Because volition compensates for insufficient motivation, the model is called the compensatory model.

Sokolowski (1993) made the distinction between motivation and volition explicit by contrasting “motivational regulation” and “volitional regulation”. Sokolowski speaks of motivational regulation if behaviors accord with the person’s actually aroused implicit motives. In contrast, behaviors not in accord with the person’s actually aroused implicit motives require volitional regulation. Using different terminology, Kuhl and Fuhrmann (1998) proposed a similar concept, when they contrasted “self-organization” (behavior energized by implicit motives) from “self-regulation” (behavior insufficiently energized by implicit motives and requiring volitional support).

 Constructs closely related to our concept of volition are willpower (Metsalfe & Mischel, 1999; Mischel, 1996), motivational skills (Kanfer & Heggestad, 1997), and self-control in its narrow sense (e.g., control to override or inhibit competing urges; Muraven & Baumeister, 2000; Rachlin, 1995). However, volition as used here is narrower than Binswanger’s (1991) volition or Latham and Locke’s (1991) self-regulation, because the latter terms subsume every goal-related effort (not just cases where internal conflicts must be resolved or unwanted impulses overridden).
Some researchers suggested coalescing dual system theories of motivation with approaches to volitional self-regulation and proposed that volitional regulation might be needed to handle discrepancies between implicit and explicit motive systems (Brunstein, Schultheiss, & Maier, 1999; Emmons, 1999; Epstein, 1998; Kehr, 1999, in press-c; Ryan et al., 1996). Ryan et al. (1996) noted that extrinsic actions resulting from goals discrepant to basic needs require volitional initiation. Conversely, Karoly (1995) maintained that volitional regulation is unnecessary if there are no such discrepancies. He wrote, “Clearly, if a person’s actions automatically or naturally matched her or his intentions, there would be little need for a process model of volition” (Karoly, 1995, p. 262).

Figure 1 suggests volitional regulation has two functions: to support motive-discrepant goals (corresponding to the outer sector of the dark circle) and to suppress unwanted implicit impulses from aroused implicit motives (corresponding to the outer sector of the bright circle). Several lines of evidence suggest such distinction (Atkinson & Birch, 1970; Forgas, Johnson & Ciarrochi, 1998; Mischel, 1996; Norman und Shallice, 1986). Atkinson and Birch (1970), for example, contrasted “inhibitory” forces that suppress behavioral impulses and “instigating” forces that enforce activated goal representations.

For this twofold task, an array of volitional strategies can be employed (Kehr, in press-c; Kuhl, 1985; Kuhl & Fuhrmann, 1998; Metcalfe & Mischel, 1999). These include motivation control (i.e., developing positive goal-related fantasies in the face of difficulties; cf. Lewin, 1926; Mischel, 1996; Oettingen, Pak, & Schnetter, 2001), emotion control (i.e., adjusting emotional states to the demands of the current intention; cf. Bagozzi, Baumgartner, & Pieters, 1998; Erber, 1996; Forgas et al., 1998; Gross, 1999) attention control (i.e., focusing attention on aspects of the situation relevant to the current intention; cf. Atkinson & Birch, 1970; Egeth & Yantis, 1997; James, 1890/1981; Norman & Shallice, 1986), and decision control (i.e., employing mechanisms to decide quickly and avoid rumination; cf. Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999; Michotte & Prüm, 1910; Tyszka, 1998).

Like other psychological processes, volitional regulation may have deficiencies. Volition (a) can be ineffective, (b) consume resources, (c) have unwanted side-effects, and (d) be dysfunctionally associated with rigid self-control. With respect to (a), it was found that emotions (Morris & Reilly, 1987) and attentional processes (Wegner, 1994) are often uncontrollable. With respect to (b), recent experiments show that after volitional acts (e.g., eating radishes rather than chocolates), subsequent
acts of volition (e.g., persisting in unsolvable puzzles) are more likely to fail (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Muraven & Baumeister, 2000). This led to a resource-based concept of “volitional strength”, where volitional acts consume and ultimately “deplete” volitional strength. Regarding (c), Kanfer and Ackerman (1989) proposed that volitional activities block cognitive capacities and make them unavailable for other task-related activities. Negative side-effects of volition include strain, emotional distress, maladaptive behavior, and behavioral excesses after relapse (Cantor & Blanton, 1996; Polivy, 1998). This leads to (d), the hazards of rigid self-control (“overcontrol”; Asendorpf & Van Aken, 1999). People who constantly overemphasize goals, ignore deeper needs, and use dysfunctional volitional strategies (e.g., negative fantasies, extreme internal pressure) may suffer from impaired well-being and alienation (Deci & Ryan, 2000; Kuhl & Fuhrmann, 1998; Polivy, 1998).

Empirical Support for the Compensatory Model

Recent studies (Kehr, in press-a, 2003a) tested a crucial proposition of the compensatory model. The twofold function of volition suggests volitional self-regulation is needed to bridge discrepancies between implicit and explicit motives or suppress unwanted impulses from implicit motives. The first function of volition was examined by Kehr (in press-a) and the second function of volition was the objective of Kehr (2003a).

The underlying idea of Kehr (in press-a) was that discrepancies between implicit and explicit motives cause behavioral conflict requiring conflict-regulation by volitional mechanisms. Adopting a resource based concept of volition (Baumeister et al., 1998; Muraven & Baumeister, 2000), it may be expected that discrepancies between implicit and explicit motives require volitional resources which may ultimately lead to a “depletion” (Baumeister et al., 1998; Muraven & Baumeister, 2000) of the person’s volitional resources.

Kehr’s (in press-a) study used a longitudinal design to strengthen causal inference. Study participants were managers from several companies representing diverse industries. Implicit motives were measured using the Multi-Motive-Grid (MMG; Sokolowski et al., 2000), a semi-projective diagnostic tool measuring the “big three” (McClelland, 1995) implicit motives: achievement, affiliation, and power/dominance (Sokolowski et al., 2000). Similar to the TAT, the MMG uses pictorial stimuli. In contrast to picture-story tests such as the TAT, the MMG does not require participants to write stories, but to choose statements fitting a particular picture. Motive scores are
the sum of scores for 14 pictures. Reliability, validity, and acceptance of the MMG, which has a relatively long research tradition (Schmalt, 1976), are satisfactory (Sokolowski et al., 2000). MMG scores predict task enjoyment and intrinsic motivation (for a summary, see Sokolowski et al., 2000), so it seems safe to conclude that the MMG relates to the implicit, not the explicit, motive system (cf., McClelland et al., 1989).

Explicit motives were assessed by three subscales of the Personality Research Form (PRF; Jackson, 1984): dominance, affiliation, and achievement. PRF uses self-ascriptions (e.g., “I try to control others rather than permit them to control me”) related to the explicit motive system (McClelland, 1985; McClelland et al., 1989). Dependent measures were volitional strength (measured with subscales of the Volitional Components Inventory, VCI; Kuhl & Fuhrmann, 1998) and subjective well-being (using a composite of positive and negative affect; cf. Brunstein, 1993).

Kehr's (in press-a) results can be summarized as follows: Discrepancies between the managers’ implicit and explicit motives were associated with reduced volitional strength. Sstructural equation modeling confirmed that the discrepancy/well-being relation was fully mediated by reduced volitional strength volitional strength.

Another longitudinal field study with managers (Kehr, 2003a) intended to replicate these findings and extend their scope to implicit fear motives. The idea was that implicit fear motives might cause avoidance-related behavioral impulses that conflict with other approach-related goals of the person and thus require suppression, the second function of volition.

Implicit fear motives were measured with an aggregate of the three fear-related subscales of the MMG (i.e., fear of failure, fear of rejection, and fear of loss of control). As predicted, managers high on implicit fear motives had reduced volitional strength and subsequently decreased well-being. Structural equation modeling again showed that the reduction in volitional strength fully mediated the effects of fear motives on decreased well-being.

The results corroborate the basic proposition of the compensatory model: Dysfunctional motive constellations – be it implicit/explicit motive discrepancies as in Kehr (in press-a) or implicit fear motives as in Kehr (2003a) - require volitional support and deplete the person’s volitional resources. Taken together, the studies substantiate the twofold function of volition, an essential element of the compensatory model.
4. Deriving the Concept of Self-Management Training (SMT) from the Model

Self-Management Training (SMT), based on the compensatory model of work motivation and volition, is primarily employed in management training programs (Kehr, 2001, 2003d) but can also be used for self-instruction (Kehr, 2002).

We explain how the concept of metamotivation and metavolition, underlying the SMT, was derived from the compensatory model and then describe how the concept of metamotivation and metavolition was transformed into the six training modules of the SMT. Finally, we describe the training procedure.

Metamotivation and Metavolition

Metacognitive processes assist people in improving behavioral competencies (Brown; 1978; Heckhausen, 1984; Kuhl & Kraska, 1989). Because metacognition covers a wide range of phenomena, it is necessary to focus on metaprocesses pertaining to motivational approaches to self-management (cf., Heckhausen, 1984).

According to the compensatory model of motivation and volition, behavior is either intrinsically motivated or requires volitional support, in line with Sokolowski’s (1993) distinction between motivational regulation and volitional regulation. Analogously, metamotivational and metavolitional processes may be contrasted. In a first terminological approximation, metamotivation denotes metacognitive strategies to improve motivational processes, and metavolition refers to metacognitive strategies to improve volitional processes.

More specifically, metamotivational strategies aim to increase intrinsic motivation by reducing discrepancies between implicit and explicit motives (Schultheiss & Brunstein, 1999) and to enhance the person’s “organismic congruence” (Sheldon & Kasser, 1995; cf. Ryan et al., 1996). For example, a person high on implicit affiliation motive may be encouraged to develop career goals involving extensive contact with other people. In contrast, metavolitional techniques aim to enhance effectiveness of volitional strategies and reduce their resource consumption and negative side-effects. For example, people may be encouraged to develop positive instead of negative self-regulatory fantasies (cf., Kehr, 2003c).

Metavolitional strategies thus support goals and enforce goal implementation, often by suppressing competing behavioral impulses (Gollwitzer & Bayer, 1999) originating in aroused implicit motives (McClelland et al., 1989). Metamotivational strategies, in contrast, support implicit motives and organismic needs and increase the chances of need satisfaction. This may
require changing or reprioritizing goals, particularly goals that are primarily socially determined (Koestner et al., 1991) and externally regulated (Deci & Ryan, 2000). By increasing thematical congruence between implicit and explicit motives (the overlap section in Figure 1), metamotivation decreases the probability that volitional regulation will be needed to overcome future conflicts from discrepancies between implicit and explicit motives. So, metavolition improves volitional strategies to handle behavioral conflict, whereas metamotivation avoids behavioral conflict and the necessity of volition. Hence, metamotivation is the more fundamental and far-reaching strategy.

However, achieving perfect integration of implicit and explicit motives is unlikely. Even people with relatively high integration occasionally experience situations requiring volitional support. In these situations, it is advantageous to use a flexible array of volitional strategies and to be aware of costs and drawbacks associated with these strategies. Thus, metavolition complements any metamotivational approach.

Historically, the distinction between metavolition and metamotivation can be traced to Ach (1935) and Lindworsky (1923a). Ach (1935) contrasted “volitional effort” and “modification of goals”, and Lindworsky (1923a) proposed that interventions to enhance willpower will only be successful if accompanied by systematic development of the person’s goals. A similar account for the interplay of metamotivation and metavolition can be found in Polivy (1998), who wrote, “The goal is twofold; one should act in accordance with one’s motives, while balancing any conflicting desires or external constraints“ (p. 185). Additional concepts similar to the distinction between metamotivation and metavolition are offered by Neck and Manz (1996), who discriminated between establishing new self-directions on the one hand and self-motivational strategies on the other, or by Rosenbaum (1998), who differentiated between opening and closing skills.

**Overview of the Concept of Self-Management Training (SMT)**

Here, we discuss how SMT relates to the compensatory model and the concept of metamotivation and metavolition, and we give an overview of SMT and the six training modules that comprise it. A more thorough description of the theoretical and empirical background of each module will be given in the next section.

The six SMT modules are: (1) goal setting and reducing goal conflicts, (2) increasing awareness of implicit motives, (3) enhancing volition, (4) reducing overcontrol, (5) enhancing organismic congruence and intrinsic motivation, (6) identifying and overcoming barriers to action.
Figure 2 illustrates how these six modules relate to the compensatory model. SMT starts by introducing the basic model (Figure 2a) to the participants. Instead of using the terms implicit and explicit motives, the concept is introduced with the metaphor of “head” and “heart” (cf., Epstein, 1994; see also Weiner, 1992, p. 343 f., for the benefits of metaphors). In general, “head” is associated with rational thoughts, whereas “heart” is associated with feelings and emotions. This closely resembles the underlying concept of explicit and implicit motives.4

Participants are then asked in which direction they would shift the two circles in Figure 2a (i.e., what these circles represent), if this were possible. Most people say one of the circles (or both) should be moved towards the other; intuitively, the intersection seems to promise positive outcomes with respect to personal success and well-being. Participants are also asked how they would realize this intended change. Most participants agree that the initial step should be to analyze what the two circles represent, in order to more fully understand the actual situation.

This is exactly what is intended with the first two training modules. Modules 1 and 2 concentrate on structural components of the compensatory model. Module 1 (explicit goals; cf. Figure 2b) comprises goal setting techniques (Bandura, 1988; Latham & Locke, 1991), and identification and resolution of goal conflicts by reprioritizing goals (Cantor & Blanton, 1996; Emmons, King, & Sheldon, 1993). Module 2 (implicit motives; cf. Figure 2c) aims at enhancing awareness of implicit motives, consistent with the view that implicit motives should not be ignored (Bazerman et al., 1998; Deci & Ryan, 2000; McClelland et al., 1989).

Modules 3 and 4 correspond to the concept of metavolition. Module 3 (volition; cf. Figure 2d) discusses motive-goal discrepancies and the twofold function of volition. Survey-feedback is given regarding the participant’s volitional strength (Kuhl & Fuhrmann, 1998) and various exercises and homework assignments are recommended to enhance volition (cf., Erber & Erber, 2000; Mischel, 1996; Kuhl, 1998). Module 4 (overcontrol; cf. Figure 2e) illuminates rigid self-control, the “dark side” of volition. Survey-feedback is given regarding the person’s inclination to rigid self-control (Kuhl & Fuhrmann, 1998), and exercises are employed to counteract this inclination and enhance self-determination (Deci & Ryan, 2000).

Finally, Modules 5 and 6 epitomize the concept of metamotivation. Module 5 (organismic congruence and intrinsic motivation; cf. Figure 2f) intends to enhance intrinsic motivation by achieving “organismic congruence” (Sheldon & Kasser, 1995). Visualization techniques (Schultheiss & Brunstein, 1999) are employed that, metaphorically speaking, aim at enlarging the
overlap in Figure 2f. If this endeavor meets difficulties, Module 6 (overcoming barriers) provides analysis of whether intrapersonal conflict, or external causes are responsible. Appropriate strategies are developed to overcome these difficulties.

**Training Procedure**

SMT covers three training phases: (1) preparatory phase, (2) training phase, and (3) transfer phase.

**Preparatory phase.** Informal interviews with personnel managers and potential participants establish a first impression of current training needs. Potentials and limits of SMT are explained to provide realistic training preview (Hicks & Klimoski, 1987). Systematic assessment of training needs (Hesketh & Bochner, 1994; Tannenbaum & Yukl, 1992) is achieved from pre-training questionnaires distributed about four weeks prior to SMT. The questionnaires assess goals (Brunstein et al., 1998), goal conflicts (Emmons & King, 1988; Kehr, 2003b), implicit motives (Sokolowski et al., 2000), volitional strength and overcontrol (Kuhl & Fuhrmann, 1998), and expectations regarding SMT (Tannenbaum & Yukl, 1992). This assessment sensitizes participants about issues relevant to SMT, which is known to enhance training motivation (Smith-Jentsch, Jentsch, Payne, & Salas, 1996).

**Training phase.** SMT is conducted as a two- or three-day program. Training length depends on client preferences, prior experiences of participants with respect to personality trainings, and the need for practical exercises. Optimal group size is between eight and twelve participants. Participants typically hold management positions in various companies from diverse sectors, and are often heterogeneous with regard to age, gender, educational background, function, and hierarchical level.

SMT starts with a mutual presentation and warm-up, followed by a general introduction to motivational psychology. To establish realistic expectations for training (Kanfer, Reinecker, & Schmelzer, 1996, p. 183), pre-training expectations are discussed, the roles of trainer and participants are clarified, and training contents and procedures are outlined.

Enhancing client insight and self-awareness by lecturing and providing supplementary exercises, the trainer’s role is that of a “catalyst” (Kanfer et al., 1996, p. 156), triggering cognitive and behavioral changes in the client. SMT aims at enhancing problem awareness, motivation for change, and strategy knowledge. In all these processes, self-observation is vital (Bandura & Schunk, 1981; Brigham, 1982; Carver & Scheier, 1982; Snyder, 1974). To improve these skills
and to sensitize for particular problems, SMT contains several self-observation exercises, mostly as homework assignments (Epstein, 1998; Kanfer et al., 1996) and diary methods (Conway & Briner, 2002). Training contents are transmitted by metaphors and practical examples, without sacrificing the scientific foundation of the intervention. Multiple methods intensify the training, including lectures, plenary discussions, small group exercises, case studies, and simulations.

Modules 1 to 4 provide individual and confidential feedback of questionnaire results. Several studies show training motivation is enhanced if participants perceive the measurements as accurate (see, for an overview, Tannenbaum & Yukl, 1992), so instruments are carefully explained and average scores from earlier surveys are provided for comparison purposes. As suggested by Meichenbaum (1993), individual scores are interpreted by stressing the adaptive potential, avoiding pathological distortions or catastrophic interpretations.

After Module 4, time is set aside for self-study and individual exercise, with opportunity for individual consultation with the trainer. This leaves room for private themes less suited for plenary discussion. To stay on track, the trainer tries to avoid departing from the theoretical background of the compensatory model and the empirical data provided by the client’s questionnaire results.

Modules 5 and 6 are a comprehensive visualization exercise to integrate earlier elements of the training (for details, see below). Then, a summary of the SMT is given, using Figure 2 to follow the main themes of the training. Participants are encouraged to build training alliances (Hesketh & Bochner, 1994) and develop personal transfer intentions, to increase training transfer (Hesketh, 1997). Satisfaction with training and transfer intentions are assessed with a post-training questionnaire.

Transfer phase. Training transfer depends on practice with the learned exercises and techniques (Priemuth, 2002). However, there can be resistance to self-management exercises, even those experienced as beneficial (cf., Heatherton & Vohs, 1998). Generally, personality intervention requires high motivation for change (Kanfer et al., 1996) and, at the same time may induce stress (Weinberger, 1994) and resistance (Kanfer et al., 1996; Pervin, 1994), decreasing the needed motivation. This is a dilemma, because it is difficult to control and regulate the aftertreatment phase, and external control is incompatible with the liberal and egalitarian concept of self-management (Kanfer et al., 1996).

Some measures help alleviate the dilemma. The training manual, provided at the onset of the training, summarizes the theory and contains all SMT exercises. It is particularly relevant to the
participants, because it bears their personal notes and individual results from the pre-training questionnaires, increasing the chances that it will be used in the transfer phase. Then, about three month after SMT, a follow-up questionnaire is distributed, containing instruments similar to the pre-training questionnaire. Commitment to transfer intentions is higher if a follow-up survey is expected (Baldwin & Magjuka, 1991), so this follow-up is announced at the end of the training program. With a second feedback on individual results, participants are confronted again with the contents of the training. In addition, they may analyze changes between pre- and post-training measures, the relation between changes and the exercises employed, and the desirability of additional exercises. In addition, summary analyses of pre-and post-training results assist the personnel department in evaluating the training program (Hesketh, 1997).

5. The Six SMT Modules in Detail

The remainder of this chapter describes the six SMT modules in detail. For each module, we review related literature, provide data from our management studies, and explain intervention aims, methods, and didactics employed. Although the compensatory model and supporting studies (Kehr, 2003a, in press-a) pertain to all SMT modules, each module represents a particular perspective on self-management and involves a specific theoretical background requiring separate explication. In addition, we review research demonstrating the relevance of each module for management behavior. However, space restrictions prevent explanation of intervention techniques in full detail. Ready-to-use descriptions of SMT intervention techniques are offered in Kehr (2002), and references for these techniques can be found in Kehr (in press-c).

Module 1: Goal Setting and Reducing Goal Conflicts

Module 1 combines elements of goal setting theory (Locke & Latham, 1990) and approaches to goal conflicts (Emmons & King, 1988; Kehr, 2003b).

Literature. The notion that specific and challenging goals are associated with increased output (when compared to diffuse or do-best goals), is common to goal research (Locke & Latham, 1990; Locke & Kristof, 1996; Wegge, 1998). Less is known about goal conflict. However, because people generally strive for more than one goal at a time (Broadbent, 1985), conflict among goals is common (Emmons & King, 1988). Goal conflicts may have detrimental consequences for goal attainment (Cantor & Blanton, 1996; Emmons & King, 1988).
Four mechanisms, in particular, may account for the negative relation between goal conflict and goal attainment. First, conflicting goals compete for the person’s resources (Cantor & Blanton, 1996; Carver & Scheier, 1990; Emmons & King, 1988; Miller, Gallanter, & Pribram, 1960; Sheldon & Kasser, 1995), so fewer resources remain for any particular goal. Second, goal conflicts may trigger dysfunctional thought processes (Emmons & King, 1988, Study 3) that occupy cognitive capacity. Third, conflicting goals can directly impair each other (Carver, 1996; Miller, 1944), increasing the probability that, even if one goal is successfully pursued or reached, progress on the remaining goals may suffer (Harlow & Cantor, 1994). Fourth, goal conflicts can lead to reprioritization (Campion & Lord, 1982; Cropazano, Citera, & Howes, 1995; Klein, 1989), decreasing the chances of achieving any particular goal.

Negative influences of goal conflicts on goal attainment are likely to be mirrored in the person’s well-being, and there is evidence for negative effects of goal conflict on well-being (Emmons, 1986; 1999; Emmons & King, 1988). However, some authors speculated that goal conflict can also activate cognitive and motivational mechanisms to pave the way for creative solutions (Sheldon, 1995), or prompt reprioritizing processes or plan revision (Cropazano et al., 1995; Klein, 1989). If these processes help resolve initial goal conflicts, well-being might not be impaired at all. Accordingly, Emmons (1999) and Emmons and King (1988) recognized positive and negative affective consequences of goal conflicts.

Empirical data from the management domain. We felt no need to study the well-sustained main propositions of goal setting theory (Locke & Latham, 1990), but Kehr (2003b) studied effects of goal conflict among managers on goal attainment and well-being.

The notion that goal conflicts inhibit attainment of the goals causing the conflict (Emmons & King, 1988; McKeeman & Karoly, 1991) seems highly plausible if not tautological, given the definition of goal conflict as a situation where “achieving one valued goal inhibits achieving another desired goal” (Lee, Locke, & Latham, 1989, p. 300). To strengthen the argument for inhibiting effects of goal conflicts and avoid tautological reasoning, the principle aim of the Kehr (2003b) study was to show that preexisting goal conflicts also inhibit progress toward newly set goals. An additional aim was to explore the relation between goal conflict and well-being.

A longitudinal field study was conducted with managers from different companies. The main results were that preexisting goal conflict significantly impaired attainment of newly set goals, but goal conflict had no negative effect on well-being. Nevertheless, there was a significant interaction
of goal conflict and goal attainment on changes in positive affect. High initial goal conflict
obviously shielded people against declines in positive affect after failure and after enduring
conflict, consistent with the notion of a buffering effect (cf. Linville, 1987) where goal conflicts
provide a buffer against fluctuations in well-being. This supports the idea that goal conflicts have a

Intervention. After the “head” and “heart” metaphor is introduced, it is explained that goals
only pertain to the explicit motive subsystem (“head”) and are not the only behaviorally relevant
agent (cf. Figure 2b).

As in earlier training programs (Bandura, 1988; Frayne & Latham, 1987; Neck & Manz,
1992), SMT includes a goal setting exercise. In line with Cantor and Blanton (1996), both private
and professional goals are considered. Participants are confronted with their goals expressed in the
pre-training questionnaire. After some theoretical input (most participants are already familiar with
the basics of goal setting theory), participants analyze, individually and then with a partner,
whether their personal goals are sufficiently specific, challenging, and realistic. If necessary,
specification and reformulation of goals are encouraged.

Consistent with the literature (Cantor & Blanton, 1996; Emmons, King, & Sheldon, 1993;
Kanfer et al., 1996; Norman & Shallice, 1986; Reither & Stäudel, 1985), Module 1 also aims to
identify and reduce goal conflict by reprioritizing goals. Using research on assessment of goal
systems (Brunstein, 1993; Emmons & King, 1988; Wadsworth & Ford, 1983), a method was
developed to diagnose goal conflict (for a more precise description, see Kehr, in press-c). After
ranking goals for subjective importance, participants arrange their goals in a two-dimensional
matrix and quantify all intergoal effects.

This instrument serves as a heuristic for identifying reprioritization needs. Sums of rows
represent the average effects of a particular goal on the other goals. Goals with a positive sum in
the row support, on average, the other goals (“supporter”), while goals with a negative sum in the
row inhibit other goals (“troubleshooter”). People are invited to devote more resources (money,
time, or attention) to supporters and less resources to troublemakers.

Goals with a positive sum in the column are supported by the other goals (“favorite”), and
goals with a negative sum in the column are inhibited (“victim”). A case by case analysis clarifies
whether it is advantageous to dedicate less attention to favorites (because they might be
sufficiently supported by the other goals) or to take advantage of the favorable situation and devote
more resources to reaching the favorite. Likewise, victims may be postponed or even abandoned or, conversely, if sufficiently important, given additional assistance to shield against the detrimental influence of the other goals.

However, since goal conflicts may have positive effects (e.g., to buffer against emotional suffering after failure; Kehr, 2003b), it is explained that it is not necessary to completely resolve goal conflict (which may be illusionary), but just to identify particularly inhibiting conflict situations and develop suitable strategies for handling them.

**Module 2: Increasing Awareness of One’s Implicit Motives**

Module 2 aims to improve self-awareness about implicit motives by comparing self-attributed motives with implicit motives as assessed with a semi-projective instrument.

**Literature.** The literature on discrepancies between implicit and explicit motives was reviewed in the theoretical section of this chapter. The general notion was that implicit and explicit motive systems are conceptually distinct and discrepancies between these systems negatively influence health and personal well-being (Brunstein et al., 1998; Kehr, in press-a; McClelland et al., 1989; Deci & Ryan, 2000; Ryan, Sheldon, Kasser, & Deci, 1996). Moreover, the empirical overlap between implicit and explicit motives is small (Brunstein et al., 1998; Cantor & Blanton, 1996; Sokolowski et al., 2000) or non-existent (Spangler, 1992), indicating people are not completely aware of implicit motives underlying their actions.

**Empirical data from the management domain.** Studies reported earlier in this chapter as support for the compensatory model show that, consistent with basic research on implicit/explicit motive discrepancies, empirical overlap between implicit and explicit motives among managers is small Kehr (in press-a). Furthermore, discrepancies between implicit and explicit motives (Kehr, in press-a), as well as implicit fear motives (Kehr, 2003a), exert negative influences on well-being, mediated by depletion of volitional strength.

An additional study (Sokolowski & Kehr, 1999) explored the relevance of implicit motives for managerial success. This longitudinal study was conducted in the course of a Management by Objectives (MbO; cf., Rodgers & Hunter, 1991) training program. Here, executive personnel are instructed in different social and communication skills, which should help them influence their staff to carry out the firm’s objectives. Influencing subordinates primarily relates to the power motive (instead of the affiliation or the achievement motive), and it was expected that managers
high on implicit power motive would profit more from MbO-training and have greater training transfer. Implicit motive scores (MMG) were obtained four weeks prior to training.

In line with predictions, the managers’ implicit power motive was positively associated with satisfaction with training, intrinsic and extrinsic motivation for training transfer, and subjectively measured success of training. Conversely, neither the achievement motive nor the affiliation motive significantly influenced training transfer, despite high intercorrelations among motive scores. Hence, implicit motives, despite being substantially intercorrelated, may have differential and substantial effects on behavioral correlates of managers.

**Intervention.** To begin with, it is explained that implicit motives, while not being (fully) consciously accessible (McClelland et al., 1989), are still of great behavioral relevance (cf. Figure 2c). We often simply don’t know why we like or dislike certain tasks more than others, but such predilections are clearly influential in determining our courses of action.

Because self-awareness is supported by systematic personality diagnoses (Baumgardner, 1990), self-ascriptions (assessed by straightforward questions, e.g., “How strong is your achievement-motive?”) are compared with the implicit motive scores of the MMG (Sokolowski et al., 2000). In case of discrepancies between implicit and self-ascribed motives, McClelland and his colleagues advocated self-observation. They wrote, “We also believe […] that through self-observation and analysis, greater congruence between the two types of motives can be achieved“ (McClelland et al., 1989, p. 700). Accordingly, to increase self-awareness of implicit motives, self-observation of implicit impulses, temptations, and task enjoyment is encouraged (McClelland et al., 1989). However, the effectiveness of techniques for increasing self-awareness is limited. Epstein (1998) noted (with some irony), “To the extend that insight is helpful in this endeavor, it is therapeutic. If it is not, it may simply succeed in making a neurotic without insight into one with insight” (p. 14). Hence, Module 5 (see below) returns to the issue of implicit/explicit motive discrepancies and introduces a more direct intervention technique to establish coherence.

**Module 3: Enhancing Volition**

Module 3 offers survey-feedback on individual strengths and weaknesses regarding volitional strategies and contains several exercises to enhance volitional strength (cf., Erber & Erber, 2000; Kuhl, 1998; Mischel, 1996).

**Literature.** The literature on volitional self-regulation was reviewed earlier, when the compensatory model was introduced.
Empirical data from the management domain. Kehr’s (2003a, in press-a) studies, reviewed above in support of the compensatory model, illustrate the mediating function of volition on the relation between dysfunctional motive constellations and well-being.

In addition, Kehr, Bles, and von Rosenstiel (1999a) longitudinally examined the effects of volitional self-regulation on success of insurance managers in a training context. The predictor, volitional self-regulation, was measured at the onset of the training program with the self-regulation scale of the Volitional Components Inventory (VCI; Kuhl & Fuhrmann, 1998). As dependents, several subjective transfer-related measures were taken. In line with predictions, volitional self-regulation longitudinally predicted training success and transfer-related emotions.

As these effects were restricted to subjective measures, an additional study (Kehr 2003c) examined whether positive effects of volitional self-regulation are confirmed by more objective criteria. Kehr (2003c) focused on one specific volitional strategy, positive self-regulatory fantasies. This is essentially equivalent to what Kuhl (1985; Kuhl & Fuhrmann, 1998; cf. Kanfer & Heggestad, 1997) called “motivation control.” Motivational control has been characterized as one of the principal volitional strategies (Beckmann, 1999; Kanfer & Heggestad, 1997). The Kehr (2003c) study showed that positive self-regulatory fantasies (assessed with the motivation control subscale of the VCI) predicted sales performance of insurance managers (assessed one year after the predictors had been taken). Hence, positive effects of volitional strength can also be found when objective performance measures are considered.

Intervention. For introductory purposes, the twofold function of volitional self-regulation is explained: Supporting need-discrepant goals and suppressing unwanted behavioral impulses originating in implicit motives (cf. Figure 2d). Feedback is given on individual strengths and weaknesses regarding volitional strategies (e.g., motivation control), using several subscales of the VCI (Kuhl & Fuhrmann, 1998). Since volition may be enhanced by training (Kuhl, 1998; Kuhl & Kraska, 1989; Lindworsky, 1923b; Muraven, Baumeister, & Tice, 1999), various exercises and homework assignments are recommended (cf., Erber & Erber, 2000; Kuhl, 1998; Mischel, 1996), depending on the training needs diagnosis. Table 1 gives lists volitional strategies and exercises employed in SMT.

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insert Table 1 about here

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These exercises are described in detail in Kehr (2002, in press-c). For example, to enhance emotional self-awareness (i.e., the ability to recognize one’s emotional states, categorize them, and act appropriately; cf. Salovey & Meyer, 1990; Sokolowski, 1993), a diary exercise is used. Some questions assist in self-observation: In which situation did I experience emotions today? What kind of emotions were they? (A list of emotions is provided to choose from.) What caused these emotions? How did I handle these emotions? In particular, did I suppress the emotions, or did I act them out? Am I pleased with how I handled these emotions? Participants are encouraged to keep this diary for at least four weeks.

**Module 4: Reducing Overcontrol**

Module 4 establishes awareness of overcontrol, provides feedback on personal inclination to overcontrol, and contains exercises to counteract and reduce overcontrol.

**Literature.** There is evidence for dysfunctional effects of rigid self-control (“overcontrol”; Asendorpf & Van Aken, 1999) on psychological and physiological well-being (e.g., Deci & Ryan, 1987; Kuhl, 2000; Polivy, 1998). Kuhl’s (2000; Kuhl & Fuhrmann, 1998) approach provides a theoretical framework for this research. Kuhl distinguishes two modes of volition, which he calls “self-regulation” and “self-control”. In his terminology, self-regulation is a self-integrating (“democratic”) style of action control and self-control is a self-disciplined (“authoritarian”) style of action control. In particular, self-regulation is the person’s ability to form goals in accordance with the individual need-structure and flexibly use self-regulatory strategies to resolve conflicts among behaviorally relevant sub-systems (Kuhl & Goschke, 1994). Thus, Kuhl’s (2000) self-regulation is a merger of what we call “volition” and “meta-motivation” in this chapter.

Kuhl’s (2000) self-control, on the other hand, refers to the ability to pursue goals with a high priority that are not embedded in the personal need structure. This is typically the case of goals imposed by others. Implementing other-imposed goals may require the ability to overcome tempting alternatives, and this is the adaptive aspect of moderate and temporary forms of self-control (Kuhl & Fuhrmann, 1998). Nevertheless, operating in the self-control mode can be maladaptive (Kuhl & Fuhrmann, 1998; cf. Deci & Ryan, 2000). According to Kuhl (2000), the self-control mode activates the punishment system, involving negative emotions and a high amount of conscious effort, so goal achievement becomes stressful.
Ignoring “unwanted” and distracting behavioral impulses, means the person foregoes opportunities to satisfy his or her needs; unwanted impulses and temptations often originate in aroused implicit motives and organismic needs and may indicate opportunities to satisfy one’s needs. As a consequence, by constantly suppressing such impulses, the person is alienated from his or her implicit need structure (Kuhl, 2000; cf., Ryan & Deci, 2000).

According to Kuhl and Fuhrmann (1998), self-control comprises, among others, impulse control (i.e., suppressing implicit impulses), external control (deference to social constraints; cf., Deci & Ryan, 2000), intention control (constantly thinking about intentions), planning (an overemphasis on planning courses of action), and negative self-regulatory fantasies.

It is not clear if self-control is an autonomous mode of action-control, as Kuhl (2000; Kuhl & Fuhrmann, 1998) theorizes, or just too much of a good thing, as Kehr (in press-c) and Polivy (1998) argue. In this chapter, we defined a two-fold function of volitional self-regulation, to either support need-discrepant goals or suppress unwanted behavioral impulses. With this definition in mind, Kuhl’s concept of self-control is an overemphasis on volitional self-regulation rather than a specific and distinct mode of action-regulation.

In support of this view, several authors emphasized the janus-headed character of self-control, and identified disadvantages of too much or too little self-control (Asendorpf & van Aken, 1999; Baumeister & Heatherton, 1996; Block & Block, 1980; Funder & Block, 1989; Gramzow, Sedikides, Panter, & Insko, 2000). For example, “over-planning” (Dörner, 1985), which Kuhl and Fuhrmann (1998) subsumed under self-control, can be contrasted with “short-cut behavior” (Dörner, 1985), with insufficient consideration of long-term consequences indicative of a planning deficit (cf., Frese, Stewart, & Hannover, 1987). In sum, there is reason to assume a curvilinear relation of self-control and behavioral success (cf., Kehr, Bles, & von Rosenstiel, 1998).

Empirical data from the management domain. The Kehr et al. (1999a) study, summarized earlier in this chapter, contained several self-control related subscales of Kuhl and Fuhrmann’s (1998) VCI to see if negative effects of self-control pertain to success among managers. As expected, inclination to rigid self-control negatively influences subjective criteria such as well-being, self-ascribed behavioral success, and goal attainment. With respect to more objective criteria, Kehr (2003c) reported that negative self-regulatory fantasies, the principal component of Kuhl and Fuhrmann’s self-control construct, may counteract positive effects of positive self-regulatory fantasies on sales performance of insurance managers.
Intervention. Because of the dysfunctional effects of over- or undercontrol (Asendopf & van Aaken, 1999), intervention efforts aim at finding a “balance” (Epstein, 1998; Polivy, 1998) and achieving a “healthy” (Kuhl, 1998) equilibrium.

For introductory purposes, Figure 2e is used to illustrate overcontrol as over-emphasis on explicit goals and ignorance or suppression of implicit motives and organismic needs (cf., Deci & Ryan, 2000). In general, participants’ problem awareness for overcontrol is low and sometimes virtually non-existent (“No pain, no gain”, is a typical motto of people high on self-control). To establish problem-awareness, empirical studies are reviewed to illustrate negative effects of over-(and under-) control on well-being and, what managers often consider as even more important, on personal success.

In analogy to Module 3, personal feedback is given from the respective subscales of the VCI. Table 2 gives an overview of the exercises used to counteract the inclination to overcontrol (for details, see Kehr, 2002, in press-c). Most of these exercises employ diary methods (cf., Conway & Briner, 2002), where particular themes (e.g., daily temptations) are analyzed and documented (cf., Pennebaker, 1997). The general objective is to improve self-observation and self-awareness (cf., Pennebaker, 1980), because inadequate self-awareness is common among people tending to overcontrol (Kuhl, 2000; Kuhl & Fuhrmann, 1998; Deci & Ryan, 2000). Ultimately, these exercises enhance the ability to perceive one’s implicit needs and desires and counteract the tendency to overemphasize goals (Loewenstein, 1996; Polivy, 1998; Deci & Ryan, 2000).

Module 5: Enhancing Organismic Congruence and Intrinsic Motivation

Module 5 aims at enhancing congruence of implicit and explicit motives by adjusting the person’s goals (the principal component of the explicit motive system) to his or her implicit motive base, which increases intrinsic motivation.

Literature. There is insufficient space to review the voluminous literature (cf., Vallerand, 1997) on intrinsic (and extrinsic) motivation here. However, we discuss how the compensatory model helps clarify the concept of intrinsic motivation. According to Kehr (in press-c), the necessary condition for intrinsic motivation of behavior is *thematical congruence with the person’s aroused implicit motives*. The additional sufficient condition for intrinsic motivation is the *absence of*
discrepant cognitive preferences. Hence, intrinsic motivation is expected for behaviors that thematically fall in the overlap section in Figure 1, where both necessary and the sufficient conditions for intrinsic motivation are met. Conversely, extrinsic motivation is assumed if cognitive preferences (e.g., goals) are to be supported that are discrepant with the implicit motives (this corresponds to the outer sector of the dark circle in Figure 1).

Prior approaches on intrinsic motivation rely on the distinction between means and ends. Higgins and Trope (1990) wrote, approaches to intrinsic motivation „emphasize the classic distinction between engaging in an activity as an end in itself (intrinsic motivation) and engaging in an activity as a means to an end (extrinsic motivation)” (p. 232). However, this means-ends distinction raises conceptual concerns. Because of the complex structure of means-ends relations (Stern, 1935/1950) and their inherently subjective quality (Brunstein, 1993), conceptions of intrinsic motivation based on a means-ends relation seem vague and arbitrary. They are ambiguous on whether a particular behavioral act is a means or an end. It is not clear, for example, whether writing a chapter is intrinsically motivated (because it marks the end of an interesting research project), or whether it is extrinsically motivated (because it is a step in an academic career).

Our approach does not require the means-ends distinction. If we observe children playing, it is evident that intrinsic motivation does not depend on the existence of a goal. However, as highlighted by the present approach, intrinsic motivation requires the absence of thematically incongruent, cognitive preferences. Conversely, if cognitive preferences conflict with implicit motives, intrinsic motivation cannot be experienced, because the person will strive to suppress the momentarily unwanted implicit impulses.

Our approach offers an explanation for inconsistencies in the literature regarding the corruption of intrinsic motivation by extrinsic rewards (Deci, Koestner, & Ryan, 1999). Many authors found a corruption effect, but some authors found that extrinsic rewards did not weaken, but even enhanced intrinsic motivation (cf., Deci et al., 1999; Rigby, Deci, Patrick, & Ryan, 1992).

Based on the compensatory model, extrinsic rewards only corrupt intrinsic motivation if they activate cognitive preferences incongruent with the intrinsically motivated activity. In contrast, extrinsic rewards that do not activate incongruent cognitive preferences, or activate cognitive preferences thematically congruent with the intrinsic motivated behavior, will not result in corrupted intrinsic motivation, but rather enhance pre-existing motivation.
Empirical data from the management domain. There is abundant literature on the advantages of intrinsic motivation as compared to extrinsic motivation. Sokolowski and Kehr (1999) found that this applies to the management domain, where intrinsic motivation mediates the relation between implicit motives and goal attainment. A recent experiment on effects of aroused achievement motives (Puca & Schmalt, 1999) had similar findings. Path analyses in the Sokolowski and Kehr study confirmed that intrinsic motivation (operationalized as task enjoyment), but not extrinsic motivation (operationalized as goal commitment), mediated the implicit power motive –goal attainment relation.

The present approach also proposes that congruence between implicit and explicit motives (the overlap section in Figure 1) positively relates to intrinsic motivation. The Kehr (in press-a) studies indirectly support this proposition, if we consider subjective well-being as a proxy for intrinsic motivation (cf., Sheldon & Houser-Marko, 2001). Kehr (in press-a) found indirect relations between implicit/explicit motive congruence and subjective well-being, and Kehr (in press-c; Study 5) also found significant correlations between implicit/explicit motive congruence and a generalized measure of intrinsic motivation.

Intervention. Module 5 introduces the notion that volition is the second-best solution for dealing with incongruent implicit motives and explicit goals, and that more profound solutions involve enhancing congruence (cf., Figure 2f).

Congruence between implicit and explicit (e.g., goals) motive systems may be achieved by adjusting implicit motives or goals, respectively. Changing implicit motives, however, is difficult (McClelland, 1972) and ethically questionable (see Kehr, in press-c, for a critical review on attempts to modify implicit motives).

Therefore, Module 5 chooses the alternative of assisting people in setting and pursuing goals that are maximally need-congruent. Using the visualization technique of Schultheiss and Brunstein (1999), goals are subdivided into action steps, and the realization of each step is visualized. This visualization triggers anticipative affective reactions useful for orientation (Mischel et al., 1996; Schwarz & Bohner, 1996). To increase motive-goal congruence, participants are encouraged to choose action alternatives triggering positive affect during visualization, because positive affect indicates congruence with implicit motives (Schultheiss & Brunstein, 1999; Schwarz & Bohner, 1996).
Module 6: Identifying and Overcoming Barriers to Action

If the visualization technique of Module 5 generates negative affect, Module 6 analyzes whether these are due to anticipated future difficulties and whether the difficulties are rooted in causes internal to the person or in external barriers. Participants are instructed to develop appropriate behavioral strategies to overcome these difficulties.

Literature. Generally, negative emotions signal behavioral difficulties (Carver & Scheier, 1990; Simon, 1967). Mellers, Schwartz, and Ritov (1999) also showed that anticipated emotions are reliable predictors for actually experienced emotions. Hence, negative anticipations signal (Schwarz & Bohner, 1996) future difficulties. Wheeler and Janis (1980, p. 21) cautioned that it can be maladaptive to disregard such signals. In support of this view, Oettingen, Pak, and Schnetzer (2001) showed that imagined future success is less helpful for self-regulatory purposes if difficulties are disregarded.

What is the advantage of the anticipation of difficulties? Rubinstein (1940/1984) theorized that anticipating difficulties may reinforce commitment. In Gollwitzer’s (1993) terminology, anticipation of difficulties supplements goal intentions with more specific implementation intentions. More precisely, implementation intentions enhance accessibility of representations of appropriate mental knowledge structures and create situational contingencies by attaching initiation of the intention to specific situational cues (Gollwitzer, 1993). As a result, implementation intentions augment chances for successfully enacting the intention (Gollwitzer, 1999). Mischel (1996), for example, showed that children with specific plans for overcoming obstacles were more successful in delaying gratification.

In sum, it is advantageous to anticipate, analyze, and prepare for future difficulties. In this respect, it is important to draw a sharp line between intra-personal or extra-personal causes for behavioral difficulties (Kannheiser, 1983; Kehr, in press-c; Kuhl & Goschke, 1994; Lazarus, Kanner, & Folkman, 1980; Metcalfe & Mischel, 1999; Sokolowski, 1993), in analogy to the distinction of internal and external influences on behavior (Epstein, 1998; Kuhl & Goschke, 1994; Leventhal & Scherer, 1987; Metcalfe & Mischel, 1999). For conceptual clarity, we follow Sokolowski (1993) holding that internal barriers require volitional self-regulation (James, 1890/1981; Kehr, in press-c), and external barriers require problem-solving (loosely defined as activation of problem solving routines, search for previously unknown solutions, or acquisition of knowledge and task-specific skills; cf., Ackerman, 1987; Nair, 2000; Smith, 1997).
Empirical data from the management domain. Two studies have particular relevance for Module 6. The first, a longitudinal study in the context of a management training program (Kehr, Bles, & von Rosenstiel, 1999b), examined a principle notion underlying Module 6: negative anticipatory emotions are good predictors for failure. As expected, negative affective anticipations predicted subsequent failure of training transfer.

The second study (Kehr, in press-c; Study 3) explored subjective theories about the difference between volition and problem-solving. From a research review, several problem-solving strategies (e.g., search for information, organizing technical support, and improving communication; cf., Ackerman, 1987; Dörner, Reither, & Stäudel, 1983; Frese et al., 1987; Nair, 2000; Smith, 1997) and volitional strategies (e.g., positive and negative self-regulatory fantasies; cf. Kehr, 2003c; Kuhl, 1985) were extracted. It was expected that subjective theories, like scientific theories, would assign problem-solving strategies to external barriers and volitional strategies to internal barriers. Similar to Kuhl and Kraska (1989), two scenarios were developed. One scenario described an internal barrier to action, whereas the other scenario described an external barrier to action. Study participants were public relation employees from several automobile companies. Each participant was given both scenarios and a list of five volitional and five problem solving strategies.

Participants were asked to rate the suitability of each strategy for each scenario. Volitional strategies were preferred for internal barriers, and problem solving strategies were preferred for external barriers. Consistent with Sokolowski’s (1993) proposition, employees’ subjective theories clearly discriminate between volition and problem solving and appropriately assign the respective strategies to internal and external causes, respectively.

Intervention. Miller et al. (1960) suggested that checking feasibility of plans and error detection is facilitated by simulation. These ideas have influenced several more recent approaches employing imagination exercises and subsequent development of cognitive strategies to overcome anticipated barriers (Bennett & Cautela, 1981; Skovholt, Morgan, & Negron-Cunningham, 1989; Taylor & Schneider, 1989). In Kanfer’s self-management therapy (Kanfer et al., 1996), for example, detailed analysis of alternative pathways to a goal and anticipation of possible barriers to action are important elements of “prospective self-regulation”.

The SMT procedure adopts these suggestions. Module 6 instructs participants to analyze all action steps that triggered negative affective responses during visualization (see Module 5), to see if
internal causes (e.g., goal conflicts, aroused fear motives, temptations) or external causes (e.g., lacking support by supervisors or subordinates, lacking skills, technical difficulties) result in the negative anticipations. Participants prepare for these difficulties by building implementation intentions of the type “when situation x arises, I will do y” (Gollwitzer, 1999, p. 494) using volitional strategies for intrapersonal conflicts and problem solving strategies for external difficulties. This procedure increases the chances that the person will successfully meet anticipated future difficulties.

If developing proactive strategies does not eliminate negative affective toning of the envisioned behavior, plan revision (Brandtstätter, Wentura, & Rothermund, 1999; Cropanzano et al., 1995) or disengagement (Klinger, 1975) is suggested. While it is often difficult to disengage from action plans (Klinger, 1975), it can be a wise strategy because it avoids depletion of resources (Schönpflug, 1985), rumination (Beckmann, 1998), and the risk of learned helplessness reactions (Martin & Tesser, 1989).

6. Conclusion

Most of the intervention techniques used in SMT are by no means new. Quite the contrary, SMT draws heavily on existing literature and research. Consider, for example, Emmons and King’s (1988) assessments of goal systems, McClelland’s idea to increase self-awareness on implicit motives by self-observation (McClelland et al., 1989), Kuhl’s (1998) or Mischel’s (1996) exercises to increase willpower, Polivy’s (1998) suggestions against rigid self-control, Schultheiss and Brunstein’s (1999) visualization technique to enhance organismic congruence, and the notion of prospective self-regulation to overcome difficulties by Kanfer et al. (1996).

SMT integrates these diverse intervention techniques into a consistent approach. While some preliminary evaluation studies have been conducted (Kehr, in press-c, Studies 7.1 and 7.2; Priemuth, 2002), it is still too early for conclusive reports on SMT effectiveness. Evaluation designs must be strengthened, and one discouraging preliminary result must be addressed (Priemuth, 2002, reported that SMT had the expected effects on the first wave of training groups but not on the second wave). However, most of the previous evaluation results were encouraging, indicating that SMT significantly enhances self-management-related knowledge, volitional strength, and affective well-being, and decreases overcontrol, stress, and energy-deficit (Kehr, 2001, 2003d, in press-c, Studies 7.1 and 7.2).

The main advantage of SMT is that it builds on coherent theory. The compensatory model of work motivation and volition coalesces dual system theories of motivation and approaches to
volitional self-regulation, two previously unrelated approaches to human motivation. Both theoretically and empirically, important advances have been recently made in these two lines of research. Integrating these research trends, the compensatory model provides a conceptual framework for intrinsic motivation (in case of congruence between the two systems) and, conversely, for intrapersonal conflict and volitional conflict-resolution (in case of discrepancies). SMT permits practitioners, trainers, and applied researchers to take advantage of this scientific progress. In effect, this extends earlier approaches to self-management, which were largely confined to goal setting and self-efficacy training (e.g., Frayne & Geringer, 2000; Latham & Frayne, 1989) and thus much narrower in focus than the SMT.

Furthermore, SMT is based on empirical research relevant for its target group. The empirical research was conducted primarily with management samples. It seems doubtful that manager motivation could be validly assessed by experimenting solely on freshmen and sophomores of introductory psychology classes. Clearly, confronted with “real” managers participating SMT, the ability to fill the framework provided by the compensatory model with empirical results actually relevant for managers, adds credence to the approach.

Finally, it is of particular advantage, that a simple Venn diagram (Figure 1) can convey the theoretical underpinning of the compensatory model in a way quick to grasp and easy to remember. The “head” and “heart” metaphor (Epstein, 1994) is as an additional didactic device. For practical application, the Venn diagram allows diagnosis of a large variety of self-management-related situations (see Figures 2a-2f).

To emphasize this and increase accessibility of the SMT contents with a practical exercise, participants are instructed at the very end of a SMT course to use their hands to form two circles; thumb and forefinger of each hand form a circle. The trainer then demonstrates how to move both hands together so that eventually the two circles overlap. SMT is concluded with the trainer’s advice, “Keep it in your minds, it is always in your hands”.

Footnotes
1 The comprehensive version of this model (cf. Kehr, in press-b) also considers perceived abilities as an additional structural component of the model and problem solving (supplementing insufficient abilities) as an additional functional property. For self-management interventions, however, we focus on implicit motives and explicit goals, the basic structural components of the model (cf., Kehr, 1999, in press-c).
2 Precisely, explicit goals are not identical to explicit motives, because explicit motives must combine with perceived abilities in order to instigate explicit goals (cf. Kehr, in press-b). For the purpose of the present article, however, it is sufficient to treat the two constructs as identical.

3 Training modules permit breaking up the training program and using separate modules according to specific training needs (cf., Tannenbaum & Yukl, 1992). However, similar to the findings of Gist et al. (1990), pretests that isolated single modules proved to be is less effective than an integrated program (for a related argument, see Frayne & Geringer, 2000). We attribute the superiority of the integrated program to the fact that an integrated program allows better overview and insight into interrelations of motivational and volitional processes, an important precondition for an effective intervention into these processes.

4 SMT was originally invented in Germany. The German language contains the metaphor of “Kopf” (head) and “Bauch” (literally: stomach), conveying the distinction between implicit and explicit motive systems better than Epstein’s (1994) “head” and “heart” metaphor. This is because “Bauch” in German is not only associated with feelings and emotions (the connotation of “heart”), but additionally transmits the idea of intuition (i.e., “gut feeling”).

References


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Table 1

Exercises to enhance volition

<table>
<thead>
<tr>
<th>Scale</th>
<th>Exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion control</td>
<td>Creating and enhancing functional emotions (Josephson et al., 1996; Mischel et al., 1996; Strack et al., 1985) Suppressing and toning down dysfunctional emotions (Erber, 1996; Metcalfe &amp; Mischel, 1999; Strack et al., 1985) Enhancing emotional self-awareness (Salovey &amp; Meyer, 1990; Sokolowski, 1993)</td>
</tr>
<tr>
<td>Decision control</td>
<td>Separation of information collection and information evaluation (Kehr, 2002, in press-c)</td>
</tr>
<tr>
<td>Activation control/calming</td>
<td>Progressive muscle relaxation (Jacobson, 1938)</td>
</tr>
<tr>
<td>Activation control/activating</td>
<td>Reference to Module 1 (setting of realistic goals and reduction of goal conflict via reprioritization)</td>
</tr>
<tr>
<td>Attention control</td>
<td>Concentration and mediation exercises (Klinger, 1982; Karoly, 1995)</td>
</tr>
</tbody>
</table>

Notes. 1 The scales were extracted from Kuhl and Fuhrmann’s (1998) VCI.
Table 2

**Exercises to counteract overcontrol**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulse control</td>
<td>Diary: identification and management of temptations (Kehr, 2002, in press-c)</td>
</tr>
<tr>
<td>External control</td>
<td>Identification of external control (Kuhl, 1998) and discrimination of degrees of external control (Kehr, 2002, in press-c; Ryan &amp; Deci, 2000) and self-determination (Kuhl, 1998)</td>
</tr>
<tr>
<td>Intention control</td>
<td>Relief of intention memory by the aid of planning instruments</td>
</tr>
<tr>
<td>Planning</td>
<td>Generation of unplanned test situations</td>
</tr>
<tr>
<td>Negative self-regulatory fantasies</td>
<td>Development of positive self-regulatory fantasies (Kanfer et al., 1996, p. 369; Kanfer &amp; Ackerman, 1996; Mischel, 1996; Oettingen, 1996)</td>
</tr>
</tbody>
</table>

**Notes.** 1The scales were extracted from Kuhl and Fuhrmann’s (1998) VCI.
FIGURE 1
Compensatory Model of Work Motivation and Volition (Basic Version)
Motives and Volition

2a) Basic model

"Head" "Heart"

Goals

Goal conflicts

2c) Module 2: Implicit motives

Implicit motives

2d) Module 3: Volition

Support need-discrepant goals

Suppress unwanted impulses

2e) Module 4: Overcontrol

Dominance Of goals

Ignorance of needs

2f) Modules 5 and 6: Intrinsic motivation and barriers to action

Intrinsic motivation

Develop goals according to implicit motives/needs

FIGURE 2
The Six Training Modules of SMT