

**Personality Development in Older Age
- A Quasi-Experimental, Longitudinal Field Study -**

by

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Abstract

Embedded in the general conceptual agenda of lifespan developmental psychology and its emphasis on the potential of individual development into old age (P. B. Baltes, Lindenberger, & Staudinger, 2006; Staudinger, 2005), the central objective of the present study was to investigate whether participation in a volunteer training program can promote personality development in older age. The program “Erfahrungswissen für Initiativen” (EFI) was developed by the German Federal Ministry of Family, Seniors, Women and Youth. The aim of the volunteer training program (VTP) was to encourage volunteers to develop a new role identity in the context of civic engagement by developing and initiating their own personal volunteering project. A curriculum lasting 3 x 3 days was implemented to provide social support and feedback and to teach participants skills and competencies necessary to successfully develop and initiate the project.

To investigate the impact of the VTP on personality development, participants of the VTP and an active control group of volunteers were assessed three times, before the VTP (T1), after the VTP (T2) and one year later as a follow-up assessment (T3). In addition, a second control group consisting of inactive, non-volunteers were recruited to validate the comparability of the active control group.

The results showed that participation in the VTP increased personality adjustment by increasing life satisfaction and by decreasing negative affect and neuroticism from T1 to T2. Even though life satisfaction decreased again, negative affect and neuroticism remained decreased from T2 to T3. These long-term improvements in well-being were attributed to the empowering effect of the VTP.

In accordance with the proposition that for personality growth to occur it takes a very special combination of personal and contextual factors (Staudinger & Kunzmann, 2005), only participants of the VTP with high internal control beliefs increased in “personal growth” and “openness to experience” from T1 to T2. From T2 to T3 levels on “personal growth” remained elevated, while “openness to experience” increased even further. An explanation for these improvements

refers to the interplay of empowerment and the concept of the beneficial developmental spiral of internal control beliefs.

Taken together, the study presents an initial piece of evidence that by empowering elderly, such as giving them the opportunity to participate in a meaningful way in society, personality development is possible, even in old age. In addition, the present study is a unique attempt to provide insight into the differentiation of personality adjustment and personality growth and contributes to the understanding of these two forms of positive personality development.

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1 Introduction

Already well into the last century, the industrialized society has undergone profound demographic changes, namely a considerable increase in the proportion of older people. This proportion will be increasing even more: In 2002, 18% of the population in Germany were 65 years of age and older, in 2050 this proportion is estimated to rise up to 30% (Alterssurvey, 2003). These demographic changes can be attributed to two main factors. The first factor concerns the increase in life expectancy. In 1950 life expectancy in Germany was around 69 years of age, in 2002 it rose to 80 years (Statistisches Bundesamt, 2006). The second main factor is the drastic decrease in birthrates that has been observed in industrialized nations.

The emergence of a graying society has given rise to an increased research interest in the aged as well as in the aging processes in the past decades. One prominent theme that has provided direction for scholarly inquiry deals with the potentialities of human development in old age. In the realm of personality psychology, one of the recurring questions is, if and how people change in systematic ways in their later years of life (P. B. Baltes et al., 2006; Staudinger, 2005). Most of the empirical research on personality over the past decades, however, fails to consider potential development in adulthood, reflecting in part the assumption that after age 30 "personality is set like plaster" (Costa & McCrae, 1994). With regard to an aging workforce and a growing cohort of retired people the interest in whether - and if so, how - older people may change becomes increasingly relevant. Embedded in the general conceptual agenda of lifespan developmental psychology and its emphasis on the possibility of individual development even in old age (P. B. Baltes et al., 2006; Staudinger, 2005), the present study investigates the potential effect of participation in a volunteer training program on personality development.

This volunteer training program (VTP), called "**Erfahrungswissen Für Initiativen**" (EFI) which one may translate as "experience for initiatives", is a nationwide program of the German Federal Ministry of Family, Youth, Seniors and Women (please see Appendix C for more information). The goals of the VTP

are twofold. First, the aim is to promote the development of a new role identity for older individuals by giving them the opportunity and the necessary training to work successfully as a volunteer and thus to participate in a meaningful way in society. Second, the motivation of the Federal Ministry has been to activate the resources of the ageing individuals. The aim is to encourage older people to develop, establish and finally implement their own personal volunteering project which can help others.

Usually, people who are interested in doing voluntary work start to work without prior training. Therefore, they may lack the necessary skills to face the problems arising within the realm of civic engagement. In order to teach older people the skills and competencies necessary to work successfully as a volunteer, the Federal Ministry developed this special program consisting of a seminar (three course modules lasting three days each) and two practical phases in-between the course modules. The seminar is divided into two thematic parts.

Part one of the seminar focuses on the development of a new role identity in the context of civic engagement. An important pre-requisite for a new role identity is to come to terms with oneself. Therefore, in the first course module, participants are encouraged to think about themselves, to critically reflect their weaknesses and strengths and finally to focus on their expectations and conceptions with regard to being a volunteer. Getting encouraged to self-reflect while being embedded in a supporting social setting with people in the same situation, is a unique feature of the VTP.

The aim of the second part of the seminar is to promote competencies and skills that are needed to work successfully as a volunteer and thus to develop a new role identity. Therefore, the goal of the remaining two course modules is to convey competencies that are necessary to utilize the prior experience, knowledge, expertise and skills individuals have acquired during their lives in order to (1) generate ideas for a personal volunteering project, (2) develop skills and methods to establish this project, (3) be prepared to struggle with and effectively resolve adversities in order to be able to (4) successfully work as a volunteer within their project and thus to (5) develop a new role identity as a volunteer.

In the two practical phases after the first and the second module,

participants get the opportunity to apply their knowledge in ongoing projects and to gather experience. They may face problems and difficulties which are then discussed and solved in the next module.

Given the special nature of the VTP - that is, being selected to participate in something special, the encouragement for self-reflection, the acquisition of competencies, the development of a personal project while being embedded in a supportive social setting, the assistance to develop a new role identity and finally being able to participate in a meaningful way in society - there is reason to assume that taking part in the VTP can have an effect on personality development. Evaluating the VTP scientifically using a quasi-experimental field study with three measurement points is a great opportunity to investigate the impact of such an "intervention program". Fortunately, the German Federal Ministry of Family, Youth, Seniors and Women gave permission to investigate the participants of their program and supported this investigation financially.

Since the literature on volunteering has revealed that volunteers differ significantly from non-volunteers on a number of psychological variables (e.g., Hunter & Linn, 1981; Shmotkin, Blumstein, & Modan, 2003), a control group is needed that takes such selectivity effects into account. Therefore, individuals of the waiting list, who were also active as volunteers but who did not participate in the VTP, were chosen to form the control group. To validate that this control group really is an active and thus comparable control group, a second control group of non-volunteers was recruited. These so called "couch potatoes" were matched with regard to age, sex and education.

If the present study can show that participation in the VTP can enhance psychological functioning in older people, this prospect may constitute an added incentive for older people as well as for society. Especially in times of demographic change, society would benefit enormously by tapping more fully into the resources of the elderly. From an individual's perspective, the present study aims to encourage the belief in the potential of activity and societal participation in old age.

In the following chapter, the theoretical underpinnings and the general conceptual agenda of lifespan psychology as it applies to the present study are described. Particular emphasis is placed on two propositions of lifespan psychology, the concept of contextualism and the concept of plasticity. The necessity to distinguish between two forms of positive personality development, that is personality growth and personality adjustment, is also introduced here.

Afterwards, in Chapter three, the distinction between personality growth and personality adjustment is consolidated. It will be shown that while indicators of personality adjustment increase normatively with age, indicators of personality growth evince age-related stability or even decline. Chapter four will then pursue the question whether personality indeed can change in older age. Theories, mechanisms and empirical evidence of developmental plasticity are presented. Since the effect of the VTP on cognitive functioning is of interest as well, the possibility for change in cognitive functioning is described in an excursus in Chapter five. Chapter six focuses on volunteering and emphasizes the differences between volunteers and non-volunteers. In addition, the chapter gives an overview of other volunteer studies.

Finally, the VTP is described in more detail in Chapter seven after which the hypotheses for the present study are derived. The methods and results of the study are described in Chapters eight and nine. The discussion of the results follows in Chapter ten. Limitations of the present study are also outlined in Chapter ten which will end with a conclusion.

2 Lifespan Developmental Psychology - The Background to the Present Study

Since the present study and its investigation of personality development in older age is nested within a lifespan perspective on development, the following chapter will present an overview of the central concepts and assumptions of this approach. Two meta-propositions that are of special relevance for the present study, lifespan contextualism and lifespan plasticity, are introduced.

Afterwards, the general propositions of lifespan theory are applied to the present topic, personality development in later adulthood. In this context, additional theories, propositions and assumptions with regard to personality development are described. The chapter ends with the description of two different trajectories of personality development in adulthood, personality adjustment and personality growth. This distinction will be of relevance throughout the dissertation.

2.1 Central Features of a Lifespan Approach

Because of the complex nature of human development and the conditions that shape its course (O.G. Brim, Jr. & Kagan, 1980), lifespan psychologists have long called for a consideration of multiple levels of explanation for personality development in old age. Several propositions describing a lifespan approach have been proposed (P. B. Baltes, 1987). To give an overview of these propositions, Table 1 summarizes the family of theoretical propositions characteristic of life span developmental psychology. The propositions which are of particular relevance for the present study, contextualism and plasticity, will be described in more detail in the following sections (Section 2.1.1 and 2.2.2).

Table 1. *Family of Theoretical Propositions Characteristic of Life Span Developmental Psychology*

Life span development: Ontogenetic development is a lifelong process. No age period holds supremacy in regulating the nature of development

Life span changes in the dynamic between biology and culture:

With age and certainly after adulthood, there is a growing gap between biological potential and individual-cultural goals. This gap is fundamental to ontogenesis as the biological architecture of life is incomplete and inevitably results in loss of adaptive functioning and eventually death.

Life span changes in allocation of resources to distinct functions of development: growth versus maintenance versus regulation of loss:

Ontogenetic development on a systemic level involves the coordinated and competitive allocation of resources in three distinct functions: (1) growth, (2) maintenance including recovery (resilience), and (3) regulation of loss. Life span developmental changes in the profile of functional allocation involve a shift from the allocation of resources for growth (more typical of childhood) toward an increasingly larger and larger share allocated to maintenance and management of loss.

Development as selection (specialization) and selective optimization in adaptive capacity:

Development is inherently a process of selection and selective adaptation. Selection is due to biological, psychological, cultural, and environmental factors. Developmental advances are due to processes of optimization. Because development is selective and age-associated changes in potential, compensation is also part of the developmental agenda.

Development as gain/loss dynamic: In ontogenetic development, there is no gain without loss, and no loss without gain. Selection and selective adaptation are space-, context-, and time-bound. Thus, selection and selective adaptation imply not only advances in adaptive capacity but also losses in adaptivity for alternative pathways and adaptive challenges. A multidimensional, multidirectional, and multifunctional conception of development results from such a perspective.

Plasticity: Much intraindividual plasticity (within-person variability) is found in psychological development. The key developmental agenda is the search for the range of plasticity and its age-associated changes and constraints.

Ontogenetic and historical contextualism as paradigm: In principle, the biological and cultural architecture of human development is incomplete and subject to continuous change. Thus, ontogenetic development varies markedly by historical-cultural conditions. The mechanisms involved can be characterized as principles associated with contextualism. As an illustration, development can be understood as the outcome of the interactions (dialectics) between three systems of biological and environmental influences: (1) normative age-graded, (2) normative history-graded, and (3) nonnormative (idiosyncratic). Each of these sources evinces individual differences and, in addition, is subject to continuous change.

Toward a general and functionalist theory of development: The effective coordination of selection, optimization, and compensation: On a general and functionalist level of analysis, successful development, defined as the (subjective and objective) maximization of gains and minimization of losses, can be conceived of as resulting from collaborative interplay among three components: (1) selection, (2) optimization, and (3) compensation. The ontogenetic pressure for this dynamic increases with age, as the relative incompleteness of the biology- and culture-based architecture of human development becomes more pronounced.

What is unique about lifespan psychology is its attempt at synthesis, viewing such meta-conceptions as a family of perspectives characterizing psychosocial and behavioral development. The lifespan approach may be more meta-theoretical than theoretical to the extent that it identifies an orientation to the study of stability and change across the life span rather than testable hypotheses in the strict sense. In contrast to other approaches, the lifespan approach proposes a dialectic between stability *and* change over the life course (P. B. Baltes et al., 2006).

A core assumption of lifespan psychology is that development is not completed after adolescence, but that it extends across the entire life course (P. B. Baltes, Reese, & Lipsitt, 1980). Thus, lifespan developmental psychology is concerned with the description, explanation and modification (optimization) of developmental processes (stability and change) in the human life course from conception to death. The goal is to obtain knowledge about general principles of life-long development, about interindividual differences and similarities in development, as well as about the degree and conditions of individual modifiability or plasticity of development (P. B. Baltes, 1987).

Thus, as a whole, the lifespan approach is intended to generate knowledge about three components of individual development: (1) *interindividual commonalities* (regularities) in development, (2) *interindividual differences* in development, and (3) *intraindividual plasticity* (malleability) in development. Joint attention to each of these three components and the specification of their age-related interplay represent the conceptual and methodological foundation of the lifespan approach (P. B. Baltes et al., 2006).

Based on these three components, four central objectives of lifespan psychology emerge: (1) To offer an organized account of the overall structure and sequence of development across the life span, (2) to identify the interconnections between earlier and later developmental events and processes, (3) to delineate the biological, psychological, social, and environmental factors and mechanisms of lifespan development, and (4) to specify the biological and environmental opportunities and constraints that shape lifespan development of individuals, including their range of development, that is the plasticity (modifiability) of development (P. B. Baltes et al., 2006).

According to lifespan psychology, the range of possible development of an individual is influenced by forces of nature and nurture, of genes and environment, and by intra- and extrapersonal influences. This view is expressed in the concept of lifespan contextualism which is explained in the following section.

2.1.1 Lifespan Contextualism

A central premise of lifespan psychology is that development is embedded in a larger evolutionary, historical, and cultural context. According to lifespan contextualism, individuals exist in a changing world and in life contexts that create opportunities for and limitations to individual developmental pathways. To understand a given life course and interindividual differences in life course trajectories, lifespan contextualism posits that it is necessary to consider three sources of internal and external contextual influences: (1) *normative age-graded influences*, (2) *normative history-graded influences*, and (3) *non-normative (idiosyncratic) influences* (P. B. Baltes et al., 2006). Normative in this context refers to a high degree of generality. Non-normative factors highlight the more individualized conditions such as winning a lottery, losing a leg in an accident or taking part in a special training program.

Normative age-graded influences are those biological and environmental aspects that, because of their dominant age correlation, shape individuals in relatively normative ways. The sequential arrangement of developmental contexts such as kindergarten, school and work can be regarded as normative age-graded influences. *Normative history-graded influences* are those biological and environmental aspects that may make ontogenetic development different across historical cohorts and periods. An example would be the historical evolution of the educational and professional system or the advent of a war. *Non-normative influences* on development, finally, reflect the individual-idiosyncratic biological and environmental events that, while not frequent, can have powerful influences on ontogenetic development (Bandura, 1982; O. G. Brim, Jr. & Ryff, 1980). The influence of these non-normative events is especially powerful because they generate conditions that are less predictable and less amenable to social control and support.

According to lifespan contextualism, these three sources of influence create the contexts within which individuals act, react and develop. They also manifest themselves as both facilitators (supportive of gains) and limiters (supportive of losses) of lifespan changes in functioning and the mastery of life tasks. In addition to contributing to similarities in development, these sources can also contribute to interindividual variations and subgroup-specific patterns of development since they exist in systematic group variations, for instance by social class, genetic dispositions, and ethnicity. Thus, lifespan contextualism highlights an orientation toward understanding the reasons for commonalities across individuals and cultures but also for understanding the sources of their differences as well as the degree to which there are as yet untapped reserves for further growth or alternative pathways (Staudinger, Marsiske, & Baltes, 1995).

One central feature of this developmental process is "transactional adaptation" (e.g., Lerner, 1984, 1986) or "person-environment interaction" (Magnusson, 1990; Roberts & Caspi, 2003). Transactional adaptation comprises the view that development is the outcome of a constant and active process of an individual's transaction with the three sources of changing contextual influences described above. The individual is not only actively selecting developmental contexts, but the individual can also change contexts, and is changed by contexts at the same time. Indeed, this realization is captured in the notion of lifespan contextualism assuming that biology, culture, and individual actions and reactions are all malleable and mutually dependent. Together, they form the spectrum of developmental contexts and/or influences and can be broadly categorized in internal and external developmental contexts (Kessler & Staudinger, 2007).

Internal contexts refer to the whole array of biological and psychological resources, such as personality characteristics and physiological parameters. External contexts denote the wide range of physical and socio-cultural resources, such as the physical environment and cultural norms or language. Lifespan contextualism considers the transaction (Sameroff, 1975) or dynamic interaction (Lerner, 1984) between both internal and external contexts (Riegel, 1976; Staudinger & Greve, 2001). Since contexts undergo constant changes, biological, psychological and cultural contexts can only be considered in relation to each

other. Given this multiplicative relationship, human development is never fully predictable, that is, individual development is probable rather than determined.

Thus, if human development is the product of dynamic and probabilistic transactions among diverse sources of developmental influences and selection processes, then development must also be characterized by plasticity making alternative pathways possible. The concept of plasticity, which includes both the consideration of the range and the limits of behavioral change, is another central concept in lifespan theory. It will be described in the following section.

2.1.2 The Concept of Plasticity

Plasticity is the concept most emphasized by lifespan researchers (M. M. Baltes & Baltes, 1982; Lerner, 1996). It designates the potential that individuals have for different forms of behavior or development. Lifespan psychology highlights the fact that within one individual there is variability in functioning across different domains (e.g., cognition, social relationships, personality). When focusing on one domain, lifespan psychology is interested in the within-person variability of functioning within this domain across time. This intraindividual variability is considered as an indicator of plasticity.

One central proposition of lifespan theory is that this potential to change development, the plasticity of development, is possible throughout the life span, and thus even in older adulthood. This proposition rests on the assumption that the plasticity of development, or the range and limits of development, are determined by internal and external contexts or resources. As alluded to in the previous section, these contexts including their resources are dependent on the three sources of influences (age-graded -, history-graded -, and non-normative influences) within which individuals have the potential to act, react and thus to develop, even in old age (Staudinger et al., 1995).

The degree of plasticity has been denoted as an individual's reserve capacity, which is constituted by internal (e.g., personality characteristics, cognitive capacity, physical health) and external (e.g., social networks, financial status) resources available to the individual at any given time. Taking a systemic approach, plasticity in one domain of functioning may serve as a resource for

another domain. To illustrate this point, consider an older person who demonstrates plasticity in the domain of social relationships by establishing new social ties. These new social relationships could later serve as important sources of support if bodily deterioration increases the need for assistance.

With advancing age, the necessity for plasticity increases, for example in order to compensate for losses in one domain. Thus, plasticity can be seen as encompassing the potential for change including increase, maintenance and decrease (Staudinger et al., 1995).

It is important to understand that the notion of lifelong plasticity in human development reflects the view that much of what happens in the life course is a direct reflection of the goals and norms of societal contexts, which can differ in the structure, emphasis and sequential ordering. With this orientation towards understanding developmental plasticity, lifespan psychology has opened new vistas on possibilities of intervention programs and training programs (Staudinger, 2001b).

The search for methods to study plasticity, but also communalities and interindividual differences in development and aging, has long been a part of the agenda of lifespan researchers. Carefully designed intervention and training studies are one example of the many research designs and analysis methods used to examine the scope and limits of developmental plasticity in older age (P. B. Baltes et al., 2006).

2.1.3 Relevance for the Present Study

Out of the eight propositions of the lifespan approach that attempt to describe the patterning of stability and change in behavior (cf. Table 1), the concept of contextualism and the concept of plasticity were chosen since they are of special relevance for the present study.

In accordance with lifespan contextualism, the VTP can be regarded as a non-normative influence and as a new and stimulating external context that may provide an array of new resources for the participants of the VTP, such as social, emotional, professional, and/or knowledge resources. The concept of plasticity emphasizes not only the importance of resources for development but also the

potential for change even in old age. Therefore, the aim of the present study is to investigate whether participation in a new and stimulating context such as the VTP including the exposure to new resources can promote personality development.

2.2 The Lifespan Approach to Personality Development: The Dialectic between Stability and Change

2.2.1 Introduction

In the previous sections, lifespan psychology and in particular the concept of contextualism and the concept of plasticity were described as an overarching framework for the present study. The following sections now focus explicitly on personality development and illustrate what the lifespan approach has to offer in organizing and stimulating the study of personality development in old age.

Personality is defined to denote “the ways in which human beings behave/act, experience, believe, and feel with regard to themselves, others, and the material world” (p. 619, P. B. Baltes et al., 2006). Since personality is such a complex system, different approaches to the study of personality development exist, which focus on different aspects or domains of personality (cf. Section 2.2.2). In order to understand the dialectic between stability and change it is important to study these different domains, since stability within one domain may imply change in another domain.

With regard to the sources and outcomes of human development, personality has multiple causes and functions (cf. Table 1). The concept of contextualism as well as the concept of plasticity imply that personality is the outcome of developmental processes. Different pathways can lead to similar if not the same outcome.

In addition, personality also operates as an antecedent for developmental processes and co-regulates outcomes. In this sense, personality can be regarded as a self-reflective personality system (cf. Section 2.2.3.). One function of the self-reflective personality system is the allocation of resources (cf. Section

2.2.4.). The self-reflective personality system tries to manage the gains and losses of personality-related resources across various domains of functioning. Having in mind that resources are essential for the plasticity of development, this allocation of resources is of special importance.

Of particular relevance for the present study is the proposition that two forms of positive personality development need to be considered, personality adjustment and personality growth. This distinction is presented in Section 2.2.5.

2.2.2 Three Approaches to the Study of Personality Development

The three-component emphasis on questions about development and aging introduced in Section 2.1 are also of relevance to the study of personality development. Thus, lifespan researchers are interested in (1) the *commonalities* across individuals in how personality develops, (2) the *interindividual differences* in personality development and (3) the *intraindividual variability or plasticity* in the ways an individual behaves/act, experiences, believes, and feels about him/herself, others, and the material world.

These three questions regarding commonalities, interindividual differences, and intraindividual plasticity can be pursued within three different types of approaches to the study of personality development: (1) a *trait approach*, (2) a *self-system approach*, and (3) a *self-regulation approach*. These three approaches are usually treated in different literatures, and cross-links are still rare, especially with regard to lifespan development. Even though research and theory building in the study of personality have been quite diverse (e.g., Caprara, 1996; Pervin, 2001), three longstanding and overarching concerns can be identified which can be linked to the three approaches mentioned above: (1) *structure/content*, (2) *dynamics*, and (3) *underlying processes* of personality (Funder, 2001). The linkage of these concerns with the three approaches is described in the following.

Under the heading of *structure*, it is primarily the classic personality dispositions investigated within the trait approach that are considered. Within the trait approach to the study of personality development, individuals are characterized in terms of fundamental attributes and behavioral dispositions, a

line of research that originated primarily in the psychometric tradition. Research in this area focuses on the identification of the structure of personality and interindividual differences (Goldberg, 1993; McCrae & Costa, 1997b).

Among the majority of trait personality researchers there is consensus that personality can be reasonably well described by the so called "Big Five." Based on factor analysis of self descriptions, the five traits that emerge reliably across many studies are: (1) neuroticism, (2) extraversion (3) openness to experience, (4) conscientiousness, and (5) agreeableness (e.g., Costa & McCrae, 1980b).

A long-standing assumption was that "personality is set like plaster" after age 30 (Costa & McCrae, 1994). However, numerous longitudinal studies were able to show developmental changes with age, also on the Big Five (e.g., Costa et al., 2000; Helson, Jones, & Kwan, 2002; Jones & Meredith, 1996; McCrae, Costa, Pedrosa de Lima et al., 1999; Small, Hertzog, Hultsch, & Dixon, 2003; Srivastava, John, Gosling, & Potter, 2003)

Within the structural approach to personality development, another line of research can be subsumed: Ryff's conception of psychological well-being. Using a psychometric approach to the study of growth aspects of personality, Ryff (1995) generated a multidimensional conception of psychological well-being that comprises six key dimensions of positive psychological functioning: (1) self-acceptance, (2) environmental mastery, (3) autonomy, (4) personal growth, (5) purpose in life and (6) positive relations with others.

The emergence, maintenance, and transformation of personality structure, and the conditions of stability and change in interindividual differences clearly are of importance for a lifespan perspective on personality (O.G. Brim, Jr. & Kagan, 1980). Moreover, a lifespan perspective is aimed at discerning the degree to which these personality attributes and behavioral dispositions also evince intraindividual change trajectories and intraindividual plasticity.

Self-conceptions, schemata, or identity are investigated within the second approach to personality development, the *self-system approach*, which also focuses on the content and *structure* of personality, but also on the *dynamics* of personality. The self-system approach characterizes individuals as multifaceted dynamic structures of a relatively stable array of self-conceptions (Baumeister,

1994; Greenwald & Pratkanis, 1984; Markus & Wurf, 1987). Self-conceptions are not meant to encompass any self-referent attitude but rather are confined to those beliefs or cognitions that constitute important (fundamental) self-components. Whenever the social meaning of such self-referent attitudes is in the foreground, the notion of “identity” rather than self-concept is used (e.g., Hermans, 1992; Waterman & Archer, 1990).

Different situations or contexts activate different subsets of this composite structure of self-conceptions or self-schemata such as role identities. Markus and Wurf (1987) have called this the working self-concept. This view of the self-system as both stable and dynamic fits lifespan conceptions that emphasize the potential for continuity as well as change as a characteristic feature of transactional adaptation during development.

Under the heading of *process* research, that is the third approach to personality development, *self-regulatory mechanisms* are most prominent. Understanding self-regulatory mechanisms is important since the structural approach to personality development typically does not consider the underlying processes or dynamics, nor does it focus on the interplay between dispositions and particular situations (Mischel & Shoda, 1999). Self-regulation may be defined as the organized abilities and skills that a person brings to bear on monitoring experiences and behavior. At least five categories can be distinguished within that category: emotion regulation, control beliefs, coping, self-evaluation, and the goal system (goal seeking, goal pursuit, goal restructuring).

Research focusing on self-regulatory mechanisms investigates the self-related adaptive potential and the reserve capacities as well as their limits in the course of lifespan development. One area of inquiry, for example, is the stability of subjective well-being in later adulthood despite the increasing number of losses with age (P. B. Baltes et al., 2006). Researchers interested in this seeming paradox have suggested a number of factors and self-regulatory processes that might explain the stability of subjective well-being (Brandstädter & Greve, 1994; Kunzmann, Little, & Smith, 2000; Staudinger et al., 1995). Thus, it is the regulatory behaviors of promoting growth as well as those of reaching,

maintaining, and regaining psychological equilibrium that are of particular interest.

A number of recent efforts have been made to integrate these rather disconnected fields of research on personality development (Cloninger, 2003; Hooker & McAdams, 2003; McAdams, 1996; McCrae et al., 2000). Within such integrative efforts, the lifespan focus is clearly on relating structure, content- and process-related dynamics such that both stability and change characterize personality development during adulthood (Roberts & Caspi, 2003; Schindler & Staudinger, 2005; Staudinger & Pasupathi, 2000).

2.2.3 The Self-Reflective Personality System

An important aspect when trying to understand the dialectic between stability and change is a systemic view on psychological phenomena - as suggested by lifespan theory. According to this systemic view, personality can be seen as the self-reflective head of the living system human being. As such, the different aspects investigated within the three different approaches to the study of personality described in the previous section, together form the personality system. In addition, the personality system is also linked to various other subsystems of the individual such as cognitive and physiological functioning (P. B. Baltes et al., 2006). Personality reflects and evaluates developmental changes in the other subsystems and tries to integrate them.

Viewing personality as a self-organizing system suggests that individuals are striving towards consistency and that self-regulatory mechanisms are very important in the pursuit of this dynamic homeostasis (P. B. Baltes et al., 2006). Therefore, personality stability observed on the trait or self-concept level of measurement, for example, does not imply that nothing has been changing. Rather, as research on subjective well-being and resilience has demonstrated, the stability observed on one level of personality functioning (i.e., structure/content) is to some degree already the product of self-regulation at work (Brandtstädter & Greve 1994; Staudinger et al., 1995). Thus, the orchestrating or executive function of personality serving self-reflecting functions is fundamental in understanding the dialectic between stability and change.

2.2.4 The Allocation of Resources

Another important function of the self-reflective personality system is the allocation of resources. As explained in Section 2.1.2, internal as well as external resources are important for developmental plasticity. With regard to the present study and the assumption that participation in the VTP offers an array of additional resources, the function of the self-reflective personality system in the allocation of resources is of special relevance.

The allocation of resources is one of the propositions of lifespan psychology (cf. Table 1). According to this proposition, development involves the coordinated and competitive allocation of resources in three distinct functions (1) growth, (2) maintenance including recovery (resilience) and (3) regulation of loss.

The concept of contextualism suggests that resources can be divided into internal resources (e.g., cognitive capacity, physical health, personality characteristics) and external resources (e.g., social network, financial status) (e.g., Kessler & Staudinger, 2007). It is important to understand that the resources of individuals are not fixed, but may themselves change over time. Across the life span, the totality of available resources is important for developmental changes. This is particularly true for early and late life. In the case of old age, it is not so much the demands of the external contexts which exhaust resources, but rather the decay of internal resources, in particular physical resources. In combination with the loss of external resources, this decay of internal resources characterizes potential risk situations. Therefore, the profile of the functional allocation of resources across the life span involve a shift from the allocation of resources for growth (more typical of childhood) toward an increasingly larger share allocated to maintenance and management of loss in older age.

In contrast to the domain of cognitive functioning, where resources in old age are depleted to maintain a certain level of functioning, the situation for personality-related resources is different. The self-reflective personality system is able to manage the gains and losses across various domains of functioning until at least the third age (cf. Staudinger et al., 1995). However, since it becomes more and more necessary for available personality-related resources to be invested in managing cognitive, physical, and social declines and losses in old

age, it is unclear whether personality-related resources are available to promote further development including growth of the personality system itself in old age.

Possibly only under very favorable developmental conditions would personality-related resources be sufficient to invest in further development of personality itself. Although, in principle, lifespan changes in personality could include advances, they are not expected to occur in everyone. However, given certain contextual conditions personality growth might even involve such high goals as wisdom (P. B. Baltes, Smith, & Staudinger, 1992; E. H. Erikson, 1959).

Thus, whether growth in domains of personality functioning in older age is possible does not only depend on the allocation of resources, but also on the amount of internal and external resources available for change. Therefore, the VTP represents a unique opportunity to investigate whether the additional resources made available by the VTP can help promote personality development in older adulthood.

2.2.5 Two Forms of Positive Personality Development

Whenever taking a lifespan perspective on personality development, development is not equated with growth but rather defined as a ratio of gains and losses. Thus, the following question arises: what are gains and what are losses with regard to personality development. In fact, the question of what constitutes a gain and what a loss is one of the meta-theoretical propositions of life span psychology (cf. Table 1). Using the notion of gains with regard to personality characteristics makes the criterion problem even more obvious and pressing than it is with regard to intellectual functioning.

In cognitive research, it seems obvious that the more words one can remember, the better; the faster we can complete a problem-solving task, the higher the level of performance. However, even with regard to intellectual functioning, such criteria, of what is better what worse, are subject to contextual conditions. We can easily imagine a situation in which it is detrimental to remember more rather than less. For example, in recent research, the age-related increase in the selective forgetting of negatively valenced material (e.g., angry faces or negative words and sentences) has been considered as a

highly adaptive process (Charles, Mather, & Carstensen, 2003; Mather & Carstensen, 2003).

When it comes to personality functioning, the problem of determining a “best” direction of personality development emerges. Moreover, the question arises what the desirable end state of personality development could be and whether there is one or more desirable end states. It seems that with regard to personality functioning at least two related types of gains, and therefore, forms of positive development need to be distinguished (Staudinger & Kessler, in press; Staudinger & Kunzmann, 2005). One type defines gains in terms of degrees of adjustment to the challenges and tasks of everyday life, and the other one in terms of growth as defined in theories of personality “maturation”. These two developmental goals, even though not completely independent, do seem to follow different trajectories and demonstrate drastically different base rates (Staudinger & Kessler, in press; Staudinger & Kunzmann, 2005).

Thus, when evaluating developmental changes, lifespan psychology proposes to evaluate changes with regard to the adaptivity and functionality of the outcome for the individual and proposes that two forms of positive personality development need to be taken into account: personality adjustment and personality growth. Even though theories of personality development typically describe a movement towards one of these two forms, they do not distinguish between them and rather put them into the same category of “maturation” or “growth”.

Personality adjustment can be defined in terms of how well an individual is able to manage changing opportunities and constraints that arise from the three sources of contextual influences illustrated above, that is, normative age-graded, normative history-graded and non-normative influences. Given that personality development proceeds in this positive direction, it contributes to everyday running smoothly, to maintaining or augmenting subjective well-being, life success and longevity. This notion of positive development is all about adjusting to the given societal circumstances (e.g., rules, norms, expectations) making the most out of them and thus goes hand in hand with higher levels of subjective well-being and happiness. Clearly, this is an important positive trajectory for both

the individual and the community (Helson & Wink, 1987; Staudinger & Kessler, in press; Staudinger & Kunzmann, 2005).

In contrast, the other form of positive development, personality growth, is defined by increases in certain virtues such as insight, integrity, self-transcendence, and the striving towards wisdom (Staudinger & Kunzmann, 2005). In this sense, positive personality development that transcends the given societal circumstances is considered as personality growth. Such an ideal endpoint of human development has also been described in a number of developmental stage models, for example Erik Erikson's (1959), Labouvie-Vief's (1982) or Loevinger's (1976). Most of these models work with a Piagetian notion of development assuming that it is the dialectic between assimilation and accommodation that promotes growth. In other words, our expectations need to be challenged continuously by new experiences and we need to emancipate ourselves in thinking and feeling and transcend the structures within which we have been socialized in order to experience personality growth (Chandler & Holliday, 1990).

There is some initial evidence that these two types of positive personality development in adulthood are embedded in different facilitative structures, result from different developmental goals, and demonstrate different incidence rates. The age-related increase in personality adjustment seems to be a normative trajectory. However, age-related increase in indicators of personality growth is a rather rare event – at least under current historical circumstances that have not yet fully adapted to the massive increase in average life expectancy. This fact has been called the structural lag phenomenon (Ryff, Kwan, & Singer, 2001) emphasizing that there are not enough opportunities for older people to participate in a meaningful way in society. The absence of such stimulating external contexts may hamper the potential for personality growth. Staudinger and Kunzmann (2005) even argue that “for the growth trajectory to show further increases it takes a very special constellation of personal and contextual factors” (p. 326).

Clearly, the two types of positive personality development are not independent of each other. Rather, the assumption is that a certain level of adjustment is a necessary, but by no means a sufficient condition for growth. For

example, authors with a background in positive mental health have viewed adjustment as one important component of maturity (e.g., Allport, 1937/1961; Freud, 1923; Ryff, 1989). In contrast, there is another tradition that considers adjustment as unrelated (e.g., Bauer & McAdams, 2004; Helson & Wink, 1992; Loevinger, 1976) or even negatively related with growth (e.g., Mead, 1934).

Other scholars have also proposed similar distinctions with a somewhat different emphasis by differentiating, for instance, between social and intrapsychic maturity (Helson & Wink, 1987) or between personal growth and environmental mastery (Helson & Srivastava, 2001; Ryff, 1989). Labouvie-Vief's recent model of affect optimization and affect complexity fits into this framework as well (Labouvie-Vief, 2003). She argues that affect optimization, that is, adults' ability to maintain and enhance levels of subjective well-being and personal happiness, fails to provide a complete picture of personality development. Therefore, she has proposed a second process that plays a critical role in personality development, namely, affect complexity or a person's ability and willingness to understand, differentiate, and integrate emotional experiences, including their dynamics, causes, and consequences. Although Labouvie-Vief's concepts, affect optimization and affect complexity, refer to the realm of affective functioning, they bear relevance for the distinction between personality adjustment and personality growth, respectively.

To better understand these two different types of personality development and to be able to promote them, it is important to conceptualize and study them individually. Therefore, for the present study, indicators of personality adjustment and growth were administered. Having in mind that personality adjustment is a normative developmental process while personality growth is a rather rare event in older adulthood, it is of special interest to assess the impact of the VTP on these two forms of positive personality development.

2.3 Summary and Relevance for the Present Study

In the previous sections, lifespan psychology as the general conceptual agenda for the present study with its emphasis on the potential for intraindividual plasticity, even in old age, was presented. Two meta-theoretical propositions, the

concept of lifespan contextualism and the concept of plasticity, were described in more detail since they bear special relevance for the present study. Lifespan contextualism proposes that three sources of influences (normative age-graded, normative history-graded, and non-normative influences) create the contexts within which individuals act, react and develop, therewith emphasizing the importance of the person-environment interaction for change. In addition, contexts are endowed with internal and external resources. According to the concept of plasticity, the degree of plasticity, that is of intraindividual development, depends on internal and external resources available to the individual at any given time. Thus, the concept of plasticity not only highlights the potential for change, even in old age, but also emphasizes the importance of resources for personality development.

Furthermore, lifespan psychology proposes that it is the self-reflecting, executive function of the personality system that is responsible for the allocation of internal and external resources. Thus, whether growth in domains of personality functioning in older age is possible does not only depend on the allocation of resources, but also on the amount of internal and external resources available for change.

Unfortunately, society as a whole has not yet kept up with the increasing number of older people including their increasing search and demand for stimulating, external contexts. According to the structural lag phenomenon (Ryff et al., 2001), opportunities for older people to participate in a meaningful way in society are still missing. By creating new, stimulating external contexts for older people they not only get the opportunity to participate in a meaningful way in society, but they also get the opportunity to activate or increase internal and external resources, which are crucial for personality development.

With regard to the present study, participation in the VTP can be regarded as an opportunity to participate in a meaningful way in society. The VTP represents a new, stimulating external context for older individuals offering a variety of additional resources. Thus, the aim of the present study is to investigate whether the context of the VTP including the additional resources can promote personality development.

Of particular relevance for the present study is the proposition of lifespan psychology that developmental changes should be evaluated with regard to the adaptivity and functionality of the outcome for the individual. Consequently, two forms of positive personality development need to be taken into account: personality adjustment and personality growth. Therefore, the present study will evaluate the effect of participation in the VTP on these two types of positive personality development. Considering that in contrast to personality adjustment, personality growth is rather rare in older adulthood, it is of special interest to investigate whether participation in the VTP will have an effect on personality adjustment and/or on personality growth.

3 Evidence on Personality Development in Adulthood

In the previous chapter, two forms of positive personality development were introduced: personality adjustment and personality growth. The aim of the present chapter is to present typical indicators of personality adjustment and growth as well as empirical evidence on their development during adulthood. Whether or not there is potential for change, that is, for plasticity, in these indicators is elaborated in Chapter 4.

3.1 Indicators of Personality Adjustment

In this section, indicators of personality adjustment will be introduced. Even though many indicators of personality adjustment can be found within the various traditions of personality development (e.g., the self-concept literature or the realm of values and personal strivings), for the present study this description will be restricted to two broad measures of personality adjustment: subjective well-being and two of the Big Five personality traits, neuroticism and extraversion.

In psychological research, subjective well-being is used as the central indices of personality adjustment. Therefore, subjective well-being was chosen as the primary indicator of personality adjustment for the present study. The two component model of subjective well-being, emotional well-being and cognitive well-being, will be presented in more detail in the next section.

Since neuroticism and extraversion have often been viewed as the temperamental underpinnings of negative affect and positive affect respectively (e.g., Bradburn, 1969; Costa & McCrae, 1980a; Diener & Lucas, 1999; Fujita, 1991; Watson & Clark, 1992), they will also be assessed as indicators of personality adjustment in the present study.

In accordance with the proposition that personality adjustment is a normative developmental process, it is shown that the developmental trajectories of these indicators change with age. This change can be described as an increase in social adaptation, in the sense of becoming emotionally less volatile and more attuned to social demands and social roles, and thus can be associated with personality adjustment.

3.1.1 Subjective Well-Being as a Typical Indicator of Personality Adjustment

Subjective well-being emerged in the late 1950s in the search for useful indicators of quality of life and, since then, has been traditionally used as the central indicator of adjustment in psychological research (Keyes, Shmotkin, & Ryff, 2002). Subjective well-being usually describes the successful adjustment to the challenges of life and refers to people's evaluations of their lives.

Following recent literature, subjective well-being is considered as the broadest and most general concept consisting of two components: emotional well-being and cognitive well-being. Emotional well-being refers to the affective evaluation of one's life and comprises the two independent dimensions of positive affect and negative affect (e.g., Diener & Emmons, 1984). Emotional well-being is defined as the presence of positive affect (e.g., enthusiasm, pride, interest) and the absence of negative affect (e.g., anger, anxiety, distress). Cognitive well-being refers to life satisfaction and typically describes the cognitive evaluation of whether the life a person leads corresponds to his or her expectations and goals.

Although life satisfaction, positive affect and the lack of negative affect often co-occur and are to some degree related within the same individual, these components are empirically separable and must be studied individually to gain a complete picture of overall subjective well-being. When assessed separately, they can provide complementary information. Therefore, emotional well-being (positive and negative affect) and cognitive well-being are elaborated separately in the following sections.

3.1.1.1 Emotional Well-Being: Positive and Negative Affect as Two Independent Dimensions

Theorists often question whether or not positive affect and negative affect are independent dimensions or opposite poles of a single dimension. Although the terms positive and negative affect might suggest that these two aspects of emotional well-being are opposite ends of a continuum, they have emerged as

distinct dimensions (e.g., Diener & Emmons, 1984; Lawton, Kleban, Rajagopal, & Dean, 1992; Watson, Clark, & Tellegen, 1988). One implication of this two-component model is that knowledge of a person's standing on one component does not help to predict his or her position on the other. A person can be high on both positive and negative affect, low on both components, or low on one component and high on the other.

Because the two dimensions of emotional well-being are independent of one another, Bradburn (1969) suggested that the difference between positive and negative affect might be a good indicator of a person's general well-being. However, combining positive and negative affect causes one main problem. A difference score of emotional well-being ignores *absolute* levels, and focuses only on the *ratio* of positive over negative affect. An example may make this problem clearer. Consider one person who rarely experiences any emotions at all and another person who very often experiences both positive and negative affect. One would expect differences between these two individuals that make it unlikely that both report the same levels of subjective well-being. However, according to the emotional difference index, both individuals would be considered as being equally happy. Given this problem, it appears most useful to conceptualize the two components of emotional well-being - positive and negative affect - separately.

The fact that positive and negative affect differ in the direction of age-related changes supports the two-component model of emotional well-being. Studies assessing emotion via self-reported positive and negative affect support the view of a gain in affective functioning in old age. Overall, the subjective salience of emotion seems to increase with age (Carstensen, Isaacowitz, & Charles, 1999). Depending on the study and the age range under investigation, positive affect was found to increase or remain stable with age while negative affect was found to either decline or remain stable (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Gross et al., 1997; Mroczek & Kolarz, 1998). This absence of strong relationships between age and subjective well-being, despite an increase in risks and losses with advancing age, has been labeled a paradox of subjective well-being (P. B. Baltes & Baltes, 1990b; Brandtstädter & Greve, 1994; Staudinger et al., 1995). This paradox of subjective well-being is a core finding

demonstrating the resilience of the aging self and the high level of adjustment (Staudinger et al, 1995).

3.1.1.2 Cognitive Well-Being: Life Satisfaction

The previous section focused on positive and negative affect, the emotional component of subjective well-being. In the present section, the cognitive component will be described, life satisfaction. Life satisfaction has also been equated with adjustment (Diener & Suh, 1998).

Life satisfaction refers to a judgmental process in which individuals assess the quality of their lives on the basis of their own unique set of criteria (Diener, Suh, Lucas, & Smith, 1999; Pavot & Diener, 1993). A comparison of one's perceived life circumstances with a self-imposed standard or set of standards is presumably made. To the degree that conditions match these standards, the person reports high life satisfaction.

With regard to age-trajectories, one of the first long-term longitudinal studies covering 22 years reveals that life satisfaction increases with age up to about 65 years and then declines (Mroczek & Spiro, 2005). Thus, there seems to be an overall trend that both, cognitive well-being as well as emotional well-being, do not decrease with age but rather remain stable or even increase up to a certain point.

3.1.2 Neuroticism and Extraversion

In the present section, age trajectories for the two dimensions of the Big Five personality model neuroticism and extraversion are presented (e.g., Costa & McCrae, 1980b). Both are regarded as two indicators of personality adjustment.

An increasing number of cross-sectional and longitudinal studies has shown that neuroticism decreases across adulthood (Mroczek & Spiro, 2005) and may show some increases again very late in life (Small et al., 2003), while extraversion seems to stay rather stable (Helson & Kwan, 2000). A longitudinal study comparing samples between age 14 and 83 years from Korea, Portugal,

Italy, Germany, Czech Republic, also found cross-country consistency with regard to the pattern of mean-level changes just described (McCrae et al., 2004; McCrae, Costa, Pedroso de Lima et al., 1999).

Thus, similar to subjective well-being, neuroticism and extraversion do not show negative age-related developmental trajectories but rather remain stable (extraversion) or even decrease (neuroticism). These developmental trajectories can be described as being highly functional and adaptive for mastering everyday life.

3.1.3 Summary and Relevance for the Present Study

In the previous sections, various indicators of personality adjustment were presented (positive and negative affect, life satisfaction, neuroticism, and extraversion). Despite the increasing number of losses with age, all indicators of personality adjustment show positive age-related developmental trajectories. It seems as if with advancing age, individuals become emotionally less volatile and more attuned to social demands.

With regard to the present study, the aim is to investigate whether participation in the VTP can promote increases on indicators of personality adjustment in the sense of increasing levels of positive affect, life satisfaction and extraversion, and/or decreasing levels of negative affect and neuroticism. The assumption is that participation in the VTP provides participants with additional resources, social support, knowledge and skills necessary to deal with and adjust to given societal circumstances and thus to function more effectively within society. Hence, it seems reasonable to expect a positive impact of the VTP on indicators of personality adjustment.

3.2 Indicators of Personality Growth

After focusing on personality adjustment in the previous section, this section will present evidence on age-related changes in indicators of personality growth. It has already been mentioned that in contrast to personality adjustment, personality growth has not been found to come normatively with older age.

The present section will show that indeed, the developmental trajectories of indicators of personality growth reveal either no or even negative age-related differences. Therefore it is an interesting question to investigate whether certain contextual conditions, such as participation in the VTP, are apt to facilitate positive changes.

A number of indicators of personality growth exist such as wisdom, ego development, “openness to experience” and “personal growth”. Certainly, wisdom is one of the prototypes of personality growth. In the lifespan literature, wisdom is considered to be one of the positive goals of adulthood (P. B. Baltes & Smith, 1990; P. B. Baltes et al., 1992; Heckhausen, Dixon, & Baltes, 1989; Staudinger, 2001c). With regard to the development of wisdom across the lifespan it has been shown that no age differences were found in terms of personal wisdom when comparing young (20-40 years) and older adults (60-80 years) (Mickler & Staudinger, in press).

Loevinger’s (1976) theory of ego development has also gained much prominence as an indicator of personality growth. A number of measures have been used to validate ego development, as measured by the Washington University Sentence Completion Test (WUSCT). For example, ego development was shown to be significantly related to indicators of personality growth such as “openness to experience” (Einstein & Lanning, 1998; McCrae & Costa, 1980, 1997a) and even to self-related wisdom (Mickler, 2005; Staudinger, Dörner, & Mickler, 2005). With regard to age trajectories, empirical findings reveal no age differences in ego level between 25 and 80 years (Cohn, 1998; McCrae & Costa, 1980).

For practical reasons, the present study only focused on two indicators of personality growth which are presented in the following sections.

3.2.1 Personal Growth

The dimension “personal growth” of Ryff’s (1995) multidimensional conception of psychological well-being is regarded as an important indicator of personality growth. According to Ryff (1995), “personal growth” is an existential feature of psychological well-being. “Personal growth” taps on an individual’s willingness to learn, to change and to grow throughout life. It captures the sense of continued development and realization of personal talents and potential (Ryff, 1995).

In contrast to indicators of adjustment, “personal growth” does not seem to increase normatively, but instead shows age-related decreases (Ryff, 1989; Ryff & Keyes, 1995). It has been shown that “personal growth” correlates with “openness to experience” (Schmutte & Ryff, 1997). In addition, “personal growth” was found to be correlated with indicators of maturity (Bauer, McAdams, & Sakaeda, 2005) and has also been used as an indicator of maturity (e.g., Helson & Srivastava, 2001). These findings suggest that “personal growth” is a valid indicator of personality growth.

The downward trajectories of “personal growth” may evoke a negative impression about old age. If older people report to no longer find purpose to strive for continued growth, the finding might underscore that later life involves marching to a different drummer. However, Ryff (1991) found that older adults, like those younger in age, show continued endorsement of “personal growth”. Qualitative, open-ended assessments convey similar messages about how middle-aged adults as well as the aged conceive this existential aspect of psychological well-being (Ryff, 1989).

3.2.2 Openness to Experience

“Openness to experiences” is one of the Big Five personality traits (e.g., Costa & McCrae, 1980b). “Openness to experiences” is manifested in “the breadth, depth, and permeability of consciousness, and in the recurrent need to enlarge and examine experience” (p. 826, McCrae & Costa, 1997).

“Openness to experiences” is discussed as a concomitant of personality growth (Compton, Smith, Cornish, & Qualls, 1996; Staudinger, Lopez, & Baltes, 1997; Staudinger, Maciel, Smith, & Baltes, 1998). It has been shown that openness correlates with ego development (Einstein & Lanning, 1998; McCrae & Costa, 1997a), emotional complexity (Kang & Shaver, 2004), Ryff's dimension “personal growth” (Schmutte & Ryff, 1997), maturity of coping strategies (Costa, Zonderman, & McCrae, 1991) as well as other constructs related to personality growth (for a review see McCrae & Costa, 1997). These empirical relationships suggest that “openness” is a valid correlate of personality growth. However, since clear distinctions between an indicator and a correlate within a developmental sequence are rarely possible, for the purpose of the present study “openness to experience” will be regarded as an indicator of personality growth.

While the indicators of personality adjustment of the Big Five, neuroticism and extraversion, show positive developmental changes with age, “openness to experience” shows age-related decline. However, studies vary with regard to the onset of the decline. Longitudinal research has shown a curvilinear pattern of change, with an increase in young adulthood, stability until age 60 and a decline thereafter (Roberts, Walton, & Viechtbauer, 2006). In contrast, a cross-sectional and cross-country study by McCrae and colleagues (1999) found a negative linear relationship between age and “openness”. This developmental trend fits well with the decline observed in “personal growth”, wisdom and ego development reported earlier.

3.2.3 Summary and Relevance for the Present Study

In the present study, two indicators of personality growth were administered: “personal growth” and “openness to experience”. It has been found that both show age-related decline. Similar declines were reported for wisdom and ego-development, two other indicators of personality growth. These findings are in accordance with the proposition that personality growth is not a normative developmental process in later life but rather a rare event (Staudinger & Kunzmann; 2005).

From a sociological perspective a possible explanation for this decline may be the “structural lag phenomenon” introduced earlier (Section 2.2.5). The “structural lag phenomenon” describes the fact that social institutions, and society as a whole, have not yet adjusted to the longer periods of life older people nowadays experience. Therefore, opportunities for meaningful experiences and especially for development and continued growth may be limited or hard to find for older people (Ryff et al., 2001; Staudinger, 2005). Participating in the VTP might constitute such an opportunity. Factors such as getting encouraged and supported to develop a personal volunteering project and to participate in a meaningful way in society might foster personality growth. Therefore, one aim of the present study is to investigate the impact of the VTP on indicators of personality growth.

4 Theories, Mechanisms and Empirical Evidence for Plasticity in Personality Development in Adulthood

The aim of the present chapter is to elucidate if personality development in adulthood can be influenced, that is, shows plasticity. The chapter will begin with the description of two classical theories of personality development: Erikson's theory of psychosocial crises and Levinson's theory of life structure. These two theories were chosen because they do not just focus on the description of the ideal endpoint of human development, but they convey the dynamics, factors and processes that might lead to personality development. After that, additional underlying mechanisms of change are described. Then, focusing on personality adjustment and personality growth, more specific theories of change and empirical evidence for plasticity will be presented.

4.1 Theories and Mechanisms of Personality Development

4.1.1 Classical Theories of Personality Development

There are numerous theories of personality development, the most influential one being Erik Erikson's theory of psychosocial crises (e.g., Erikson, 1959). Other growth or stage theories for example are those of Gordon W. Allport (1961), Loevinger's theory of ego development (1976), Labouvie-Vief's cognitive theory (1982), Ryff's theory of psychological well-being (1995) as well as Levinson's theory of life structure (1986). The theories differ with regard to their primary focus emphasizing either the processes and dynamics precipitating personality development or the typical end-state characteristics of personality growth. What all theories have in common, however, is the conception that personality development is possible throughout the entire lifespan as people continuously adapt to changing internal and external requirements and thereby grow.

Of interest for the present study is not so much the description of the ideal end-state of personality growth or of maturity, but rather the processes or the dynamics that foster personality development. Therefore, two theories that focus

on the processes and the dynamics underlying personality development will be described in more detail. Erikson's theory of psychological crisis is a classical stage theory, describing both, the endpoint of maturity but also the processes underlying personality change. In contrast, Levinson's theory of life structure does not identify typical end-state characteristics of personality maturity. His theory was chosen since it clearly emphasizes the processes and mechanisms underlying personality change. In the following, both theories will be presented. Please note that the similarities of both theories which are of particular relevance for the present study will be discussed in Section 4.1.3, 'Summary and Relevance for the Present Study'.

4.1.1.1 Erikson's Theory of Psychosocial Crisis

Perhaps more than other theorists, Erikson (1963) provided a systematic developmental theory, based on a psychoanalytic framework that encompasses eight stages of ego development, from infancy to old age. At each stage, the organism must meet and resolve specific challenges in order for growth to occur. Briefly, the eight stages of personality development or ego development are: (1) early infancy, with the challenge of developing a sense of basic trust; (2) later infancy, where the crisis is one of autonomy versus a sense of shame and doubt; (3) early childhood, a sense of initiative versus guilt; (4) middle years of childhood, a sense of industry versus inferiority; (5) adolescence with its well-known crisis of ego identity versus role confusion; (6) early adulthood, a sense of intimacy versus a sense of isolation, (7) middle adulthood, the development of generativity versus ego stagnation; and (8) late adulthood, a sense of ego integrity versus a sense of despair.

Erikson identified each stage in terms of a polarity (e.g., trust vs. mistrust, generativity vs. stagnation). A person is in a stage when the polarity is of central importance in experiencing the self and relating to the world. The primary developmental tasks of a stage are to come to terms with both of its polar opposites and to arrive at some balance or integration of the poles, so that they are no longer entirely antithetical. Hence, Erikson's epigenetic theory of development is characterized by a process of equilibration in which the

psychosocial balance shifts from one state of disequilibrium to the next (Clayton, 1975). To approximate resolution or the state of equilibrium, people must experience a favorable ratio between a positive pole and a negative pole.

Though there is a specific conflict or turning point at each stage, the same theme is also present in preceding and subsequent stages. For example, the conflict of trust versus mistrust occurs not just in the oral sensory period of development, but throughout life, and because of its primacy is a central issue. In this sense, the resolution of the crisis is never absolute. Personality development is thus a continuous process, not terminated at physical maturity, but a hierarchically ordered sequence of stages in which psychosocial growth is a necessary prerequisite for the resolution of the crisis specific to each stage.

By viewing each stage as an encounter between the individual and the environment Erikson was one of the first theorists to consider the importance of environmental, cultural and societal influences on the development of the individual. The challenges or crisis the individual has to resolve at each stage stem from internal, biological pressures and cultural and societal expectations outside the person as well the challenges that arise out of that specific constellation and interaction between the individual and the environment. Consequently, the reciprocal relationship between the person and the environment is a central developmental process in Erikson's theory of the developing person.

From a psychoanalytic view, the developing relationship between the individual and the environment is seen largely in terms of ego development. In other words, the development of personality requires the development of an ego that is strong enough to control the basic pleasure seeking instincts of the "id", which keeps the individual properly in touch with reality, and enables him or her to recognize what can be accomplished within the constraints of the superego (conscience) and the environment. According to Erikson (1980), the feeling of having control, not only over the instincts of the "id", but also over one's own behavior are essential for personality development. In contrast, loss of self-control and the feeling of being controlled are seen as the precursor of neurosis, a desperate struggle for control of one's environment, and paranoia, a manifestation of feeling controlled by others (Allen, 2006).

By listing the challenges of each stage an individual has to master on the way to maturity, Erikson also formulates criteria for a mature personality. As the ideal endpoint of personality development he identified the achievement of integrity and wisdom as the last and highest form of personality functioning. Achieving this last stage requires, on the one hand, successful mastery of the previous life tasks and, on the other hand, accelerative and supportive conditions associated with the social environment. Wisdom, in the Eriksonian sense, necessitates the full expression of mature identity including the transcendence of personal interests, mastery of one's own finitude, and attention to collective and universal issues (J. M. Erikson, 1988).

One way to resolve this last stage of life (integrity vs. despair) and thus to integrate one's life with the goal of achieving integrity and wisdom is life reflection. Looking back over one's life, the remembering of past events plus the further analysis of the events (explanation and evaluation), and finally the integration of these events into a satisfactory whole, while also considering the present and the future, is called life reflection. One can certainly imagine that successful life reflection of this kind may help to promote wisdom. However, since Erikson's notion of stages is a relative one, life reflection - as a means of coming to terms with one's life as lived - should also be present at earlier phases of the life span.

With regard to the present study, participants (mean age 62 years) should be struggling with the resolution of the seventh stage, generativity versus stagnation - according to Erikson's scheme. The seventh stage is generally identified with the long period in the life course that follows early adulthood but comes before "old age". The prototype for generativity is raising children. By being good and caring parents, many adults fulfill their basic "need to be needed" and directly promote the next generation. Yet there are many other ways to be generative, especially in one's occupational life, in creative activity, and through community involvement such as volunteering, charitable contributions or church activities. The generative adult commits him - or herself to some kind of activity that can help others, investing significant time and creative energy into that endeavor. If individuals are not able to feel that they are productive, creative or giving, they are likely to have a sense of stagnation. Feelings of stagnation reflect

an inability to take control of one's life (Grossbaum & Bates, 2002). This particular concern is often referred to as the mid-life crisis. It highlights the importance of personal control for mastering the task of generativity thereby avoiding stagnation and a mid-life crisis.

Thus, according to Erikson, personality development for the middle-aged person entails moving beyond the self-directed concerns of identity or interpersonal needs of intimacy (stages five and six) to a phase in which one's skills and knowledge are shared with younger individuals through assuming leadership and decision-making roles. In fact, a significant theoretical literature on personality and social development suggests that the experience and expression of generativity represent a hallmark of psychosocial maturity and personality change in the adult years (Fisher, 1995; Kotre, 1984; McAdams & de St. Aubin, 1998; McAdams, Ruetzel, & Foley, 1986).

4.1.1.2 Levinson's Model of Life Structure

Daniel Levinson (Levinson, 1978, 1986) also put forward a stage and crisis theory of the development of the life span. Levinson's theoretical perspective, immortalized in the provocative "A Season of a Man's Life" (Levinson, 1978), characterizes development as a life structure or "underlying pattern or design of a person's life at a given time" (p. 6). These life structures are reminiscent of what Piaget referred to as schemes or ways of organizing information about the world at particular points in time. According to Levinson (1986), life structures are the foundation of an individual's life cycle or life span that is further demarcated into sequential stages, "seasons" or "eras" with concomitant age-linked tasks. He proposed that the life cycle consists of four major eras: pre-adulthood (childhood and adolescence), early, middle, and late adulthood (Levinson, 1986).

Although hierarchical development of logical thought takes place during childhood, Levinson claims that in domains significant to adult development no such stage hierarchy can be observed. Successive eras in adulthood cannot be considered "higher" than their predecessors. Therefore, he refers to them metaphorically as "seasons" that have their own distinct character but that do not

necessarily represent a progression in evolutionary form. Thus, the endpoint of the life course involves interests and endeavors that typify the last season, but it does not necessarily reflect a logical culmination of capacities or fruition of potential (Levinson, 1990).

According to Levinson, during each of the four eras, the individual creates a “life structure” by developing a network of relationships and roles. An era consists of three parts: (1) it begins with an entry life structure; (2) it revolves around a transitional period in the middle of the era and (3) it ends with a culminating life structure. In between each of the four eras, the individual is also faced with a transitional period, lasting about five years (Levinson, 1986).

In the entry life structure, life tasks entail making specific choices that lead toward defining one’s goals for a particular season of life, such as deciding to engage in an intimate relationship with another. According to Levinson, this phase lasts five to ten years. The transitional period within the era also lasts approximately five years. This transitional period provides a basis for the culminating life structure. In the culminating life structure the individual fulfills those aspirations which were initiated in the entry life structure and which were modified during the transitional period. Culminating life structures last five to seven years and signal the end of a season.

Especially during these transition periods, that is within and between eras, the life structure is reviewed. The doubts and dilemmas raised during such review often cause a period of instability, which must be resolved before the individual can move on. Thus, these transition periods are opportunities for “individuation” and growth of the self. This reappraisal or review of the existing life structure is seen as the necessary dynamic with the potential for change.

Although Levinson does not use the term life reflection, his description of examining and assessing the life structure, to explore possibilities for change in the self and the world and to move toward commitment to the crucial choices that form the basis for a new life structure in the ensuing period, seems to involve what others have called life reflection (e.g., Staudinger, 2001a; Wong & Watt, 1991).

According to Levinson (1986), it is the life structure that forms a boundary between the personality structure (the person) and the social structure (the

environment) and governs the transactions between them. Levinson (1986) state that “the life structure mediates the relationship between the individual and the environment. It is part the cause, the vehicle, and the effect of that relationship.” (p. 7). Thus, Levinson seems to acknowledge the importance of the reciprocal relationship between the person and the environment for the development of the life structure, that is for the individual’s life.

According to Levinson (1986, 1990), the transition between adolescence and early adulthood is seen as taking place between the ages of 17 to 22, and is a time when the individual must form an adult identity (cf. Erikson’s concept of identity versus role confusion). Early adulthood lasts until the ages of 40 years. During this era the young adult is seen as having to master certain tasks, including pursuing an occupational ambition or “dream” and raising a family. This is viewed as a productive and demanding era. Between the ages of 40 and 45 comes the mid-life transition. During this time, the individual needs to deal with three tasks. First, he must review what he has achieved so far and perhaps adjust to the reality of not having achieved all he set out to so. Secondly, he must start to move into middle age. Thirdly, he must adjust to four particular issues – growing older, being mortal, accepting the feminine as well as the masculine side of his nature and needing attachment to as well as separateness from others. This transition links with the notion of mid-life crisis, and leads into middle adulthood which then continues to the age of 60. During middle adulthood (45-60 years) individuals are in a period when they have the opportunity to make an impact on their families and on society, through family, professional and civic roles (cf. Erikson’s notion of generativity). At the ages of 60 to 65 there is a transition into late adulthood. Thus, according to Levinson (1986, 1990), participants of the present study (mean age 62 years) can be placed in the transition to late adulthood. Indeed, most of them are retired and thus could be searching for something new in their lives.

4.1.2 Other Mechanisms of Personality Development

In the previous sections, two traditional lifespan developmental theories were described which focus on the processes or dynamics promoting personality development in adulthood. More recently, Roberts and colleagues (Caspi & Roberts, 2001; Roberts & Caspi, 2003; Roberts & Wood, 2006) also focused on the underlying mechanisms of change. They identified four mechanisms of change: (1) responding to contingencies, (2) watching ourselves, (3) watching others and (4) listening to others. In addition, they spelled out a more general theory of personality development in adulthood, the social investment theory focusing on the importance of a new social role for personality change (Lodi-Smith & Roberts, 2007). These mechanisms of change will be described in the following.

The first mechanism of change, responding to contingencies, entails responding to explicit as well as implicit contingencies. Explicit contingencies are concrete contingencies applied to the person's behavior, for example a parent's attempt to change a child's behavior. Implicit contingencies on the other hand are either unspoken expectations and demands, or roles with specific expectations and demands for appropriate behavior. Often the acquisition of a new social role comes with a set of expectations and demands that is known to the person assuming the role as well as to other people interacting with the person in the new role. Therefore, people in new social roles usually respond to these expectations and demands and by doing so, eventually change their behavior.

The second mechanism of change is watching ourselves. By watching their own actions people can gain insight into and draw conclusions about their own behavior. This can facilitate an introjection process, leading to the internalization of role demands into one's self concept (Deci & Ryan, 1991). This can trigger efforts to change this behavior and develop a new role identity. Thus, watching themselves can help the individual to change by providing self-insight and feedback on the way to developing a new role identity.

The third significant source of information important for personality change comes through watching others, such as parents, teachers, coaches and mentors. This approach to change is consistent with a social learning perspective

implying that multiple information-processing mechanisms are involved in the acquisition of new behavior (Bandura, 1986). The most likely sources of observational learning are parents and significant role models.

The forth critical source of information about ourselves and subsequently a potential source of change is the people with whom we interact, especially the feedback they provide to us. This resembles the propositions made by identity theory. According to identity theory, people develop meanings about themselves through receiving feedback from other individuals (Stryker & Statham, 1985). If this feedback is incongruent with people's self-perceptions, they change their behavior in order to change the feedback. Thus, when people receive feedback concerning their personality through exposure to new environments and new social groups, people will be more likely to change.

In fact, the exposure to new social environments and new social groups has been recognized as an important factor for personality development within the social investment theory (Lodi-Smith & Roberts, 2007; Roberts, Wood, & Smith, 2005). The social investment theory is a more general theory of personality development. It states that investing in social institutions, such as age-graded social roles outside of the individual's current identity, and making commitments to these social roles, such as work, marriage, family and community, is indispensable for personality development. Social investment in community, such as volunteer work, reflects a direct attempt to improve one's society and, therefore, is a core indicator of social investment.

The important assumption underlying the social investment theory focuses on how the acquisition of new social roles enacts change. According to Roberts, Wood and Smith (2005) "the crux of the process of personality development, within the social investment framework, lies in committing oneself to social institutions outside of one's existing identity structure" (p. 174). In addition, a prerequisite for a new social role to promote personality development is "the introjection of the role into one's identity and the cognitive and emotional commitment made to the role" (p. 70, Lodi-Smith & Roberts, 2007). This act exposes a person to new contingencies contained in these new social roles, expressed in the form of role expectations for appropriate behavior.

Thus, in order for personality development to occur, the experience of, the investment into, and the commitment to a new social role have to lead to the development of a new role identity. Only then will the individual try to act in accordance with the contingencies contained in a new social role. The other three mechanisms of change, watching oneself, watching others and listening to others, will most likely set in simultaneously while trying to act in accordance to these new role expectations.

4.1.3 Summary and Relevance for the Present Study

In an attempt to specify how personality may change, Erikson's theory of psychosocial crisis (1953) and Levinson's theory of life structure (1978, 1986), two traditional lifespan developmental theories, were consulted. Among the numerous theories, these two were chosen because their theory of personality development does not only focus on the ideal end-state of the mature person, but instead they are among the few theories which also specify the processes or dynamics promoting personality development in adulthood.

Both theories take up the conception of transitions as an important turning point with the opportunity for psychological development. Only successful passage through a transitional period may promote personality development. Following the division of transitions within each theory, participants of the present study should be struggling with the resolution of a transitional phase. However, it is important to note that both, participants of the VTP but also the control group, are in a transitional phase. Therefore, the concept of transitions as a mechanism of change for personality development cannot be accounted for when evaluating the impact of the VTP on personality development.

In addition, both theories acknowledge the relevance of the environment and regard the reciprocal interaction between the person and the environment as an important mechanism for personality development. The need to incorporate environmental factors into adult personality research is supported by lifespan psychology. The concept of contextualism also underlines the importance of the environment for personality development (e.g., P. B. Baltes et al., 2006).

With regard to the present study, it will be shown in the following sections that certain environmental influences, such as the experience of a positive event, can be sufficient to promote personality adjustment. However, for personality growth to occur, a special constellation of contextual and personal factors might be necessary (Staudinger & Kunzmann, 2005).

As another central developmental process, both theories identify life reflection. Indeed, there is evidence that life reflection, under certain contextual conditions, may promote wisdom, one of the most central indicators of personality growth (Staudinger & Baltes, 1996). The hypothesis that life reflection can be related to the accumulation of self-insight and personality development also receives support from a very different literature, the literature on personality continuity and change. Roberts and Caspi (2003) described various mechanisms that may underlie personality change, such as responding to contingencies, watching others, watching ourselves, and listening to others. In this terminology, life reflection is based on information stemming from watching ourselves, but also very often from watching and listening to others, thereby contributing to personality change.

Even though both groups of participants, that is participants of the VTP and the control group, are in a transitional phase in which life reflection often takes place, only participants of the VTP are explicitly encouraged to life reflect during the VTP (cf. Section 7.1). Therefore, life reflection as one mechanism of personality development can be regarded as a special feature of the VTP with the potential to promote personality change.

More recent research on the dynamics of personality development suggests that in addition to the four mechanisms underlying personality change (responding to contingencies, watching others, watching ourselves, and listening to others, Roberts & Caspi, 2003) social roles and in particular the development of a new role identity are important for personality change (Lodi-Smith & Roberts, 2007). According to the social investment theory, investing in and committing to a new social role and thus developing a new role identity is essential for personality change, since the acquisition of a new social role will most likely trigger the four

mechanisms of change. These often unconscious ways in which people change in order to fit in are some of the most successful mechanisms of change.

With regard to the present study, one main goal of the VTP is to encourage and support participants to develop a new role identity in the context of civil engagement. Therefore, the development of a new role identity will also be considered as an important element of the VTP with the potential to foster personality development.

4.2 Personality Adjustment

4.2.1 Subjective Well-Being

The question whether subjective well-being can change is a pivotal one to the field of subjective well-being for both theoretical and applied reasons. In terms of theory, the idea that subjective well-being remains stable makes strong predictions about the relation of heritable features such as temperament and the experience of events in influencing subjective well-being. In terms of practical importance, interventions to help individuals or even society to change must be considered in a different light if they cannot hope to improve people's subjective well-being. Thus, the question of whether subjective well-being can be changed is of immense importance to the field of psychology.

In subjective well-being research, emotional well-being and life satisfaction are frequently subsumed under the broader construct of subjective well-being, and therefore are often not studied separately. Thus, unless dimensions were assessed separately, the present section will refer to the overall construct of subjective well-being.

A great deal of research has been based on the supposition that the most likely causes of change in subjective well-being are major life events and experiences. A milestone in psychologists' understanding of subjective well-being is the adaptation model of subjective well-being posited by Brickman and Campbell (1971). Brickman and Campbell (1971) described a hedonic treadmill, in which processes similar to sensory adaptation occur when people

experience emotional reactions to life events. Just as people's noses quickly adapt to many scents and smells which thereafter disappear from awareness, Brickman and Campbell suggested that one's emotion system adjusts to one's current life circumstances and that all reactions are relative to one's prior experience. They proposed that people briefly react to good and bad events, but before long they return to neutrality. Life events and experiences are seen as having no more than a fleeting impact on subjective well-being.

In studies that have become classics in the field, Brickman, Coates and Janoff-Bulman (1978), invoked the adaptation level model to explain why both a major favorable event (winning a state lottery) and a major adverse event (becoming a quadriplegic or paraplegic) apparently had little long lasting effects on subjective well-being. They concluded that lottery winners were not happier than non-winners and that people with paraplegia were not substantially less happy than those who can walk. Impressive as this research is, its results are easily overinterpreted. Sample sizes were small (22 lottery winners and 29 accident victims) and the response rate for lottery winners was only 52%. Furthermore, and perhaps most importantly, the data were not longitudinal, which prevented Brickman and colleagues from comparing respondents' post-event levels of well-being with their pre-event levels. Without this information, it is difficult to interpret their results. Thus, the study is intriguing, but it does not offer definitive support for the idea of adaptation.

Although the empirical support for hedonic adaptation was, in fact, mixed, the study captured the attention of psychologists. Brickman and colleagues' work is often cited as showing that adaptation is so rapid and so complete that events have no detectable impact on subjective well-being (Argyle, 1987; Costa & McCrae, 1980b).

However, to capture the complete process of reaction and adaptation to events, it is desirable to study large groups of individuals for long periods of time. Inevitably, some of the individuals being studied will experience major life events, and then researchers can determine whether adaptation occurs. One study that used this design is Headey and Wearing's (1989) Australian Panel Study. These authors followed a group of respondents for a period of eight years. They found that people initially reacted strongly to bad and good events but then returned

toward their original baseline levels of subjective well-being. On the basis of their data, Headey and Wearing (1989) made several modifications to the original hedonic treadmill hypothesis.

They proposed that subjective well-being has a baseline or set point for each individual and that it returns to this set point after unusual events perturb it away from the set point level. This set point level of subjective well-being is determined by the recurring life events that result from individuals' personality predispositions (Headey & Wearing, 1991). Provided an individual's "normal" (equilibrium) pattern of life events is maintained, subjective well-being is not affected. It is only when events and experiences deviate from the equilibrium pattern that a person's level of subjective well-being changes. The differential impact of different types of experiences on subjective well-being is described in more detail in the following section (Section 4.2.1.1).

Thus, in contrast to Brickmans, Coates and Janoff-Bulman's adaptation level model (1978) concluding that adaptation is so rapid and so complete that the impact of events is undetectable, Headey and Wearing do not doubt that life events may change subjective well-being. However, according to Headey and Wearing (1989, 1992), the change in subjective well-being is usually temporary, because stable personality traits, which play a crucial equilibrating function, cause a person to revert to his or her normal set point level. In support of Headey and Wearing's theory, Lykken and Tellegen (1996) proposed that long-term subjective well-being is determined primarily by a person's genetically based dispositions, although they maintained that events can temporarily move individuals above or below their baselines.

The theory of adaptation was readily accepted by psychologists because evidence frequently supported the idea. In particular, longitudinal studies that tracked changes in subjective well-being over time provided more direct evidence that adaptation does occur. For instance, Silver (1982) found that individuals with spinal cord injuries reported strong negative emotions one week after their crippling accident. However, two months later, happiness was their strongest emotion.

More recent studies also support the theory of adaptation. Tracing the reactions to the death of a spouse, several studies showed that emotional reactions eventually rebound after this major life event (e.g., Bonanno, Wortman, Lehman, Tweed, & Sonnega, 2002; Bonanno, Wortman, & Nesse, 2004; Lucas, Clark, Georgellis, & Diener, 2003).

Likewise, Suh, Diener, and Fujita (1996) found that events only had an impact on positive and negative affect if the events occurred in the past six months. More distant past events did not predict changes. Comparable results were found for life satisfaction. Life satisfaction was only affected if the events occurred in the past six months (Suh et al., 1996). Lucas and colleagues (2003) investigated adaptation to the positive event of getting married and resulting changes in life satisfaction. On average, participants of the study received a boost in life satisfaction after marriage. However, after less than a year, these increased levels of life satisfaction were found to decrease again. These findings are in line with other studies showing that the increases in life satisfaction associated with marriage are mainly found in the months after marriage (e.g., Winter, Lawton, Casten, & Sando, 1999). Similarly, a longitudinal intervention study also revealed that the increase in life satisfaction was only temporarily (Searle, Mahon, Iso-Ahola, Sdrolas, & van Dyck, 1995, 1998).

4.2.1.1 The Type of Life Events: Differential Effects on Positive and Negative Affect

Research in the area of life events and adjustment processes indicates that there are significant effects of major life events on emotional well-being (e.g., Dohrenwend & Dohrenwend, 1974; Vaidya, Gray, Haig, & Watson, 2002). In this research context, most research suggests that the valence of the life event (positive or negative) has differential effects on positive and negative affect (e.g., Stallings, Dunham, Gatz, Baker, & Bengtson, 1997; Suh et al., 1996; Zautra & Reich, 1980, 1983).

A growing body of evidence supports this assumption. Numerous studies have shown that experiencing positive events increases positive affect but has little effect on reducing negative affect. Conversely, negative events are

associated with negative affect but only inconsistently with positive affect (e.g., Block & Zautra, 1981; Headey, Holmström, & Wearing, 1984; Headey & Wearing, 1991; Reich, Zautra, & Hill, 1987; Suh et al., 1996; Winter et al., 1999; Zautra & Reich, 1983). In general, it appears that each type of event relates most directly only to a corresponding same-domain affective condition. It seems as if people have two separate systems for experiencing and responding to affective experiences: one which tallies up negative events and their impact, and another which tallies the impact of satisfying events. Cross-domain effects, such when an experience in one affective domain influences responding in the other, are particularly rare (Zautra & Reich, 1983). In contrast, life satisfaction was affected by positive events but also by negative events (Headey & Wearing, 1991; Suh et al., 1996).

4.2.1.2 The Source of Experience: Differential Effects on Positive and Negative Affect

Focusing only on positive and negative affect, research suggests that the source of the experience, that is whether the experience is caused by external or internal factors, might also have a differential effect on positive and negative affect (L. A. Clark & Watson, 1988; Lawton, 1983). Positive affect is believed to depend on experiences that result from effectively interacting with the external world, for example, with one's friends and family. On the basis of his survey data, for example, Bradburn (1969) concluded "that there was something about social participation and involvement in the world that was conducive to the experience of positive feelings" (p. 123). Indeed, the significant association between positive affect and social activity has been demonstrated in a number of studies (e.g., Bradburn, 1969; L. A. Clark & Watson, 1988; Watson, 1988; Watson, Clark, McIntyre, & Hamaker, 1992). In contrast, negative affect does not seem to have a clear or consistent association with social activity. Studies in this area have found weak and inconsistent correlations between negative affect and socializing (Watson, 1988).

Diener and his colleagues found further support for the impact of the environment on positive affect (Diener, Suh, Oishi, & Shao, 1996). They were

able to show that pleasant affect is influenced more by cultural norms than unpleasant affect. In cultures where it is deemed inappropriate to express pleasant affect, people report lower levels of it, while reports of unpleasant affect are less related to norms.

Thus, while positive affect seems to be influenced by the external world (e.g., social activity, social norms), negative affect appears primarily to be a function of sources that lie inside oneself. For example, negative affect has been demonstrated to result from the evaluation of one's health, chronic pain and discomfort, subjective distress, or low self-esteem (Bradburn, 1969; Watson & Pennebaker, 1989).

These findings are in line with heritability studies suggesting that pleasant and unpleasant affect probably arise from different genes, as evidenced by their different patterns of heritability. According to these studies, unpleasant affect may be quite strongly related to biology. In contrast, pleasant affect, in addition to the biological component, is more likely to be influenced by shared family environments, situational factors and environmental reinforcements (Baker, Cesa, Gatz, & Grodsky, 1992).

4.2.2 Neuroticism and Extraversion

In contrast to subjective well-being, research on the impact of life events on neuroticism and extraversion has been rather limited. Even though several researchers have suggested that investigators should also study personality development in relation to life experiences (Caspi, 1987; Neugarten, 1982) most studies focused on subjective well-being and not on personality traits. The reason for this may be that particularly in the 1980s and 1990s, research was dominated by the belief that after age 30 personality “is set like plaster” (Costa & McCrae, 1994).

Even so, Headey, Glowacki, Holmstrom and Wearing (1985) investigated the impact of life events on neuroticism and extraversion. They found that the same-domain effects evident within research on emotional well-being can also be applied to neuroticism and extraversion. They found modest but significant correlations between life events occurring in adulthood and their gradually

modifying impact on personality. Just as expected for emotional well-being, favorable events increased extraversion and adverse events increased neuroticism. No cross-domain effects were found. Similar results were reported in a study by Suh, Diener and Fujita (1996). Negative events correlated significantly with neuroticism, while the correlation between positive events and extraversion just missed the significance level. Again, no cross-domain effects were reported.

An intervention study for older individuals also focused on possible changes in neuroticism and extraversion (Pushkar, Reis, & Morros, 2002). However, participation in the intervention did not promote changes in neuroticism and extraversion. Since all three groups of older adults (former volunteers, new volunteers and non-volunteers) took part in the intervention, the results have to be interpreted accordingly.

Another line of research investigating changes in neuroticisms and extraversion focuses on the impact of severe life events, the onset of clinical disorders and psychopathology (Caspi & Shiner, 2006). Since participation in the VTP cannot be compared to the experience of significant psychopathology, this line of research will not be presented.

4.2.3 Summary and Relevance for the Present Study

Overall, the evidence suggests that certain contexts, such as the experience of a life event, can have an impact on subjective well-being, the prominent indicator of personality adjustment. However, due to an internal set point, increased levels of subjective well-being are usually only temporary (Headey & Wearing, 1991; Lykken & Tellegen, 1996). Even though evidence differs with regard to the amount of time it takes for adaptation to occur, studies reveal that positive events evoke heightened levels of subjective well-being from about six month (Suh et al., 1996) to one year (Lucas et al., 2003; Winter et al., 1999).

Of particular relevance for the present study is the finding that positive and negative affect seem to be differentially related to the experience of life events. A

number of studies support the view that life events only evoke same-domain affective reactions: positive events enhance positive affect but do not reduce negative affect, while negative events increase negative affect but do not reduce positive affect. In contrast, life satisfaction can be influenced by both types of events.

In addition to the valence of the event, the source of the event is also of importance. Numerous studies have provided evidence that positive and negative affect seem to have different sources of experience. While positive affect seems to be influenced by external sources (e.g., social activity, social norms), negative affect seems to depend more on internal sources. Heritability studies support this view.

In contrast to subjective well-being, the evidence for changes on the other two indicators of personality adjustment, neuroticism and extraversion, is limited. Nevertheless, two studies show that the same-domain effect evident for positive and negative affect also seems to hold for extraversion and neuroticism (Headey et al., 1985; Suh et al., 1996).

With regard to the present study, participation in the VTP can be compared to the experience of a positive event. In addition, it can be regarded as an external source and as a social activity. Therefore, it is of interest to investigate if participation in the VTP will indeed enhance personality adjustment by increasing positive affect, life satisfaction and extraversion. In line with the hedonic treadmill theory, these increases should revert to baseline levels one year after participation in the VTP.

4.3 Personality Growth

4.3.1 Introduction

The question whether personality growth is possible even in old age has been of interest to many researchers. Some theorists have answered in the negative, emphasizing the shrinking perspective of the elderly and the ever-present struggle to cope with new limitations and losses (Pfeiffer, 1977). Indeed, some have suggested the concept of development has little meaning in the context of old age, because any biological push to mature is likely gone. In contrast, other theories claim that a new sense of completion and ego integrity may be gained during the final part of life (Erikson, 1963), perhaps by positive life review (Butler, 1974), ego transcendence (Peck, 1968), or increasing spirituality (Tornstam, 1994). Vaillant (1977), for example, claimed that increased wisdom and decreased use of immature defenses typically come with age. Maslow (1968) theorized that lifelong personality growth may occur as people satisfy more and more needs.

According to lifespan theory (cf. Chapter 2), personality growth is possible at all ages. However, in contrast to personality adjustment, personality growth in adulthood is not seen as a normative developmental process. Indeed, empirical evidence supports this proposition. Indicators of personality growth do not show normative increases with age. Studies focusing on the plasticity in indicators of personality growth are rare, in particular with regard to older adulthood.

Nevertheless, some studies do investigate the potential for personality growth. For example, it has been found that wisdom-related knowledge and judgment can be facilitated by providing the possibility of reflecting on the presented life problem with another person. Providing such a dyadic context for reflection on a life dilemma increased the level of wisdom-related knowledge and judgment significantly (Staudinger & Baltes, 1996). Focusing on the effect of late-life challenges, Kling, Seltzer and Ryff (1997) found that the experience of relocating to an independent living setting led to increases on Ryff's dimension "personal growth" ten months after the move. White (1985) investigated the effect of a nurse practitioner training program on ego development. He found that only those women on lower pretest ego levels were able to profit from the training.

Similar results were obtained in two other studies focusing on the effect of a psychological education course on ego development (Kwasnick, 1982; Mattei, 1979). Both studies found that only participants on lower pretest ego levels, as compared to higher pretest ego levels, showed increases on ego development after the training.

Subgroup differences were also found in a study investigating the effect of divorce on ego development (Bursik, 1991). Participants were divided into four groups depending on the degree of suffering and adjustment to the divorce directly after the experience and one year later. Only the group of women who had suffered the most after the divorce but who managed to successfully adapt to the experience one year later reported the highest increases on ego development.

These findings suggest that certain circumstances and sometimes additional individual characteristics are necessary in order for personality growth to occur. This is in line with Staudinger and Kunzmann (2005) who propose that “for the growth trajectory to show further increases it takes a very special constellation of person and contextual factors” (p.326).

Hence, for the present study, participation in the VTP will be regarded as a special contextual factor. However, the assumption is that the experience of the VTP is not sufficient to promote personality growth. Therefore, a personal factor was also chosen for the present study: high internal control beliefs. The importance of control beliefs for personality development will be described in the following section.

4.3.2 Control Beliefs and Personality Development

As has been described before, personality growth will most likely result out of a special constellation of contextual and personal factors (Staudinger & Kunzmann, 2005). Therefore, the aim of the present section is to present a personal factor which is regarded as important for personality development.

Reviewing the literature on personality development, human agency in the sense of having personal control emerged as an important characteristic for

personality development. This will be described in the following section. After that, in a separate section, the focus will shift to internal control beliefs.

4.3.2.1 Control and Development – A Historical Review

In the 19th century, the dominant schools of psychology at that time, behaviorism and psychoanalysis, both denied the importance of human agency. They viewed behavior as determined by a few powerful drives whose expression was shaped by prior experience and present stimuli. Yet, within both schools, inexplicable findings were arising that could not be made to fit into the orthodox drive models (R. W. White, 1959).

Humans and other mammals seemed to be intrinsically motivated to explore their environments, to interact with them, and to affect them. In humans, this motivation seemed to take the form of a striving for skill acquisition, mastery, or control. According to Angyal (1941) “the general dynamic trend of the organism is toward an increase in autonomy... The human being has a characteristic tendency toward self-determination, that is, a tendency to resist external influences and to subordinate the heteronomous forces of the physical and social environment to its own sphere of influence” (cited in R. W. White, 1959, p. 324).

Recognizing the need for more agent-centered and growth-oriented theories, Maslow (1954/1987) placed “self-actualization” at the top of his hierarchy of needs. The motivation of self-actualizers is “character growth, character expression, maturation, and development; in a word self-actualization” (cited in Schultz, 1977, p.65, 66). Similarly, White (1959) concluded that “something important is left out when we make drives the operating forces in animal and human development” (p. 297). Therefore, White developed a concept of competence and mastery leading to a feeling of efficacy.

The importance of mastery and efficacy has been acknowledged by other theorists. DeCharms (1968) asserted that “man's primary motivational propensity is to be effective in producing changes in his environment. Man strives to be a causal agent. His nature commits him to this path and his very life depends on it” (p. 269). Neugarten (1968) found that of central importance to successfully

master the challenges of middle age were characteristics such as self-awareness, selectivity, mastery, competence and control of the environment. Recognizing that the two basic instincts of libido and aggression were not sufficient to explain children's behavior, Hendrick (1943) proposed a third instinct. The "instinct to master" enables the individual to control and alter his environment and aims at developing the ego, thus at personality development.

Likewise, Erikson (1953) underlines that the feeling of having control over the instincts of the "id", as well as over one's own behavior are essential for personality development. In emphasizing the capacity to govern oneself, to exercise self-control, Erikson's view of autonomy is consonant with others. He argues that "from a lasting sense of self-control without loss of self-esteem comes a lasting sense of good will and pride; from a sense of loss of self-control and of foreign over-control comes a lasting propensity for doubt and shame" (p. 254). Similarly, Vygotsky regarded self-mastery as the key feature of personality. He argued that "only when we see the mastery over one's own behavior, can we speak of the shaping of personality" (1930; cited in Leont'ev, 2002, p. 49).

Overall, the importance of control or human agency for personality development has been recognized by various theorists. Therefore, control beliefs and in particular internal control beliefs will be described in more detail in the following section.

4.3.2.2 Internal Control Beliefs

The aim of the previous section was to show that human agency, that is a sense of personal control, whether called mastery, competence, or efficacy, over one's own behavior and over the environment, has been recognized as an essential characteristic for personality development more than 70 years ago. This fact is also recognizable in the enormous number of research rising during the last half of the past century. Research on agency and control has continued steadily since the 1950s and the construct of control has played a major role in modern psychology. Control has become a central topic in social, developmental, clinical, health, and community psychology, as well as in several areas of sociology (Haidt & Rodin, 1999).

However, research on control has in a way been hampered by its own success. Control is relevant to so many areas of investigation that researchers have developed dozens of control-related constructs and measures, including locus of control, learned helplessness, self-efficacy, mastery, personal causation, personal competence, self-determination, autonomy, agency, empowerment, and instrumentality (Lefcourt, 1966; Rodin, 1990; Skinner, 1996; Waterman, 1981). Although researchers have measured the construct of control in a number of different ways, most scales share a common conceptual core. Embedded in these measures is the notion that individuals with a strong sense of personal control, mastery or competence believe the external social world is responsive to their efforts to change it, whereas people with a weak sense of control believe they are unable to influence the things that happen to them (Rodin, Timko, & Harris, 1985).

The present study focused on internal control beliefs which belong to the concept of locus of control. The concept of locus of control distinguishes between internal control beliefs and two types of external control beliefs: belief in control by powerful others and belief in control by chance or fate (Levenson, 1981).

Internal control beliefs basically reflect a person's belief that his or her efforts to perform certain tasks or achieve certain outcomes depend on their own behavior, skill, effort, or personal characteristics (Levenson, 1981; Rotter, 1966). In contrast, external control beliefs refer to the belief that an outcome is a function of chance, luck, or fate (belief in control by chance or fate), or is under the control of powerful others (belief in control by powerful others) (Levenson, 1981).

In general, control beliefs - whether internal or external - operate through its impact on cognitive, motivational, affective, and decisional processes. Control beliefs affect whether individuals think optimistically or pessimistically, in self-enhancing or self-debilitating ways. Such beliefs affect people's goals and aspirations, how well they motivate themselves, and their perseverance in the face of difficulties and adversity. Control beliefs also shape people's outcome expectations - whether they expect their efforts to produce favorable outcomes or adverse ones. In addition, control beliefs determine how opportunities and impediments are viewed (Bandura, 1997; Rodin et al., 1985).

The claim that internal control beliefs are important for personality development is supported by a study from Heatherton and Nichols (1994) who examined subject's attributions about their change process. They discovered that those individuals who successfully changed were found to be significantly more likely to report greater internal control over their behavior and over the ability to change, compared to those who did not change.

In addition, numerous studies have shown that internal control beliefs were generally associated with positive outcomes in health, sports, work, marriage, academic achievement, psychological adjustment, information processing, physiologic indicators, health related behaviors and other domains (Lefcourt, 1966). For example, research has found that internals were more active than externals (Wolk & Kurtz, 1975; Ziegler & Reid, 1979). An internal orientation was also found to be associated with participation in group activities (Strickland, 1965). A variety of field experiments have shown that control-enhancing interventions for the elderly lead to better activity patterns and improved health status (Langer & Rodin, 1976; Reich & Zautra, 1989; Rodin & Langer, 1978; Schulz & Hanusa, 1978).

Furthermore, research has shown that when individuals with internal control beliefs are faced with discrepancies between acceptable standards of performance and actual performance, they tend to increase their efforts to match their actual performance to the standards (Weiss & Sherman, 1973). Similarly, research suggests that internals are likely to exhibit greater intrinsic motivation and be more achievement oriented (Renn & Vandenberg, 1991; Spector, 1982; Wiegmann & Norma, 1998). Internals were found to be more motivated to learn. Furthermore, Noe (1986) proposed that individuals with an internal locus of control have more positive attitudes toward training opportunities because they are more likely to feel that training will result in tangible benefits. This relationship was confirmed in a subsequent study (Noe & Schmitt, 1986).

Thus, in many ways the sense of controlling one's own life acts as a stored resource. Individuals draw on the personal sense of control for the motivation to meet challenges, develop themselves, and guide their lives in preferred directions. In fact, some investigators argue that strong feelings of personal control are a key marker of successful aging (Rowe & Kahn, 1987).

A possible explanation is that when individuals perceive themselves as agentic they are more likely to believe that they are able to master their environment, goals or tasks and to control their outcomes. Therefore, they may be more likely to believe that they will be successful in obtaining this goal. Thus, they are more encouraged to engage in striving for the goal and to act towards the goal. In addition, an internal sense of control often helps individuals address difficulties more confidently and actively, moderating the associated distress and speeding a resolution (Avison & John, 2003). As a consequence, internals are also more likely to experience success. This encourages effort, sharpens ability and can promote personality development. In fact, the resulting effectiveness and resilience can even strengthen the sense of control in a beneficial developmental spiral (Mirowsky & Ross, 2007).

However, despite the extensive number of studies focusing on the impact of internal control beliefs on various domains such as health, sports, work, marriage, academic achievement and psychological adjustment, studies investigating the relationship between internal control beliefs and indicators of personality growth are scarce.

Considering the importance of internal control beliefs for dealing with tasks and challenges as well as the positive attitude of internals regarding training opportunities, the aim of the present study is to investigate whether participation in the VTP might promote personality growth for participants with high internal control beliefs.

4.3.3 Summary and Relevance for the Present Study

The question whether personality growth is possible even in older adulthood has garnered controversial opinions. According to lifespan theory personality growth is possible at all ages. However, while certain contextual influences (e.g., life experiences) can be sufficient to promote personality adjustment, personality growth will most likely result out of a special constellation of contextual and personal factors (Staudinger & Kunzmann, 2005). Reviewing the literature, personal agency or the feeling of having control emerged as an

important characteristic for personality development. Therefore, internal control beliefs were chosen as the personal factor for the present study.

Individuals with high internal control beliefs attribute outcomes to their own behavior, skills and effort. This belief encourages attention to setting goals, directing actions toward the goals, evaluating apparent consequences, and revising efforts. Therefore, a sense of control often helps individuals address difficulties more confidently and actively. In addition, internals are also more motivated to learn and have more positive attitudes toward training opportunities.

Therefore, the aim of the present study is to investigate whether the combination of contextual factors and personal factors will lead to personality growth. Participation in the VTP will be regarded as the contextual factor and internal control beliefs as the personal factor. The assumption is that in particular participants of the VTP with high internal control beliefs are motivated, active and therefore able to benefit from the VTP resulting in personality growth.

5 Excursus: Cognitive Functioning

Certainly, it is also of interest to investigate whether participation in the VTP would have an effect on cognitive functioning, especially since personality development and cognitive functioning are related. For example, Staudinger and colleagues speak of the mechanics and pragmatics of life as an overarching framework encompassing personality and self-related phenomena as well as intellect (Schindler & Staudinger, 2005; Staudinger & Pasupathi, 2000). Similarly, Ackermann (Ackerman, 1996; Ackerman & Heggestad, 1997) proposed an integrative framework characterizing adult intellectual development as complex interactions between cognitive processes, personality traits, broad interests and knowledge domains. Indeed, it has been shown that “openness to experience” is positively related to measures of intelligence and other cognitive abilities (Goff & Ackerman, 1992; McCrae, 1987; McCrae & Costa, 1997a).

However, as will be described in more detail in Section 5.2, in contrast to personality adjustment and personality growth, it is not very likely that the VTP will have an impact on cognitive functioning.

5.1 The Lifespan Approach to Cognitive Functioning

Lifespan psychology proposes a lifespan theory of intellectual functioning that distinguishes between two main components of cognitive functioning: the mechanics and the pragmatics of cognition. The centre of attention is on how these two components of cognitive functioning interact with each other, develop, maintain and decline throughout the life course (P. B. Baltes, Staudinger, & Lindenberger, 1999; Lindenberger & Kray, 2005).

The mechanics of cognition, also called the fluid intelligence, are closely linked to biological including neurophysiological brain conditions. It can be compared to the “hardware” of the human brain since it was shaped by biocultural coevolution. In terms of psychological operations, the cognitive mechanics are indexed by the speed, accuracy and coordination of elementary processes of information processing and can be assessed with tasks that measure, for

example, the information input, sensory and motor memory or selective attention (Li & Schmiedek, 2001; Lindenberger, 2001).

Researchers in the realm of cognitive development have been trying to identify the number and nature of developmental determinants that are responsible for the age-based decline in cognitive functioning, starting around midlife (Li & Schmiedek, 2001). The three constructs that have been studied the most are (a) the information processing rate, (b) the working memory and (c) inhibition. At the moment, the information processing rate seems to be the strongest predictor of age differences in the mechanics of cognition (Lindenberger & Kray, 2005).

In contrast to the mechanics of cognition, the crystallized pragmatics of cognition can be understood as the culture-based “software” of the mind. They reflect the bodies of knowledge and information that are made available to individuals in the course of their socialization. Developmental changes are reflected through culturally transmitted bodies of declarative and procedural knowledge. The pragmatics of cognition direct attention of lifespan researchers towards the increasing significance of acquired knowledge in cognitive behavior. Typical examples include reading and writing skills, educational and professional qualifications and skills. Knowledge about the self and about skills to get along in life, that is skills necessary for planning, conducting and interpreting life, also belong to the pragmatics of cognition (P. B. Baltes et al., 2006).

Being primarily determined by cultural forces, the efficacy of these culture-, experience-, and expertise-based pragmatics show a positive life span trajectory, thus remaining well into old age. Later in life, the acquisition and maintenance of pragmatic knowledge serve the function to buffer against the declining mechanics of intelligence (P. B. Baltes et al., 2006; Schaie, 1994).

5.2 Plasticity in Cognitive Functioning

Given that fluid abilities show age-related decline beginning as early as the mid 20s, the question arises of whether behavioral interventions might be effective in compensating and/or enhancing cognitive performance in later adulthood. For older adults suffering cognitive decline, the intervention focuses

on the possibility of compensating for prior loss in level of ability. In contrast, for older adults who have not declined on an ability, the question is whether interventions can boost cognitive performance above prior levels. Since the 1970s, there has been a growing body of cognitive intervention research in later adulthood focusing on tests from the broad fluid domain (e.g., variety of mental abilities, including memory, reasoning, and speed of processing). Much of the research has shown that non-demented, healthy older adults show improved performance after a few sessions of task-related training or practice (P. B. Baltes & Willis, 1982; Schaie & Willis, 1986; Willis & Nesselroade, 1990). The opportunity for practice constituted an important factor (P. B. Baltes, Kliegl, & Dittmann-Kohli, 1988). Training effects have been demonstrated for multiple measures, however only for the ability which was trained. In addition, training transfer is limited to the particular ability that was the target of training. That is, training on a specific ability does not lead to significant enhancement on other primary abilities (Schaie & Willis, 1986).

In accordance with lifespan contextualism, the relevance of the interaction between the person and the environment has also been acknowledged for cognitive functioning. The realization of the importance of person-environment interactions for promoting intellectual growth has led to the development of the construct of the engaged lifestyle. According to the engagement hypothesis (Schaie, 1983), an engaged lifestyle is likely to emerge from a combination early in life of high levels of individual abilities and favorable environmental contexts, including greater educational opportunities. In such an environment, intellectual abilities are more likely to be challenged, practiced, and reinforced resulting in the development and maintenance of higher levels of intellectual ability in later life. Indeed, engaging in activities that make significant demands on cognitive skills has been linked to higher cognitive functioning (Hultsch & McDonald, 2004; Pushkar, Arbuckle, Conway, Chaikelson, & Maag, 1997; Schooler, 1987; Schooler & Mulatu, 2001).

Within the context of the Seattle Longitudinal Study, Schaie (1983) determined several important personal characteristics of his study participants which are in line with the engagement hypothesis. Participants high on these

characteristics maintained or even improved their cognitive functioning over a 14 year period. Those characteristics which are of importance for the present study are listed below (Table 2). Schaie (1994) extended this list with characteristics such as being married to a spouse with high cognitive status or rating one's self as being satisfied with one's life's accomplishments.

Table 2: *Characteristics Enhancing an Engaged Lifestyle (Schaie, 1994)*

1. The absence of cardiovascular and other chronic diseases
 2. Living in favorable environmental circumstances, usually the case for people with high SES. High SES is characterized by above-average education, high occupational positions, above-average income and the maintenance of intact families.
 3. Substantial involvement of activities typically available in complex and intellectually stimulating environments.
-

Notes. SES = Socioeconomic Status

Thus, lifestyles that contain high levels of environmental stimulation, particularly those that include continuing formal and informal education, tend to be related to the maintenance of high levels of cognitive functioning (Schaie, 1994).

5.3 Summary and Relevance for the Present Study

Considering the type of training carried out in cognitive training studies, the VTP cannot be compared to an explicit cognitive training program. Certainly, the aim of the VTP was not to improve cognitive functioning but instead to convey skills and competencies to develop a personal project and to work successfully as a volunteer. Therefore, skills needed to improve on measures of cognitive functioning (e.g., perceptual speed and vocabulary knowledge) were not explicitly trained.

Furthermore, in line with the engaged lifestyle hypothesis, participants of the VTP represent an active and well-educated sample which goes hand in hand

with high levels of cognitive functioning to begin with (Schaie, 1994). These high levels of cognitive functioning at baseline limit the opportunity for improvements.

Consequently, it seems very unlikely that participation in the VTP would lead to improvements on measures of cognitive functioning. However, since there is evidence that “openness to experience” is positively related to measures of intelligence and other cognitive abilities (e.g., Goff & Ackermann, 1992; McCrae, 1987, 1994; McCrae & Costa, 1997), two measures of cognitive functioning were administered nonetheless. Finding no improvements on these measures would imply that possible changes in personality development cannot be attributed to changes in cognition.

6 Volunteering: Benefits, Social Selection Processes and Other Volunteer Programs

The general concept of the VTP, that is to give volunteers the opportunity to help others, has been applied within other volunteer programs. Therefore, an overview of other volunteer programs is given in the present chapter. In addition, since participants of the present study are volunteers, the benefits associated with volunteering and also possible selections processes are discussed.

The chapter is divided into three major parts. To begin with, a short review of various theories of activity and engagement in older age (activity theory, disengagement theory, continuity theory, concept of successful aging) is given (Section 6.1). The reason for this overview is to embed the concept of volunteering into a broader, theoretical and psychological background of active engagement in older age.

Part two elaborates whether the benefits associated with volunteering have to be attributed to social selection processes that facilitate participation of certain individuals into volunteering. It is shown that volunteers differ significantly on a number of characteristics (e.g., socioeconomic status, personality characteristics) compared to non-volunteers. Therefore, the importance of recruiting an active and comparable control group of volunteers when investigating the effect of the VTP is emphasized.

Since one general aim of the VTP is to give participants the opportunity to help others, the VTP can be compared to volunteer support programs such as the Foster-Grandparent Program. Therefore, an overview of such volunteer programs is given in Section 6.3.

6.1 Excursus: Theoretical Background of Activity and Engagement in Older Age

Researchers interested in the psychological aspects of healthy aging often examine different types of activity and the resulting impact on well-being among older adults. An implication of much of the research on well-being is the

importance of remaining an active and vital member of the community (Everard, 1999). Theoretical debates over the relation between activity and disengagement in old age go back to the past century.

The disengagement theory of Cumming and Henry (1961) claims that both psychological and social disengagement are mutually desired and beneficial for individual elders and for society as well. Old age is depicted as a period of life where disengagement and inactivity are prevailing.

This theory was opposed vigorously by activity theory (Havighurst, Neugarten, & Tobin, 1964, 1968; Lemon, Bengtson, & Peterson, 1972) which holds that elders adjust best by finding replacements for lost activities or relationships and by maintaining activity at a level comparable to that in middle age. Activity theory states that elderly people who remain productive and maintain or create new social networks do better than those who disengage from society and social commitments. Furthermore, activity theory suggests that older individuals benefit from developing new roles and commitments that allow for some continuity in societal participation (Havighurst et al., 1964; Lemon et al., 1972).

This continuity in societal participation is the cornerstone of another theory investigating activity in later adulthood: continuity theory (Atchley, 1989, 1999). While activity theory and disengagement theory give opposing prescriptions for successful aging, continuity theory is not a theory of successful aging. It is a theory of adult development proposing that in making adaptive choices middle aged and older adults attempt to preserve and maintain existing psychological and social patterns by applying familiar knowledge, skills, and strategies. Applied to activities, continuity theory maintains that adults gradually develop stable patterns of activity and that, in adapting to aging, adults engage in thought and take action designed to preserve and maintain these patterns in their general form (Atchley, 1993). According to continuity theory, individuals who enter retirement adapt to the loss of the work role by preserving both the level and the number of activities (e.g., by volunteering), therewith preventing the impact of activity loss on subjective well-being (Atchley, 1999).

The importance of productive activities, including volunteering, for maintaining and enhancing well-being in older age has also been highlighted in

another theory of successful aging (P. B. Baltes & Baltes, 1990a; Garfein & Herzog, 1995; Rowe & Kahn, 1997). Rowe and Kahn (1997) proposed a model of successful aging comprising three components: avoidance of disability, maintenance of physical functioning, and active engagement with life. Indeed, active engagement in social activities has been associated with increased well-being among community dwelling older people (Everard, 1999). Tobin and Neugarten (1961) showed that, with advancing age, activity becomes increasingly important for predicting life satisfaction.

Active engagement with life has been divided into three separate types of activity (Lemon et al., 1972): (1) informal activity which includes social interaction with relatives, friends and neighbors, (2) formal activity meaning social participation in formal voluntary organizations and (3) solitary activity which includes such pursuits as watching television, reading and hobbies of a solitary nature. Thus, one way of engaging in social activities is volunteering.

Indeed, in accordance with activity theory, continuity theory and theories of successful aging, it has frequently been pointed out that in particular volunteering offers the participants an avenue to social approval as well as an opportunity to increase his/her feelings of usefulness and self-respect. The positive impact of volunteering will be discussed in more detail in the following section.

6.2 Volunteering: Benefits and Social Selection Processes

With the awareness of the demographic changes and the increasing number of older people, volunteering has enjoyed a fairly recent interest in gerontological research as a means of providing a fuller picture of contributions made by older adults to their communities. In addition to the increased interest in the productive potential of an aging and graying society, the curiosity whether the aging individual can profit from being active and engaged is rising. In order to examine the impact of activity and engagement on the older individual, volunteering has been investigated in numerous studies.

Volunteering is defined as any activity in which time is given freely to benefit another person, group or organization. Not only the voluntary giving of

time, but also the voluntary giving of talent to deliver services or perform tasks with no direct financial compensation expected, is regarded as volunteering (Warburton, Le Brocque, & Rosenman, 1998; J. Wilson, 2000).

Volunteering is an increasingly popular activity among older adults. A growing emphasis on staying active in later years, a widespread cultural value of volunteering, and rising income and educational levels among the aged have led to more older adult volunteers over the last few decades (Chambre, 1993). Much of the current societal enthusiasm for volunteering in later adulthood focuses on the mutual benefits of such activity, namely, that older adults have the availability and ability to assist others and that volunteering provides older adults with needed constructive activities and productive social roles (e.g., Rouse & Clawson, 1992).

A growing number of studies have investigated the association between volunteering and personality adjustment. The bulk of the literature points to volunteer participation enhancing well-being. Comparing volunteers with non-volunteers, studies consistently found increased life-satisfaction (Adelmann, 1994; Bond, 1982; Hunter & Linn, 1981) more positive affect (Greenfield & Marks, 2004) higher levels of contentment (Jirovec & Hyduk, 1998) less depressive symptoms (Adelmann, 1994, Hunter & Linn, 1981), and more self-efficacy (Adelmann, 1994). Volunteers were also more extraverted than non-volunteers (Pushkar et al., 2002; Smith & Nelson, 1975). With regard to measures of personality growth, it was also found that volunteers have higher levels of ego development than non-volunteers (Morros, Pushkar, & Reis, 1998).

A study by Shmotkin, Blumstein and Modan (2003) even showed that volunteers were highly distinguishable from non-volunteers who were otherwise very active. Apparently, the benefits of volunteering in late life are not reducible to those of other activities.

However, most of these studies are cross-sectional and have not systematically considered the direction of causality. For example, the question arises whether persons with high levels of well-being might be more likely to volunteer. Perhaps individuals who select themselves into community associations or services already possess more physical and psychological resources, including higher levels of well-being than non-volunteers.

Indeed, disentangling causality is one common problem cited by multiple scholars (Chambre, 1987; Fischer & Schaffer, 1993). The issue is one of social causation versus social selection (Verbrugge, 1983). Social causation assumes that social integration and engagement, such as volunteering, influences well-being. By contrast, social selection implies that certain types of people, in particular those with high levels of well-being and many resources, are the ones most likely to take on and maintain social integration and engagement (Moen, Dempster-McClain, & Williams, 1989; Thoits & Hewitt, 2001). According to Moen and colleagues (1989), “causation and selection are probably both operating simultaneously and interactively in a dynamic cascade of events over the life course” (p. 1613).

Research investigating the effect of volunteering longitudinally (social causation) and controlling for a number of relevant covariates have documented a link between volunteering and well-being outcomes. Focusing on measures like life-satisfaction (Van Willigen, 2000), functional health (Moen et al., 1989), physical health (Thoits & Hewitt, 2001), perceived health (Lum & Lightfoot, 2005; Morrow-Howell, Hinterlong, Rozario, & Tang, 2003; Van Willigen, 2000), self-esteem (Omoto, Snyder, & Martino, 2000; Thoits & Hewitt, 2001), and depression (Lum & Lightfoot, 2005; Morrow-Howell et al., 2003; Thoits & Hewitt, 2001), all studies documented a positive effect of volunteering on well-being. Follow-up times varied between 6 month and 3 years. Moen and associates (1992) even followed 300 women over a 30-year period and found that volunteering (even on an intermittent basis) is related to subsequent functional ability.

Other studies investigated the relationship between volunteering and decreased mortality rates. These prospective studies have incorporated 3- to 8-year observation periods and produced solid evidence that volunteer engagement in later life is related to reduced mortality rates (Harris & Thoresen, 2005; Musick, Herzog, & House, 1999; Oman, Thoresen, & McMahon, 1999; Shmotkin et al., 2003).

In fact, Oman and colleagues (1999) even found that the reduction in mortality associated with volunteering was larger than the reduction associated with physical mobility, exercising, and attendance at religious services.

Overall, the studies varied in the controls used in isolating the association of volunteering and well-being outcomes; nevertheless, all used some subset of demographics, economic status, health, lifestyle, psychological status, social support and religious involvement. Thus, these studies provide evidence that volunteering in later life is related to improved well-being and thus support the social causation proposition.

Research on the determinants of volunteering (social selection) focuses on socio-demographic characteristics, motivations, attitudes, and values of volunteers (Clary et al., 1998; Okun, Barr, & Herzog, 1998; Penner & Finkelstein, 1998; Rouse & Clawson, 1992). Research indicates that volunteers are motivated to volunteer for a number of reasons, such as to help others, to learn new skills, to develop the self, to enhance self-esteem and to express values and community commitment (Janoski, Musick, & Wilson, 1998; Omoto & Snyder, 1995). Penner and Finkelstein (1998) suggest that personality or dispositional variables motivate volunteer work. They demonstrated that a prosocial personality orientation, including traits of “other-oriented empathy” and “helpfulness” were related to length of service and time spent in volunteer activities.

Focusing on socio-demographic variables, studies identified the “prototypical volunteer”. Consistent across studies, individuals who volunteer represent a highly educated, healthy and motivated group of people, leading an active and engaged life-style. In fact, a high socioeconomic status (e.g., higher education, more income, higher/better occupation) is one of the strongest and most consistently replicated correlate of volunteer-participation (Herzog & Morgan, 1993; Warburton et al., 1998; J. Wilson & Musick, 1997).

In addition, individuals who volunteer are more likely to possess personal resources compared to non-volunteers which might also facilitate their involvement in volunteer work (Herzog & Morgan, 1993; Thoits & Hewitt, 2001; Warburton et al., 1998). As pointed out already more than 20 years ago (Fengler,

1984), the generally positive relationship between activity and well-being depends on the personal and social resources of the older adult.

Overall, these findings support the contention that self-selection processes facilitate the participation of certain individuals into volunteering. Specifically people with socioeconomic resources (e.g., education, income), personality “goods” (e.g., well-being, self-esteem, low depression) and a prosocial personality orientation volunteer. However, longitudinal studies also support the social causation proposition, showing that volunteering promotes well-being.

Thus, the benefits associated with volunteering can best be described as a positive cycle of social selection and causation processes. Just as Moen and colleagues proposed (1992), social “causation and selection are probably both operating simultaneously and interactively” (p. 1613).

With regard to the present study, it is important to remember that participants of the VTP are volunteers. To take the self-selection processes just mentioned into account, it is very important to choose a control group consisting of volunteers who do not take part in the VTP. Only then can the findings be attributed to the impact of the VTP and not to other confounding variables.

6.3 Other Volunteer Support Programs

Concurrent prevalent increases among both the older population and the population of vulnerable people needing human service have prompted institutions to develop innovative, elder volunteer support programs as one adjunct method of meeting such social service demands. Various volunteer support programs have emerged linking older volunteers with people who may benefit from their service. In the United States, the largest federally sponsored programs for older volunteers are the Retired Senior Volunteer Program (RSVP), Foster Grandparents Program (FGP) and the Senior Companions (Barlow & Hainsworth, 2001; Chambre, 1993). Participants of these programs are usually paid a small stipend for their work. Other smaller programs are for example the Project OASIS (Older Adults Sharing Important Skills) (Croese, Duffy, Warren, &

Franklin, 1987) or the more recently established Experience Corps Program (Fried et al., 2004). Participants of such support programs, mostly regular volunteers of senior citizen centers, are usually given some form of short training before they may enact their newly acquired role, for example as a foster-grand-parent. By giving older persons the opportunity to participate in a meaningful way in society, not only the volunteers, but also those they serve, have seemed to glean tremendous benefits from such programs.

To avoid the self-selection problem described in the previous section, studies investigating the effect of a volunteer support program should choose a comparable control group consisting of volunteers who do not take part in the program. However, not all studies which investigate volunteer support programs and report positive effects administered a comparable control group. In order to give an overview of such programs, volunteer support programs which have been investigated scientifically are displayed in Table 3 and Table 4.

Table 3: *Overview of Volunteer Support Programs: Part One*

	Participants	Program	Age range of participants	Longitudinal?	Follow-up?	Sample size	Participants (EG)	Control group (CG)?	Randomized CG ?	Comparable CG?
Rook & Sorkin, 2003	Older adults	Foster Grandparent Program	<i>M</i> =70.5 (60-92)	1 year	1 year	130	T1: 52; T1-T2: 26 (50%); T2-T3: 20 (76%)	interested volunteers (IV): T1: 69 T1-T2: 65 (94%) T2-T3: 52 (80%) non-volunteers (NV): T1: 59 T1-T2: 55 (93%) T2-T3: 42 (76%)	EG – IV = random	Yes
Fried, Carlson, Freedman, Frick, Glass et al., 2004	Older adults	Experience Corps Program	<i>M</i> =69 (60-86)	4-8 month after beginning of work	No	128	70 T2: 69	58 T2: 56	Yes	Yes
Byrd, 1984	Older adults	Peer counselor program	<i>M</i> =73	9 weeks	No	97	38	CG1: 26 „interested in program“ CG2: 33 „not interested“	No	probably
Saltz, 1971	Older adults	Foster Grandparent Program	<i>M</i> =67 (60-75)	2 years	Yes (see below)	59	37	22	Yes	Yes
Saltz, 1989 = follow-up study	follow-up study	follow-up study	<i>M</i> =67 (60-75)	7 years	follow-up study	59	37	22	Yes	Yes-
Gray & Kasteler, 1970	Elderly in financial need	Foster Grandparent Program	60-70 <i>M</i> not given	1 year	No	106	52	54	No	No
Yuen, 2002	Institutionalized elders in long-term care	Mentoring a student in English	EG: <i>M</i> =82.2 CG: <i>M</i> =77.9	3 weeks	No	18	9	9	No	No
Barlow & Hainsworth, 2001	Older people with arthritis	Arthritis Self-Management Program	50 and older; <i>M</i> =57.9	6 weeks	No	22	22	No	-	-

Newman, Vasudev & Onawola, 1985	Active volunteers in three different schools	School Volunteer Program	$M=64.4$ (55-85)	3.7 years volunteer experience	No	180	180	No	-	-
Croese, Duffy, Warren & Franklin, 1987	Potential volunteers	Project Oasis: Volunteers become paraprofessionals serving nursing homes	55-80	2 years	No	12	12	No	-	-
Turner, 1992	Older volunteers	Gerontology Extension Project	$M=67$ (52-77)	2 month	6 month	41	41	No	-	-

Notes. EG: Experimental Group; CG: Control Group; NV: non-volunteers; IV: interested volunteers; CG1: interested in program; CG2: not interested in program

Table 4: *Overview of Volunteer Support Programs: Part Two*

	Refunded for Work?	Volunteer Activity	Training before Volunteer Activity (VA)	Baseline differences between EG und CG?	Dependent Variables	Significant improvements?
Rook & Sorkin, 2003	Modest stipend (set by federal policy to correspond roughly to minimal wage)	Care for a disabled child or adolescent: 4 hours per day, 5 days per week	"standard orientation and training" (p. 319) - no more information given	No differences regarding self-esteem, loneliness and relationships, EG were more depressed, NV were older, IV were healthier	90 minutes interviews; Self-Esteem Scale (Rosenberg, 1965); UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980); Depression (CES-D; Radloff, 1977), Type and number of social ties	No significant interaction effects except for sig. interaction on "new social ties" (more for EG from T1 to T2 and from T1 to T3)
Fried, Carlson, Freedman, Frick, Glass et al., 2004	150 – 200 \$ per month	Work in public elementary school, 15-h per week, 3-4 days, for one school year	Team building training	No differences regarding age, gender, education; CG healthier than EG	Physical Activity (e.g., number of blocks/stairs walked, strength felt), Social ties, Cognitive Activity (e.g., number of books read, hours of television watching)	Sig. interaction effects: EG reported to feel significantly more active at T2, felt stronger, had more adults to turn to and watched less television.
Byrd, 1984	No	Help others deal with problems	Training in counseling skills	No differences regarding age, education, activity level, health status between the three groups	Facts on Aging Test (Palmore 1977), Life Satisfaction Index (Neugarten, Havighurst, & Tobin 1961); PGC*-Moral Scale (Lawton, 1975); Personal Feeling Scale (Wessman & Rick, 1965)	No sig. interaction effects for life satisfaction, facts of aging test, moral scale. Sig. interaction effect on Personal Feeling Scale: EG and CG1 scored higher compared to CG2

Saltz, 1971	Yes, non-taxable stipend, daily meal and transportation	Help institutionalized children	2 weeks full-time prior to VA on basic principles of child development; during VA: weekly discussion sessions for 6 weeks	No differences regarding age, sex, race, education, health	Ladder of Aspirations (Cantril, 1962) Life Satisfaction Scale (Neugarten, Havighurst, & Tobin 1961)	No interaction effect reported - EG improves after 2 years
Saltz, 1989 = follow-up	Follow-up study	Follow-up study	Follow-up study	Follow-up study	Follow-up study	No interaction effect reported - EG improves after 7 years
Gray & Kasteler, 1970	Paid for service	Help institutionalized children	Weekly training (2 hours) on nursing skills, teaching methods, mental retardation	No difference regarding age, sex education, adjustment and life satisfaction	"Your Activities and Attitudes"-Scale (Burgess, Cavan, Havighurst & Goldhamer, 1949); Life Satisfaction Scale (Neugarten, Havighurst, & Tobin 1961)	Sig. interaction effect: EG increased on both measures
Yuen, 2002	No	Mentoring students	-	-	Life Satisfaction Index (Neugarten, Havighurst, & Tobin 1961)	No interaction effect reported - only time effect reported: sig. increase for EG
Barlow & Hainsworth, 2001	No	Help and support others	6 weeks training to become a lay leader in arthritis	-	Semi-structured telephone interview	Participants reported more meaning in life and less pain
Newman, Vasudev & Onawola, 1985	No	Active volunteers in school volunteer programs	-	-	Only descriptive analyses using qualitative data	65.6 % of participants reported improvements on life satisfaction
Croese, Duffy, Warren & Franklin, 1987	No	Help institutionalized elderly	Pre-service training: 1 day for 4 weeks on topics associated with experience of aging such as depression, grief, disorientation. In-service training: monthly 3-hour sessions	-	Individual interviews (case study method)	Participants felt they made a contribution
Turner, 1992	No	Conduct in service training for social-service personnel	28-h of classroom training over 6 weeks in one of five areas of gerontological knowledge, e.g., home health and nursing, nutrition and food preparation, drugs and medical practices	-	Facts of aging quiz, Self-esteem Scale (Rosenberg); PGC*-Moral Scale (Lawton, 1975)	Only general knowledge on aging improved

Notes. EG: Experimental Group; CG: Control Group; NV: non-volunteers; IV: interested volunteers; CG1: interested in program; CG2: not interested in program

* Philadelphia Geriatric Center (PGC) Moral Scale (Lawton, 1975)

As can be seen in Table 4 and Table 5, numerous studies did not assess a control group (Barlow & Hainsworth, 2001; Crose et al., 1987; Newman, Vasudev, & Onawola, 1985; Turner, 1992). Of those studies that did assess a control group, at least two are not comparable to the experimental group (Gray & Kasteler, 1970; Yuen, 2002).

However, only one study admitted the problem of comparability and randomization by stating that “Although randomization would have been preferable as far as the evaluation procedure was concerned, the planning committee felt the advantage to be gained in selecting the best of the applicants outweighed the bias that might possibly be introduced into the evaluation process” (p.182, Gray & Kasteler, 1970). In contrast, Saltz (1971; 1989) explicitly emphasized the importance of employing an active and thus comparable control group: “ ... controls were secured to the foster-grandparents and who were judged to be active, involved people who would have been acceptable for such employment (e.g., they actively pursued activities such as church work, visiting friends, baby-sitting, etc.). Thus, the aging persons in both experimental and control groups represent those with active as opposed to passive lifestyles...” (p. 319, Saltz, 1971).

The study by Rook and Sorkin (2003) is exemplary. In addition to recruiting both the experimental group and the control group from the pool of older adults who attended regional volunteer centers, they also recruited a control group of older adults who were not working in the service agencies but were comparable in age and socioeconomic status to the other two groups. According to Rook and Sorkin (2003), the advantage of assessing an additional non-volunteer control group is to control for individual differences associated with volunteering. Out of the various measures assessed, only on the measure assessing the “number of new relationships” the experimental group reported significant increases compared to the two control groups.

All studies presented employed measures of personality adjustment. In particular life satisfaction was administered frequently (Byrd, 1984; Gray & Kasteler, 1970; Saltz, 1971, 1989; Yuen, 2002). Only Gray and Kasteler (1970) reported a significant interaction effect for life satisfaction between the two groups, however, as mentioned above, the groups were not comparable.

Assessing measures of self-esteem, depression and loneliness, Rook and Sorkin (2003) did not find significant interaction effects between the three groups.

Taken together, the inspection of the volunteer support studies presented in Table 4 and 5 showed that none of the studies administered measures of personality growth. In addition, only some studies employed an active and thus comparable control group. Indeed, Wheeler, Gorey and Greenblatt (1998) have acknowledged that "the majority of the studies in this field fall far short of being able to confidently assess a hypothesized causal program-outcome relationship, that is, they are cross-sectional or pre-experiments (only one group in a pre-post design)" (p. 71). Similarly, Heller and colleagues point out that "most support intervention studies reporting positive effects are either uncontrolled demonstration projects with very few attempts to systematically assess effects on the volunteer helpers or the recipients of their services, or use participants who are preselected in some way. Volunteers, such as those who participate in senior center activities, are likely to be healthier and more motivated, and of higher economic and educational level" (p. 56, Heller, Thompson, Trueba, Hogg, & Vlachos-Weber, 1991). Unfortunately, the most sophisticated and methodologically sound studies did not find significant interaction effects between the experimental group and the control group on measures of personality adjustment (Rook & Sorkin, 2003; Bryd, 1984).

Even though the general aim of the VTP is comparable with the volunteer support studies, that is, providing the opportunity for volunteers to help others, the VTP differs in many ways. As can be seen in Table 4 and 5, most volunteer support studies do provide some sort of training. However, the intensity and the range of this training is not at all comparable to the training provided by the VTP. The aim of the VTP is that participants develop and initiate their own volunteering project. The curriculum is designed accordingly, teaching skills and competencies necessary for the development and the implementation of a volunteering project. In addition, the VTP provides social support, feedback and fosters the active participation of the individual. Certainly, the "standard orientation and training" which participants from the Rook and Sorkin study (2003) received cannot be compared to the curriculum of the VTP. Similarly,

receiving instructions in counseling skills in order to help others deal with their problems (Byrd, 1984) is also not comparable to the curriculum of the VTP. Therefore, it is of special interest to investigate if participation in such a special program as the VTP might promote personality development.

6.4 Summary and Relevance for the Present Study

The aim of the previous sections was to show that social selection processes do indeed facilitate the participation of certain individuals into volunteering. Volunteers differ significantly on various characteristics compared to non-volunteers and even compared to individuals who are otherwise very active. According to numerous studies, volunteers not only enjoy a higher socioeconomic status (e.g., higher education, more income, higher/better occupation) but also are more likely to possess personal resources, live longer, are less depressed and also evince higher levels on various measures of well-being (e.g., life satisfaction, positive affect, self-esteem, contentment).

Therefore, considering that participants of the VTP are volunteers, special care was taken to choose a volunteering control group. Even more, a second control group of inactive individuals who were matched with regard to age, gender and education to the first control group was also recruited. The purpose of this inactive control group was to validate if the volunteering control group really is an active and thus comparable control group. Only then it is possible to attribute potential changes to the impact of the VTP and not to other confounding variables.

The overview of volunteer support programs revealed that studies assessing a proper and thus comparable control group are rare. Some studies even missed to employ a control group at all. Another finding is that only measures of personality adjustment were administered. However, methodological sound studies did not report significant improvements on these measures. The overview also showed that none of the studies is comparable to the VTP. The VTP seems to be unique in that it conveys skills and competencies, provides support and feedback and encourages participants to develop and initiate their own volunteering project. Therefore, the assumption is that

participation in such a unique program as the VTP will most likely promote personality development.

7 The Present Study

7.1 The Volunteer Training Program (VTP)

7.1.1 General Description

The aim of the present study is to investigate the effect of participation in a volunteer training program (VTP) on personality development in older adulthood. This volunteer training program, called “Erfahrungswissen Für Initiativen” (EFI) which one may translate as “experience for initiatives”, is a nationwide program of the German Federal Ministry of Family, Youth, Seniors and Women (please see Appendix C for more information). Regarding the increasing number of retired people, who possess valuable experience, knowledge, expertise and skills, the aim of the Federal Ministry was to develop a program which could tap on the resources and competencies of these people. The idea was that older adults provide their competencies in a beneficial way to others who can profit from this help.

At the same time, the goal was to give older and retired adults the opportunity to participate in a meaningful way in society and therefore to promote the development of a new role identity. Especially after the loss of the work role, some individuals might lack the opportunity to actively take part in a meaningful and satisfactory way in society. Since the lack of opportunities to compensate for the lost work role can decrease well-being, enhance depression and increase health problems, the program is an innovative idea of the Federal Ministry, combining individual and societal needs.

The program was launched in 2001 with the help of 33 designated volunteer agencies nationwide and lasted for 5 years. The volunteer agencies were responsible for recruiting, selecting and the training of the participants. Participants were recruited with advertisements and flyers in volunteer agencies. Interested people, usually volunteers already working with the agency, were interviewed. Only those individuals were chosen who were eager to develop a personal project on their own, who seemed to have the necessary capacities to do so and who were willing to commit long-term to the program. The demand was tremendous. After all places were taken, eligible persons were placed on a waiting list.

Prof. Dr. Burmeister of the Hochschule Neubrandenburg, Germany, developed the curriculum for the program that was laid out in a handbook. The curriculum, which consisted of three course modules lasting three days each, about four to six weeks apart, was implemented by trained personnel. In between each of the three modules, participants had the chance to practice their newly acquired skills in ongoing volunteer projects. Questions and problems arising during these practical phases could be discussed and, if possible, solved in the next module.

7.1.2 The Intervention

The aim of the VTP was twofold and the curriculum was structured accordingly. First of all, the program aimed at providing an opportunity for older adults to participate in a meaningful way in society and in particular to promote the development of a new role identity in the context of civic engagement. Second, participants should be taught the necessary skills to work successfully as a volunteer with their own project.

Therefore, the first course module of the curriculum dealt with the development of a new role identity in the context of civic engagement. An important prerequisite for a new role identity is to come to terms with oneself. Hence, participants were encouraged to think about themselves, to critically reflect their weaknesses and strengths and finally to focus on their expectations and conceptions with regard to being a volunteer. After that, they had to come up with a personal volunteering project which they would like to implement.

The second and third course module of the curriculum focused on the competencies and skills that are needed to work successfully as a volunteer and thus to develop the new role identity. Participants were taught various methods and skills (e.g., organizational skills, group leading skills) that are necessary to utilize their prior experience, knowledge, expertise and skills acquired during their lives in order to (1) organize, develop and establish their project, (2) be prepared to struggle with and effectively resolve adversities arising during the process of development but also during the implementation of their project and thus to (3) work successfully as a volunteer with their personal project.

While women mostly chose social projects, such as tutoring children after school or giving German lessons to foreign mothers, men usually chose projects in the domain related to their last job, such as giving financial advice, developing a radio channel in an old people's home or giving computer lessons for kindergarten kids. Participants were responsible for each step necessary to implement their project. For example, they had to organize a location or a vacant room (e.g., for the computer course), they had to take care of the financial support (e.g., for the radio project), and finally they had to ask for permission for and consent to their project.

At the end of the program, participants received the "Senior Trainer" card. This card certified participation in the VTP and provided some basic insurance during their volunteering work.

7.1.3 Features of the VTP Relevant for Personality Development

In the following section, the theoretical propositions for personality development depicted in the previous chapters are related to the present study. Besides the propositions of lifespan psychology stemming from the concept of contextualism and the concept of plasticity, the importance of resources, life review and of developing a new role identity for personality development are of special relevance.

Indeed, as will be described in this section, these three factors (resources, life review, new role identity) were addressed by the VTP. However, it is important to note that no measures were available in the present study to assess any of these factors. Therefore, the approach of this study is cumulative. The assumption is that the combination of these three factors makes it particularly likely that participants of the VTP experience personality development. Thus, the overall impact of these factors will be considered when deriving the hypotheses.

Getting Encouraged to Life Reflect

As mentioned previously, one task of the first course module was to develop a new role identity in the context of volunteering. An important

prerequisite for this endeavor is life reflection. Therefore, participants of the VTP are explicitly encouraged to think about themselves, about their past and their future. Getting encouraged to and having the opportunity for self reflection while being embedded in a supporting, social setting with people in the same situation, is a unique feature of the VTP.

Life reflection has been regarded as an important mechanism for personality change within Erikson's theory of psychosocial crisis and Levinson's theory of life structure (cf. Section 4.1.1). The process of life review is based on information stemming from watching ourselves, but also very often from watching and listening to others. According to Roberts and Caspi (2003), these mechanisms (watching ourselves, watching others and listening to others) are three of the four mechanisms of change that can promote personality development (cf. Section 4.1.2). Even though life reflection was not assessed in the present study, it will be regarded as a special feature of the VTP with the potential to promote personality change.

The Development of a New Role Identity

The main goal of the VTP was to promote the development of a new role identity in the context of volunteering. Roberts and Caspi (2003) propose that the development of a new social role and thus the development of a new role identity is indispensable for personality change. It is the acquisition of a new social role that exposes individuals to the four mechanisms promoting personality change (reacting to contingencies, watching ourselves, watching others and listening to others) (cf. Section 4.1.2).

Whether participants have developed a new role identity has not been measured in the present study. However, since one major aim of the VTP is to promote the development of a new role identity in the context of volunteering, this effort will be considered as a special feature of the VTP that might foster personality development.

The Aggregation of Resources

It has been suggested that investment in any one type of resource, such as the presently popular social-support resource, might not necessarily offer the same advantage as the benefits of multiple resources (Murrell & Norris, 1984). This suggestion is in line with integrated resource theory which looks at resources broadly, rather than focusing on one specific resource (Hobfoll, 2002). Integrated resource theory “views resources as part of a greater dynamic process associated with well-being through the general use of resources” (Hobfoll, 2002, p. 311).

Therefore, the VTP has been conceived as a program that offers participants not one but an array of resources, such as internal resources, i.e., an individual’s psychological characteristics, social-support resources and knowledge resources. As emphasized by lifespan contextualism and lifespan plasticity, resources are important for personality development.

It is assumed that being selected to participate in the VTP and to take part in something special, that is, in a program that is unique in Germany, increases self-esteem. Self-esteem is regarded as an important internal resource. Self-esteem has been found to be related to well-being and better stress resistance (Hobfoll & Leiberma, 1987) Furthermore, self-esteem leads to confidence in making social contact, which consequently can lead to more social support (Hobfoll & Jackson, 1991).

In addition, participation in the VTP is assumed to increase social-support resources. On the one hand, the training in groups of people in similar situations and with identical goals fosters a feeling of solidarity. On the other hand, participants receive social support when the problems encountered within the practical phases are discussed and solved in the next course module. Numerous studies have found that individuals who receive social support are of better mental health, are more stress resistant, and have better physical health (Cohen & Wills, 1985; House, Umberson, & Landis, 1988).

Knowledge resources fall into the rubric of energy resources (Hobfoll & Jackson, 1991) and aid in obtaining things which are valued. In the context of the VTP, knowledge resources refer to the skills and competencies taught within the course moduls. Since one aim of the VTP is that participants work successfully as

volunteers, the competencies and skills taught are geared explicitly to successfully master the problems encountered in volunteering work. Being able to deal with such problems may also enhance self-esteem.

Having an array of resources available, not only knowledge resources but also internal resources (e.g., high self-esteem) as well as social-support resources, makes it more likely to develop and implement a personal project effectively, to resolve the problems arising in volunteering work and therefore to work successfully as a volunteer. Thus, the effective conveyance of these three resources is important for the VTP to be effective and successful. However, none of the three resources were measured in the present study.

Summary

As just described, participation in the VTP confronted participants with three potential mechanisms of personality development (life reflection, development of a new role identity, additional resources). Unfortunately, no measures were employed to assess any of these underlying processes or mechanisms of personality change. However, a measure to assess the overall effectiveness of the VTP as well as two measures focusing on social relations were available. Therefore, these three will be used to assess and validate the general and social effectiveness of the VTP in the sense of a manipulation check. They are described in the following section.

7.1.4 Manipulation Check of the VTP

Even though measures focusing on mechanisms, dynamics or processes of personality development were not assessed in the present study, three measures were available that capture the general and social effectiveness of the VTP. These will be used in the sense of a manipulation check of the VTP.

The general effectiveness of the VTP can be tested by comparing the amount of psychological energy that participants report to invest into the domain of “occupation-like activities” before and after participating in the VTP. Only if the program is effective, participants should report increased investment. Therefore,

in the present study this general measure will be used to validate the general effectiveness of the VTP.

In addition, two measures focusing on social relations were also available. Since an increase in social relations does not imply an increase in social support, these two measures are not regarded as measuring social-support resources. It is assumed that due to the social nature of the VTP (e.g., being chosen and taking part in the same special program, working together with people in a similar situation and with comparable goals, developing a project with other participants) participation in the VTP will increase social relations. Therefore, these two measures will be used to validate the social effectiveness of the VTP in the sense of a manipulation check.

At the last measurement point (T3), participants were asked to evaluate their volunteering activities in the past year in terms of their satisfaction with their volunteer work, how many negative experiences they had encountered, whether they had the feeling that their work was self-determined and whether their work fulfilled their expectations. These evaluations will also be considered to investigate the effectiveness of the VTP. Assuming that the VTP is effective, these evaluations should be better for the VTP group than for the active control group.

7.2 Hypotheses of the Present Study

In the following, the hypotheses of the present study are derived. The section begins by specifying the hypotheses for the baseline differences between the three groups (participants of the VTP, active control group, inactive control group). After that, the hypotheses put forward for the manipulation check of the VTP as well as those for cognitive functioning will be presented. Then, the hypotheses for personality adjustment and personality growth are derived. Hypotheses are developed for changes occurring during the VTP (T1-T2) as well as for possible changes taking place after the VTP is over (T2-T3).

It is important to note that only for the hypotheses regarding baseline differences all three groups are relevant. Since all other hypotheses concern the impact of the VTP, only the two active groups, that is the participants of the VTP

and the active control group, are regarded. In order to avoid repetition, some of the hypotheses do not mention the active control group and only focus on the hypothesized development for the VTP group. However, the changes of the VTP group are always compared to those of the active control group for which no changes are assumed.

7.2.1 Hypotheses Concerning Baseline Differences Between the Three Groups

As elaborated in Chapter 6, numerous studies have pointed to the fact that when comparing volunteers with non-volunteers preselection effects are complicating the picture. Therefore, in the present study, the two major comparison groups both were active as volunteers (VTP group and active control group).

In addition, a third group of non-volunteers (inactive control group) was also recruited, that was matched by age, gender and education, to demonstrate that the active control group indeed showed the typical preselection effects known from volunteering studies. In accordance with the literature, the following hypotheses about differences between the three groups at baseline (T1) guided the study:

H1.1: Both groups of active volunteers, that is the *VTP group* and the *active control group*, do NOT differ at baseline on all outcome measures (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).

H1.2: The *VTP group* differs significantly at baseline on all outcome measures compared to the *inactive control group* (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).

H1.3: The *active control group* differs significantly at baseline on all outcome measures from the *inactive control group* (e.g., measures of personality

adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).

7.2.2 Hypotheses Guiding the Manipulation Check of the VTP

To validate the effectiveness of the VTP in the sense of a manipulation check three measures were available: one measure assesses the general effectiveness of the VTP and two measures focus on the social effectiveness of the VTP.

It is expected that between T1 and T2 social relations increase. This is measured by assessing the amount of energy invested in “friendships” (PLI) as well as scores on the “positive relations with others” scale (Ryff) (cf. Method Chapter for more details). The reason for this assumption has to do with the social nature of the VTP such as being selected to take part in something special, receiving feedback and social support. In such a context participants are more enthusiastic and willing to meet new people and make new friends. In addition, the recurrent meetings with the other participants as well as the need for colleagues and solidarity can result in a willingness to meet new people unprejudiced and thus may foster the development of positive relations and new friendships. Only if the results confirm increases on both social measures the VTP can be regarded as being socially effective.

With regard to changes from T2 to T3, both measures assessing social relations are expected to decrease again. This assumption rests on the consideration that it is most likely that with the termination of the regular meetings of the VTP, the contact with other participants decreases. In addition, perhaps once the VTP is over a more realistic judgment of relations could also lead to a decrease in “positive relations with others”. Since it usually takes more effort and energy in the beginning to meet new people and to make new friends, one could argue that one year after the VTP, once real friendships have established, it is not necessary to invest so much energy anymore. Therefore, the investment of energy in “friendships” will most likely also decrease from T2 to T3.

To test the general effectiveness of the VTP, a measure assessing the amount of energy invested into the domain “occupation-like activities” (PLI) was available. In the context of the present study and considering that participants are retired, the assumption is that participation in the VTP as well as the development of a personal project is regarded as an activity comparable to an occupation.

Since one major aim of the VTP is that participants develop their own personal project, participants are taught skills and competencies, receive social support and recurrent feedback. It is assumed that such an encouraging and supportive surrounding will promote the investment of energy into the VTP and the personal project. Therefore, it seems most likely that participants will report an increase in the amount of energy invested into “occupation-like activities” from T1 to T2. Since participants continue to work as volunteers after the VTP and due to the pursuit of their self-initiated personal projects, the invested energy is expected to remain elevated from T2 to T3.

With regard to the manipulation check of the VTP, the assumption is that only if the VTP is effective in the sense of conveying skills and competencies as well as providing social support and feedback, participants are encouraged and motivated to invest energy into their project. Therefore, an increase in the amount of energy invested into “occupation-like activities” also implies that the VTP was generally effective.

In addition, at T3 the evaluation of the volunteering activities in the past year was assessed. Assuming that the VTP was effective, these evaluations should be better for the VTP group than for the active control group. Thus, the following hypotheses were investigated for the manipulation check of the VTP:

H2.1: Compared to the active control group, only participants of the VTP group invest more energy into “*friendships*” at T2 (compared to T1). However, this investment decreases again from T2 to T3.

H2.2: Only participants of the VTP report to have more “*positive relations with others*” at T2 (compared to T1). These higher ratings of positive relations decline again from T2 to T3.

H2.3: Only participants of the VTP invest more energy into the domain “*occupational-like activities*” at T2 (compared to T1). This investment remains elevated at T3 (compared to T2).

H2.4: The evaluation of the *volunteering activities* at T3 should be better for the VTP group than for the active control group.

7.2.3 Hypotheses Concerning Cognitive Functioning

As has been explained in the excursus (Chapter 5), there is no theoretically grounded reason to expect changes in cognition. However, there is evidence that personality and cognition are related. For example, various studies found that “openness to experience” is positively related to measures of intelligence and other cognitive abilities (e.g., Goff & Ackermann, 1992; McCrae, 1987, 1994; McCrae & Costa, 1997). Therefore it is important to test if participation in the VTP promotes cognitive functioning. Finding no improvements would imply that possible changes obtained in personality adjustment and/or growth cannot be attributed to changes in cognitive functioning.

Two lines of research need to be considered in order to come to the conclusion that the VTP will not lead to improvements in cognitive functioning. A well-supported finding is that cognitive intervention programs only lead to training improvements in skills which were explicitly trained (Lindenberger & Kray, 2005). Since the aim of the VTP was not to improve cognitive functioning, skills needed to improve measures of cognitive functioning (e.g., perceptual speed and vocabulary knowledge) were not explicitly trained. Therefore, the VTP cannot be compared to a cognitive training program.

In addition, in line with the engaged lifestyle hypothesis, participants of the VTP represent an active and well-educated sample which goes hand in hand with high levels of cognitive functioning to begin with (Schaie, 1994). These high levels of cognitive functioning at baseline limit the opportunity for improvements.

As will be described in the Method Chapter, measures of cognitive functioning were only administered at T1 and T2. Therefore, hypotheses can only be formulated for changes between T1 and T2:

H3.1: Compared to the active control group, no improvements on *fluid measures of intelligence* are expected for the VTP group at T2 (compared to T1).

H3.2: Compared to the active control group, no improvements on *crystallized measures of intelligence* are expected for the VTP group at T2 (compared to T1).

7.2.4 Hypotheses Concerning Personality Adjustment

As has been discussed in the previous chapters, personality adjustment is a normative developmental process in older adulthood. Since subjective well-being is seen as the prototypical outcome of personality adjustment (cf. Section 3.1.1), all three facets of subjective well-being (positive affect, negative affect and life satisfaction) were assessed in the present study. Given that neuroticism and extraversion are often regarded as the temperamental underpinnings of negative affect and of positive affect, respectively, they were also employed as indicators of personality adjustment (cf. Section 3.1.2).

In line with integrated resource theory (Hobfoll, 2002) viewing the possession of available resources as critical for promoting well-being, it is assumed that participation in the VTP, due the availability of the three resources (self-esteem, social-support resources and knowledge resources), increases subjective well-being. Indeed, the importance of the availability of resources to augment subjective well-being has been documented in numerous studies (e.g., Diener & Fujita, 1995a).

In addition, participation in the VTP can be compared to the experience of a positive life event. The literature on the effect of life events on subjective well-being (cf. Section 4.2.1) has emphasized that positive events may enhance positive affect and life satisfaction but will usually not decrease negative affect (same-domain effect) (Zautra & Reich, 1983). Furthermore, there is evidence that only positive affect seems to be influenced by social activity (Charles, Reynolds, & Gatz, 2001; Watson et al., 1992). Therefore, it is hypothesized that positive affect and life satisfaction will increase from T1 to T2. In contrast, no effects on negative affect is expected.

In accordance with the hedonic treadmill theory, numerous studies investigating the impact of life events on well-being showed that increases in subjective well-being do not remain elevated long-term (e.g., Brickman et al., 1978; Suh et al., 1996). Therefore, it is expected that positive affect and life satisfaction will decrease again from T2 to T3.

With regard to extraversion and neuroticism, the literature on life events revealed that the same-domain effects found for positive affect and negative affect also seem to apply to neuroticism and extraversion (cf. Section 4.2.2). Accordingly, the experience of a positive event should only increase extraversion but not decrease neuroticism. Therefore, it is assumed that extraversion increases from T1 to T2. In line with the hypothesis for positive affect, this increase in extraversion should only be temporary and should therefore decrease again from T2 to T3. In contrast, no changes are expected for neuroticism. Hence, the following hypotheses will be investigated in the present study:

H4.1: Only the VTP group will report increased levels of *positive affect* and *extraversion* at T2 (compared to T1). These increased levels will decrease again from T2 to T3.

H4.2: No changes are expected for the VTP group with regard to *negative affect* and *neuroticism* neither at T2 nor at T3 compared to the active control group.

H4.3: *Life satisfaction* will increase only for the VTP group from T1 to T2 and will decrease again from T2 to T3.

7.2.5 Hypotheses Concerning Personality Growth

7.2.5.1 Hypotheses Concerning Main Effects for Personality Growth

In contrast to personality adjustment, personality growth cannot be regarded as a normative developmental process in older adulthood. However, given a special combination of contextual and personal factors, personality growth might occur (Staudinger & Kunzmann, 2005). Indeed, most studies investigating the potential for personality growth find that under certain

circumstances and participants with certain personality characteristics reported personality growth (e.g., Bursik, 1991; M. S. White, 1985).

Therefore, it is expected that the context of the VTP is not sufficient to promote personality growth. Rather, the assumption is that for personality growth to occur, personal factors in addition to the context of the VTP are necessary. Consequently, the following hypotheses concerning main effects for personality growth are put forward:

H5.1: Participation in the VTP will not lead to improvements in “*personal growth*” neither at T2 nor at T3 for the VTP group.

H5.2: No improvements will be found in “*openness to experience*” neither at T2 nor at T3 for the VTP group.

7.2.5.2 Hypotheses Concerning the Moderating Effect of Internal Control Beliefs on Personality Growth

As mentioned in the previous section, it has been argued that for personality growth to occur, a special combination of contextual and personal factors is needed (Staudiger & Kunzmann, 2005). Studies investigating the potential for personality growth support this view (e.g., Bursik, 1991; M. S. White, 1985). Therefore, in addition to regarding the VTP as the contextual factor, internal control beliefs were chosen as the personal factor for the present study.

Internal control beliefs or personal agency have been advocated in numerous theories as essential for personality development (cf. Section 4.3.2). In addition, individuals with high internal control beliefs see themselves as responsible for the outcome of an action or goal and thus they are encouraged to invest time and effort into this goal. This can consequently increase the likelihood of success. Since internals ascribe this success to their own action, they are also more active and motivated to reach a goal. Assuming that one goal of participants of the VTP is the development of the personal project, particular participants with high internal control beliefs should be able to benefit from the VTP and successfully develop their project. This could increase their feeling of having

achieved something and of having broadened their horizon thereby leading to an increase in “personal growth” from T1 to T2.

Since individuals with high internal control beliefs are more likely to deal with new situations successfully, they are also more willing to encounter new situations and experiences. The competencies and skills learned during the VTP should make it particularly likely that participants with high internal control beliefs successfully manage new situations. This should increase their willingness to encounter more new experiences thereby leading to an increase in “openness to experience”.

With regard to follow-up levels one year after the VTP, it is hypothesized that the increases in “openness to experience” and in “personal growth” evident at T2 will remain elevated from T2 to T3. The reason for this assumption is that individuals with high internal control beliefs will most likely continue to attribute outcomes and success to their own effort, even if the VTP is over. Therefore, once they successfully managed to develop and implement their project, to deal with adversities and new situations, they should continue to invest effort into their project and remain confident to deal with new situations. Therefore, the following moderation hypotheses were put forward:

H5.3: Only participants of the VTP with *high internal control beliefs* (above median) will improve in “*personal growth*” from T1 to T2. At T3, these increased levels will remain stable (compared to T2).

H5.4: Only participants of the VTP with *high internal control beliefs* (above median) will improve in “*openness to experience*” from T2 to T3. At T3, these increased levels will remain stable (compared to T2).

7.2.6 Summary Regarding Hypotheses

The goal of the previous chapter was to derive hypotheses for the present study regarding the potential effect of the VTP on indicators of personality adjustment and growth. Please note that an overview of the hypotheses is given in Table 18 in the Discussion Chapter.

With regard to personality adjustment, particularly the effects of life events on well-being were considered, implying that a positive event such as the VTP can have an effect on positive affect and extraversion, but will probably not affect negative affect and neuroticism. Therefore, it was assumed that positive affect, extraversion and life satisfaction increase from T1 to T2. In line with the hedonic treadmill theory it is expected that these increased levels revert to baseline levels from T2 to T3.

In contrast, for personality growth to occur it usually takes a special combination of contextual and personal factors (Staudinger & Kunzmann, 2005). Therefore, it was hypothesized that participation in the VTP is not sufficient to promote personality growth. Rather, it is assumed that certain personal characteristics are necessary in addition to the context of the VTP for personality growth to occur. As a personal factor, internal control beliefs were chosen. Hence, it was hypothesized that only participants of the VTP with high internal control beliefs will show improvements on indicators of personality growth from T1 to T2. From T2 to T3 it was expected that these levels remain elevated.

In addition to these hypotheses concerning personality adjustment and growth, hypotheses regarding baseline differences between the three groups were also derived. In line with the literature, it was assumed that both active groups, that is the VTP group and the active control group, will differ significantly on all baseline measures assessed compared to the inactive control group.

Furthermore, hypotheses for cognitive functioning were formulated. In accordance with the prevalent findings that only explicit cognitive training programs will promote improvements, and since the VTP can not be compared to a training program, no improvements are expected on measures of cognitive functioning.

Since no measures are available to assess underlying dynamics or processes of change, some other measures are used to check on the

effectiveness of the VTP in the sense of a manipulation check. These measures include two measures which focus on social relations and thus can capture the social effectiveness of the VTP. The general effectiveness of the VTP will be measured by assessing the amount of energy invested into “occupation-like activities”. In addition to these longitudinal measures, participants were asked to evaluate their volunteering work at T3. It is hypothesized that the VTP will be socially and generally effective and that participants will rate their volunteering work better than the active control group.

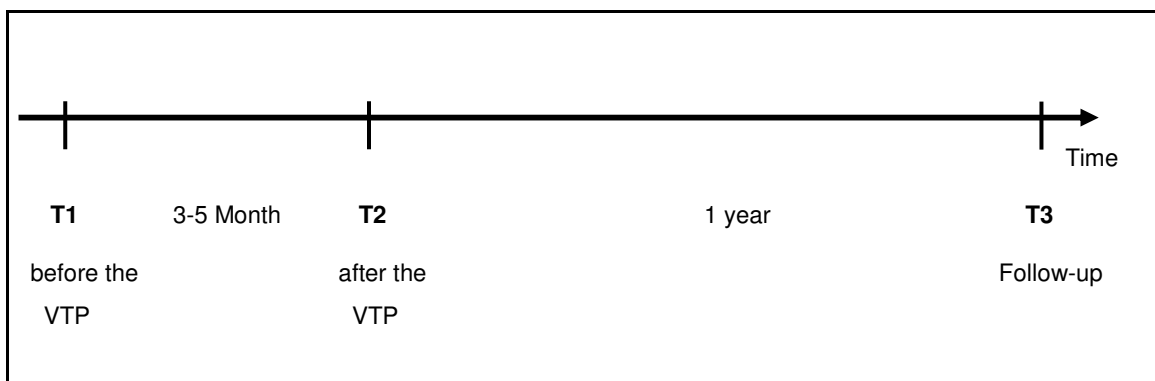
8 Method

The purpose of this dissertation was to investigate the short-term and long-term effect of the VTP on personality development. Therefore, a longitudinal study design with three measurement points (T1, T2 and T3) was employed. In order to evaluate the effect of the VTP in a sound methodological manner, an active control group was chosen, consisting of individuals who also work as volunteers but who did not take part in the VTP.

Numerous studies have shown that volunteers differ significantly on a number of important psychological factors from non-volunteers (cf. Chapter 6). To avoid these selectivity problems it is particularly important to choose a comparable control group of volunteers. In order to validate if the volunteering control group really is active and therefore comparable, a second control group consisting of non-volunteers was also recruited.

The time interval between the first and the second measurement point (T1-T2) was between three and five month. The third measurement point (T3) took place one year after T2 to investigate whether changes due to the participation in the VTP sustained. Figure M1 gives an overview of the study design.

Figure 1: Overview of the Study Design



8.1 Sample Description

The sample for the present study consisted of participants of the second wave (2003/2004) of the volunteer training program of the German Federal Ministry, also called EFI, who were willing to take part in the present study. Individuals of the volunteering control group were interested in taking part in the program, but due to shortage of places, were put on the waiting list. Members of both groups were already working as volunteers with a volunteer agency. Hence, the present study compared two active, engaged and thus comparable groups of volunteers. The only difference between the groups was that the VTP group (experimental group) took part in the VTP while the active control group did not. It is important to point out that the members of the active control group continued to work as volunteers during the present study.

Participants of the VTP, who were younger than 57 years ($N=21$) were excluded from the study since all of them were still working full time. Including these participants in the study could have led to distortion of the results since changes could not be traced back solely to the participation in the VTP but could have been caused also by work experiences. Most of the remaining participants were retired (cf. Table 5). Only some reported to be working part time.

Members of the inactive control group were recruited through newspaper articles. Besides matching individuals with regard to age, gender and education with the active control group, only those individuals were allowed to participate who were not active and therefore survived the activity screening (cf. Section 8.4.2). It is important to note that the inactive control group was investigated only twice, since two measurement points were sufficient for the validation.

Table 5 gives an overview of the socio-demographic characteristics for all three groups. No significant differences were found between the inactive control group and the active control group on these socio-demographic characteristics (age: $\chi^2_{(18, N = 138)} = 19.52$, n.s., $\eta^2 = .14$; gender: $\chi^2_{(1, N = 146)} = .03$, n.s., $\eta^2 = .01$; Education: $\chi^2_{(3, N = 145)} = 1.56$, n.s., $\eta^2 = .03$). When comparing the inactive control group with participants of the VTP, also no differences on these measures emerged (age: $\chi^2_{(14, N = 187)} = 13.29$, n.s., $\eta^2 = .02$; gender: $\chi^2_{(1, N = 192)} = .10$, n.s.,

$\eta^2 = .02$; Education: $\chi^2_{(3, N = 196)} = .02$, n.s., $\eta^2 = .01$). Similarly, no differences were found between the VTP group and the active control group (age: $\chi^2_{(18, N = 131)} = 23.46$, n.s., $\eta^2 = .14$; gender: $\chi^2_{(1, N = 140)} = .18$, n.s., $\eta^2 = .04$, Education: $\chi^2_{(3, N = 147)} = 1.80$, n.s., $\eta^2 = .03$).

Regarding marital status, living arrangements, occupational status and subjective health, no significant differences emerged between the three groups (cf. Table A1 in Appendix A), except for two significant differences between the active control group and the inactive control group regarding living arrangements ($\chi^2_{(1, N = 146)} = 5.44$, $p < .05$, $\eta^2 = .19$) and marital status ($\chi^2_{(4, N = 146)} = 19.72$, $p < .05$, $\eta^2 = .07$). Apparently, more members of the inactive control group were married and living together, in comparison to members of the active control group.

Table 5: *Sample Description in Terms of Age, Gender, Education, Marital Status, Living Arrangements, Occupational Status and Subjective Health for all Three Groups*

	VTP Group VTP	Active Control Group ACG	Inactive Control Group ICG
Measurement-Point	T1-T2	T1-T2	T1-T2
<i>N</i> _{questionnaire}	100	52	99
Cognitive Tests	74	36	89
Age (years)	M=63,52 (58-71)	M=64,76 (57-80)	63,38 (57-71)
<i>Gender</i>			
Men	33 (36%)	15 (32%)	33 (33%)
Women	60 (65%)	32 (68%)	66 (67%)
<i>Education</i>			
Hauptschule	15 (15%)	8 (17%)	15 (15%)
Realschule	26 (26%)	16 (33%)	26 (27%)
Gymnasium	23 (23%)	7 (15%)	22 (23%)
University	35 (35%)	17 (35%)	34 (35%)
<i>Marital Status</i>			
Married	59 (59%)	25 (52%)	66 (68%)
Single	5 (5%)	8 (16%)	0 (0%)
Divorced/separated	19 (19%)	7 (14%)	17 (18%)
Widowed	14 (14%)	8 (16%)	9 (9%)
Long-term relationship	3 (3%)	1 (2%)	5 (5%)
<i>Living Arrangements</i>			
Living alone	35 (36%)	22 (46%)	26 (27%)
Living together	64 (64%)	26 (54%)	72 (73%)

Method

<i>Occupational Status</i>			
Full-time employed	0 (0%)	0 (%)	0 (0%)
Retired	78 (84%)	39 (83%)	75 (79%)
Part-time employed	6 (7%)	3 (6%)	9 (9%)
Unemployed	7 (7%)	4 (9%)	10 (10%)
Other	2 (2%)	1 (2%)	2 (2%)
<i>Subjective Health</i>			
<i>M</i>	3.12	3.10	3.16
<i>SD</i>	.69	.78	.82

Please note that for the main purpose of the present study, the investigation of the impact of the VTP, only participants of the VTP and the active control group are regarded. Therefore, Table 6 provides an overview of the demographics only for the VTP group and the active control group for all three measurement points.

Table 6: *Sample Description Only for the VTP Group and the Active Control Group*

	VTP Group VTP	Active Control Group ACG
Measurement-Point	T1-T2-T3	T1-T2-T3
<i>N</i> _{questionnaire}	72	41
Age (years)	M=63,62 (58-71)	M=64,10 (57-80)
<i>Gender</i>		
Men	21 (32%)	11 (30%)
Women	45 (68%)	26 (70%)
<i>Education</i>		
Hauptschule	8 (11%)	7 (18%)
Realschule	17 (24%)	13 (34%)
Gymnasium	18 (25%)	6 (16%)
University	29 (40%)	12 (32%)
<i>Marital Status</i>		
Married	41 (57%)	20 (52%)
Single	5 (7%)	6 (15%)
Divorced/separated	13 (18%)	6 (15%)
Widowed	12 (17%)	6 (15%)
Long-term relationship	1 (1%)	1 (3%)
<i>Living Arrangements</i>		
Living alone	26 (37%)	17 (44%)
Not living alone	45 (63%)	22 (56%)

<i>Occupational Status</i>		
Full-time employed	0 (0%)	0 (%)
Retired	56 (85%)	30 (81%)
Part-time employed	4 (6%)	3 (8%)
Unemployed	5 (8%)	3 (8%)
Other	1 (1%)	1 (3%)
<i>Subjective Health</i>		
<i>M</i>	3.10	3.11
<i>SD</i>	.68	.83

As can be seen in Table 6, the active control group did not differ significantly from the VTP group with regard to important socio-demographic variables (age: $\chi^2_{(15, N=94)} = 19.95$, n.s., $\eta^2 = .06$; gender: $\chi^2_{(1, N=103)} = .05$, n.s., $\eta^2 = .02$; Education: $\chi^2_{(3, N=110)} = 3.47$, n.s., $\eta^2 = .13$). Furthermore, no differences were found for marital status ($\chi^2_{(4, N=111)} = 2.30$, n.s., $\eta^2 = .02$), living arrangements ($\chi^2_{(1, N=110)} = .50$, n.s., $\eta^2 = .07$), occupational status ($\chi^2_{(3, N=103)} = .37$, n.s., $\eta^2 = .05$) and subjective health ($F_{(1, 108)}(\text{group}) = .00$, n.s., $\eta^2 = .00$) between the VTP group and the active control group.

8.2 Selectivity Analysis

In contrast to the VTP group and the active control group, the inactive control group was only assessed twice. Of 106 participants at T1, 99 (93.40%) participants finished the study.

With regard to the VTP group and the active control group, Table 7 reveals that sample sizes diminished from baseline assessment to follow-up assessment for the VTP group and the active control group. Of the 148 participants in the VTP group at T1, 100 (67.60%) participated at T2 and 72 (72%) at T3. In the active control group, 52 of 100 (52%) participants took part at T2 and 41 (78.85%) remained at T3.

However, within longitudinal studies sample attrition is common. Other intervention studies reveal similar participation rates. For example, in a study by Pushkar, Reis and Morros (2001), 100 of 159 (67%) retired individuals completed the study after 12 month. Another longitudinal intervention study reported a 50% participation rate (26 of 52) for the experimental group after one year, and 70%

(20 of 26) at the follow-up one year later (Rook & Sorkin, 2003). Manners, Durkin and Nesdale (2004) reported that 68 % (36 of 53) of the experimental group and 64 % (22 of 34) of the control group finished the study lasting 14 month. Hence, participation rates of the present study are comparable to other intervention studies.

Table 7: *Participation Rates of the VTP Group and the Active Control Group*

Measurement-Point	T1	T1-T2	T1-T2-T3
VTP Group: <i>N</i>	148	100 (67.57%)	72 (72%)
Active Control Group: <i>N</i>	100	52 (52%)	41 (78.85%)

Sample attrition however can have major implications for the interpretation of results. Therefore, two types of selectivity analyses were carried out prior to the main analyses. First, to make sure that the present sample was a representative sample of the total group of participants taking part in the second wave of the program of the German Federal Ministry, selectivity analyses were conducted to examine the total selectivity. To compare the total group of participants of the second wave ($N=205$) with the T1 sample of the present study ($N=148$), demographic information about the total group of participants ($N=205$) were obtained from the ISAB-Institute in Cologne¹. No significant differences between the T1 sample and the total sample were found with regard to age, gender and education (cf. Table A2, Appendix A).

Second, selectivity analyses concerning the present sample were conducted by comparing the T1 sample of the VTP group ($N=148$) with those individuals still participating at the second occasion ($N=100$). In a second step, these T2 participants ($N=100$) were then compared with data from the sample at

¹ The ISAB accompanied the program of the Federal Ministry assessing in particular descriptive data of the participants.

T3 ($N=72$) (P. B. Baltes, Mayer, Helmchen, & Steinhagen-Thiessen, 1999). The equivalent analyses were conducted for the control group.

Mean-level differences between the three groups were analyzed on all measures of psychological functioning (e.g., positive affect, negative affect, life satisfaction, neuroticism, extraversion, “openness to experience”, “personal growth”), as well as on important demographic characteristics (age, gender, education, occupational status). Results revealed no significant selection effects (cf. Table A3 and A4, Appendix A).

8.3 Measures

The present section describes the assessment materials that were used in the study for all three groups. The same measures were administered at all measurement points. Table 8 provides an overview of these measures.

Aggregation of items into scales/constructs was done according to the guide lines provided by the respective coding manuals of the instruments. As a general rule, scales were computed if no more than 20% of responses were missing for the respective scale. Internal consistencies (Cronbach’s Alpha) of the measures for each group at each time point (T1, T2 and T3) are presented in Table 9. The internal consistencies for different sample sizes (T1-T2-T3 and T1-T2) for the three groups are given in Table A5 in the Appendix. Means and Standard Deviations for each measure are presented in the Results Chapter (Chapter 9, Table 10).

Table 8: *Overview of Measures Used in the Present Study*

Constructs	Method
<i>Personality Adjustment</i>	
Positive Affect	PANAS (Watson et al., 1988)
Negative Affect	PANAS (Watson et al., 1988)
Life Satisfaction	Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985)
Neuroticism	NEO Five Factor Inventory (Neo-FFI) (Borkenau & Ostendorf, 1993).
Extraversion	NEO Five Factor Inventory (Neo-FFI) (Borkenau & Ostendorf, 1993).

Personality Growth

Personal Growth

Psychological Well-Being (PWB) (Ryff, 1995)

Openness to Experience

NEO Five Factor Inventory (Neo-FFI) (Borkenau & Ostendorf, 1993).

Cognitive Functioning:

Fluid Intelligence

Zahlen-Symbol-Test (Wechsler, 1982)

Crystallized Intelligence

Mehrfachwahl-Wortschatz-Intelligenztest (MWT-B) (Lehrl, 1995)

Moderator

Internal Control Beliefs

IPC (Krampen, 1981)

Manipulation Check of the Intervention*Social Relations:*

Positive Relations with others

Psychological Well-Being (PWB) (Ryff, 1995)

Investment into Friendships

Personal Life Investment (Staudinger & Fleeson, 1996; Schindler, Staudinger & Nesselrode, 2006)

Overall Effectiveness of the VTP

Investment into Occupation-like Activities

Personal Life Investment (Staudinger & Fleeson, 1996; Schindler, Staudinger & Nesselrode, 2006)

Evaluation of Volunteer Work

Specific Questions Regarding the Volunteer Work

Developed for the Project

Table 9: *Internal Consistencies (Cronbach's Alpha) for the three Groups*

Measures	VTP Group			Active Control Group ACG			Inactive Control Group ICG	
	T1	T2	T3	T1	T2	T3	T1	T2
Positive Affect	.83	.80	.80	.76	.81	.73	.87	.88
Negative Affect	.87	.82	.83	.79	.82	.83	.87	.90
Life Satisfaction	.85	.70	.82	.80	.73	.68	.80	.88
Neuroticism	.75	.85	.86	.79	.81	.79	.82	.84
Extraversion	.64	.76	.80	.79	.74	.62	.75	.74
Personal Growth	.68	.80	.82	.82	.70	.79	.65	.66
Openness to Experience	.73	.87	.91	.74	.84	.66	.56	.66
Internal Control Beliefs	.56	.72	.56	.80	.77	.67	.56	.70
Positive Relations with Friend	.81	.83	.82	.83	.82	.85	.73	.71

Notes. Investment into "friendships" (PLI) and into "occupation-like activities" (PLI) are only single items, therefore no Cronbach's Alpha is given. The same applies to the two measures of cognitive functioning.

8.3.1 Demographics

At the first questionnaire assessment (T1) participants were asked to complete a short demographic questionnaire. The questionnaire comprised questions concerning age, gender, education, marital status, living arrangements (e.g., living alone or with a partner), occupational status as well as subjective health.

8.3.2 Personality Adjustment

8.3.2.1 Emotional Well-being: Positive and Negative Affect

The emotional component of subjective well-being, that is positive affect and negative affect, was measured with the Positive and Negative Affect Schedule consisting of 20 adjectives, with ten positive and ten negative affect items (e.g., nervous, alert, excited) (PANAS; Watson et al., 1988). A response scale ranging from 1 (never) to 5 (very often) was used to rate the frequency of experiencing each emotion generally. Internal consistency of positive affect and negative affect were good (Table 9).

8.3.2.2 Cognitive Well-Being: Life Satisfaction

The cognitive component of subjective well-being, life satisfaction, was assessed using the Satisfaction With Life Scale (SWLS; Diener et al., 1985), a 5-item measure involving statements on satisfaction with one's life and living conditions assessing overall life satisfaction. Responses were given on a 7-point rating scale ranging from 1 (does not apply at all) to 7 (applies very well), indicating the extent to which each item described the participant in general. This scale contains statements such as "In most ways, my life is close to my ideal" or "If I could live my life over, I would change almost nothing". Averaging across items yielded the mean life satisfaction score for each participant. Internal consistency for the scale was satisfactory for all three time points (Table 9).

8.3.2.3 Neuroticism and Extraversion

The two subscales of the Big Five, extraversion and neuroticism, were measured with the German version of the NEO-Five Factor Inventory (NEO-FFI) (Borkenau & Ostendorf, 1993). Considering the degree to which each statement described them, participants responded to each of the 12 items per subscale on a 5-point scale ranging from 1 (applies very well) to 5 (does not apply at all). Internal consistency for both subscales are satisfactory (Table 9).

8.3.3 Personality Growth

8.3.3.1 “Personal Growth”

The dimension “personal growth” is one of the six dimensions of Ryff’s inventory of psychological well-being (Ryff, 1995). Considering the extent to which each item describes them in general, participants respond to each item on a 5-point scale ranging from 1 (not at all) to 5 (strongly applies). To obtain a mean score for personal growth, the nine items were averaged. The internal consistency coefficients for personal growth were satisfactory across all three time points (Table 9).

8.3.3.2 “Openness to Experience”

“Openness to experience” is one of the Big Five personality factors measured with the German version of the NEO-Five Factor Inventory (NEO-FFI; Borkenau & Ostendorf, 1993). Considering the degree to which each statement described them, participants responded to each of the 12 items per subscale on a 5-point scale ranging from 1 (applies very well) to 5 (does not apply at all). Items were averaged within the subscale. Internal consistency for the openness subscale was satisfactory (Table 9).

8.3.4 Measures of Cognitive Functioning

8.3.4.1 Fluid Intelligence

The indicator for fluid intelligence was perceptual speed using the Digit Symbol Substitution Test (DSST) of the HAWIE-III (Tewes, 1991; a German version of the WAIS-R, Wechsler, 1982). In the Digit Symbol Substitution Test, participants received a sheet of paper on top of which a line of the digits from 1 to 9 was presented, with an abstract symbol corresponding to each of these digits printed underneath it. After this digit-symbol example, several lines of digits were presented in random order, and the task was to fill in the space underneath each digit with the corresponding symbol one after the other. Participants had 90 second for this test. The number of digits correctly assigned represents the performance score on this task (range: 0–100).

8.3.4.2 Crystallized Intelligence

The indicator for crystallized intelligence was the Mehrfachwahl-Wortschatz-Intelligenztest-B, (MWT-B; Lehrl, 1995), also called the Spot-a-Word test. In the Spot-a-Word test participants were required to choose the correct word from a list of five words containing one word and four non-words. Participants indicated the real word by underlining or circling it. The number of correctly identified words is counted as a performance indicator on this task (range: 0–35).

8.3.5 Variables for the Manipulation Check of the VTP

8.3.5.1 Social Relations

Investment in Friendships

Personal Life Investment (PLI) (Schindler, Staudinger, & Nesselroade, 2006; Staudinger & Fleeson, 1996) is defined as the degree to which individuals perceive themselves to invest time and energy in order to pursue goals in central life domains such as health, cognitive functioning, occupation and leisure. Each domain is assessed by single items asking to which degree one invests in terms

of thinking and doing in different domains. Responses are expressed on a Likert scale ranging from 1 (not at all) to 5 (very much). For the present study, two domains were of special interest: reported investment in “friendships” as well as reported investment in “occupation-like activities”.

Positive Relations with Others

Social relations were also measured using the scale “positive relations with others” of Ryff’s psychological well-being questionnaire (1995). The instrument consists of six 9-item subscales. Participants had to answer the nine items on a 5-point scale ranging from 1 (not at all) to 5 (strongly applies). Internal consistencies are presented in Table 9.

8.3.5.2 Investment in “Occupation-like Activities”

The construct Personal Life Investment (PLI) (Schindler, Staudinger & Nesselroade, 2006; Staudinger & Fleeson, 1996) has been described in more detail in the previous section. The amount of energy participants report to invest into the domain “occupation-like activities” is employed in this study to assess the general effectiveness of the VTP.

8.3.5.3 Evaluation of the Volunteer Work

Only at the last measurement point (T3) participants were asked to answer a number of questions pertaining to their volunteer work.

Number and Type of Projects

At T3 participants were asked to specify the number of projects which they conducted during the past year. In addition, they had to briefly describe these projects. These descriptions were assigned to four main categories: (1) administrative work, (2) sports, (3) providing training to others (Bildungsarbeit) and (4) work within the social domain.

Questions Regarding the Volunteer Work in General

At T3 participants were also asked to rate several single item questions concerning their volunteering work, which they had to answer on a 5-point scale.

1. How satisfied were you with your volunteer work in the last year?
(= Satisfaction)
2. Did the volunteer work fulfill your expectations? (= Expectations)
3. How many unpleasant experiences did you encounter during your volunteer work in the last year? (= Unpleasantness)
4. Did you have the feeling you could decide the course of your volunteer work on your own? (= Self-Determination)

In addition, participants were asked to specify whether or not the projects they did during their volunteer work were initiated on their own (yes (1) or no (2)) and whether they conducted them on their own (yes (1) or no (2)).

8.3.6 Moderator: Internal Control Beliefs

The subscale internal control beliefs were assessed with the IPC scale (Krampen, 1981). Each of the 8 items pertaining to internal control beliefs had to be answered on a 7-point scale ranging from 1 (applies very well) to 7 (does not apply at all). Items were averaged within the subscale to obtain subscale averages per participant. Internal consistency for the internal control subscale were satisfactory (Table 9). To employ internal control beliefs as a moderator, a median split was performed. The sample was divided into two groups with high internal control beliefs (above the median) and low internal control beliefs (below the median).

8.4 Procedure

8.4.1 Participants of the VTP and the Active Control Group

The program of the German Federal Ministry of Family, Youth, Senior and Women took place nationwide in 35 volunteer agencies, spread evenly all over Germany (cf. Appendix C for an overview of the 35 agencies).

In addition to the measures of cognitive functioning, some other performance measures were administered which are however not part of this thesis. Since all these measures had to be assessed by a trained investigator, it was necessary to travel to these volunteer agencies. Participants of the VTP as well as the active control group were asked in a written invitation to be present at a certain date and time in one of the locations organized by the respective agency.

The first measurement point (T1) took place before the VTP started, in autumn 2003. After signing an informed consent form, both groups were assessed separately, in the optimal case at the same day, however at different times.

By means of a short power-point presentation, the purpose of the present study was explained emphasizing the importance that participants take part in all three measurement points. The cognitive tests were handed out first. After giving detailed instructions with the help of a power-point slide, participants were given 90 seconds to complete the HAWIE digit-symbol test (Wechsler, 1982). Since the exact timing was essential, the time was taken using a stop watch. The second cognitive test, the “Mehrfachwahl-Wortschatz-Intelligenztest” (MTW) (Lehrl, 1995) took about 10 minutes and also had to be completed in the presence of an investigator.

After administering both cognitive tests, the other performance measures were administered. Afterwards, participants were given a pre-stamped return envelope including the demographic questionnaire as well as the psychological tests (cf. Table 8). Participants were allowed to take these tests home and were asked to fill them out and send them back as soon as possible.

The second measurement point (T2) took place after the VTP, about three to five months after T1, following the same procedure. Data collection for the

follow-up assessment (T3) one year after the VTP was planned to be identical to T1 and T2. However, the first three investigations in Northern Germany yielded very low participation rates, even though great effort was undertaken to contact and motivate participants, including a written invitation as well as a personal reminder per phone. Therefore, it was decided to reduce the assessment protocol of the third measurement point to the paper and pencil tests that were mailed to the participants. Thus, the cognitive tests were not administered at T3.

In order to motivate participants to take part in the postal investigation, a lottery was organized promising 10 attractive prizes for those who send back the answered questionnaire within two weeks. The lottery was successful and it was possible to collect even more data than at T2.

8.4.2 The Inactive Control Group

Members of the inactive control group were recruited through newspaper articles that informed the public about the project (cf. Appendix B). The project was introduced as a research project investigating the beliefs and attitudes of older people. It was stressed in the ad that persons interested should not be working as volunteers.

To select only inactive people, callers were asked to tell what kinds of activities they were doing including the amount of time spent on these activities. Those who were actively taking part in organizations, meeting at least once a week, were excluded from the study. Other exclusion criteria were: taking part in adult-university courses, going on art-trips regularly, planning and carrying out major personal projects, e.g., house building, organizing trips for children or older people. Those people interested in the study and who survived the activity screening were matched as close as possible with regard to their age, gender and education to participants of the active control group.

The first and second measurement point took place at Jacobs University Bremen. Data collection for the second measurement point (T2) took place about three to four months after T1. Participants were sent a reminder letter two weeks before, inviting them kindly to participate in the second part of the study which they had signed in for at T1.

At T1, an investigator informed participants about study procedures, data protection, and the participant's right to terminate participation at any time. Participants were then asked to sign an informed consent form.

All sessions were conducted in groups with varying sizes (5 to 20 persons). Both assessment points were carried out in the same standardized manner. The test battery included exactly the same questionnaires as those of the other two samples, that is a demographic questionnaire, personality tests and the cognitive inventory (cf. Table 8). After the second assessment, each person was debriefed, told what the project was all about and had the chance to ask questions. After that each person was reimbursed with 10, - Euro².

² The reimbursement was necessary as participants of the inactive control group were not at all involved in the program of the Federal Ministry.

9 Results

Results are presented following the sequence of the hypotheses. Prior to the results, the general statistical procedure will be described in part one. The second part focuses on the baseline differences between the three groups to validate the comparability of the volunteering control group. In the third part, the results for the manipulation check of the VTP are presented. Section four focuses on cognitive functioning. Finally, part five reports analyses carried out to identify changes in the domain of personality adjustment while the fifth part deals with the hypotheses put forward for personality growth.

9.1 General Statistical Procedures

All analyses were conducted using the statistical software package SPSS 15.0 for Windows (SPSS Inc., 2006). Prior to statistical analyses, all variables were examined for missing values, departure from normality, and the existence of univariate and multivariate outliers. In addition, all variables were checked for violations of basic assumptions of the respective statistical procedures.

9.1.1 Data Screening: Missing Values and Outliers

Prior to analyses, the raw data were checked for missing values on item level. According to Tabachnick and Fidell (2001) the highest acceptable amount of missing data is 5%. In the present study, the amount of missing data on item level was less than 5%.

As a first step in data analysis, distributions of all variables were screened for deviation from normality and univariate outliers using SSPSS EXPLORE. Inspection of the absolute skewness and kurtosis values revealed that deviation from zero was within reasonable limits and did not exceed the suggested cut-off values of 3.0 for skewness and 10.0 for kurtosis (Kline, 1993).

One of the more serious limitations of analysis of variance (ANOVA) is its sensitivity to outliers. Cases were considered outliers if their z-scores were above 3.29 or below -3.29 (Tabachnick & Fidell, 2001). Since all variables were

analyzed in grouped data, outlier detection was conducted at the subgroup level (e.g., EG versus CG) (Tabachnick & Fidell, 2001). Two outliers were detected and not included in the analyses.

In addition for screening for univariate outliers, all variables were also checked for multivariate outliers using SPSS REGRESSION. Cases were considered multivariate outliers if their Mahalanobis distance was significant at $p < .001$ (Tabachnik & Fidell, 2001). Using this criterion, no multivariate outliers were detected.

9.1.2 Additional Assumptions for the Statistical Analyses

For all analyses, the assumption of homogeneity of variance and variance–covariance matrices was tested. In univariate analyses, Levene’s test for homogeneity of variances was checked. In multivariate and repeated-measures analyses, Box’s M tests were screened to test homogeneity of variance–covariance matrices. In both tests, violation of homogeneity is assumed when the tests yielded significance at the level of $p < .05$. However, Bortz (1999), states that ANOVA is relatively robust against violations of these assumptions when sample sizes are relatively equal (Tabachnick & Fidell, 2001). According to Tabachnick & Fidell (2001) relatively equal sample sizes are given if samples are within a ratio of 4 to 1 or less for largest to smallest cell size. Thus, for the present study, the requirement of relatively equal sample sizes is met.

When there are more than two levels of the within-subject factor in the repeated-measures analyses, is difficult to satisfy the sphericity assumption of the Box’s M test (see Weinfurt, 2000). In these cases the degree of sphericity was assessed using the Mauchly test. In cases where data departed significantly from sphericity, the Greenhouse-Geisser correction was applied to the tests of significance. However, if the Greenhouse-Geisser correction did not alter the significance level, the conservative F -Test using Wilk’s Lambda as recommended by Bortz (1999) was reported.

9.1.3 Significance Level and Alpha-Level Adjustment

The alpha-level indicating statistical significant results was set at 10%. This level is regarded as acceptable for a quasi-experimental field study investigating relatively new areas (Bortz, 1999). Since developmental changes over the three time points were specified prior to analyses for each group, in particular for the experimental group, alpha-level adjustments for multiple analyses (e.g., Bonferroni adjustment) are not required (Bortz, 1999).

9.2 Is the Active Control Group Indeed Active? - Baseline Differences Between the Three Groups

H1.1: Both groups of active volunteers, that is the *VTP group* and the *active control group*, do NOT differ at baseline on all outcome measures (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).

H1.2: The *VTP group* differs significantly at baseline on all outcome measures compared to the *inactive control group* (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).

H1.3: The *active control group* differs significantly at baseline on all outcome measures from the *inactive control group* (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).

Table 10 displays the means and standard deviations of baseline measures for all three groups. Multivariate analyses of variance (MANOVA) yielded no significant differences between the VTP group and the active control group ($F_{(13, 116)}(\text{group}) = .54$, n.s., $\eta^2 = .16$). Univariate analyses for each baseline

measure (Table 10) also revealed no significant differences between the two groups. In contrast, a MANOVA for baseline differences between the VTP group and the inactive control group reached significance ($F_{(13, 154)}(\text{group}) = 37.88, p < .01, \eta^2 = .76$), just like the univariate analyses for each baseline measure. The active control group and the inactive control group also differed significantly ($F_{(13, 122)}(\text{group}) = 37.74, p < .01, \eta^2 = .80$).

Table 10. Means, Standard Deviations and Between-Group Differences for Baseline Measures (T1)

	VTP Group (VTP)	Active Control Group (ACG)	Inactive Control Group (ICG)	F-values		
				VTP – ACG	VTP – ICG	ACG – ICG
Baseline Measures (T1)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	$F^{(a)} / \eta^2$	$F^{(b)} / \eta^2$	$F^{(c)} / \eta^2$
Positive Affect	3.63 (.514)	3.62 (.40)	3.43 (.363)	.12 / .00	9.75*** / .06	5.93** / .04
Negative Affect	1.88 (.57)	1.83 (.50)	2.03 (.64)	.20 / .00	4.35** / .03	5.08** / .04
Life Satisfaction	24.58 (5.18)	24.78 (4.04)	23.34 (4.25)	.05 / .00	4.01** / .02	4.91** / .04
Neuroticism	2.31 (.62)	2.30 (.51)	3.56 (.65)	.14 / .00	163.86*** / .50	145.82*** / .52
Extraversion	3.43 (.49)	3.40 (.58)	2.64 (.56)	.28 / .00	100.78*** / .38	58.34*** / .30
Personal Growth	3.98 (.69)	3.91 (.54)	3.71 (.41)	.08 / .00	9.13*** / .05	7.75*** / .05
Openness to Experience	3.57 (.55)	3.54 (.53)	2.38 (.47)	.001 / .00	235.98*** / .59	195.56*** / .59
Fluid Intelligence	49.93 (12.33)	47.04 (9.81)	42.49 (11.65)	1.36 / .01	12.25*** / .07	4.31** / .03
Crystallized Intelligence	32.11 (2.94)	31.98 (2.60)	31.14 (2.62)	.04 / .00	5.91** / .03	3.37* / .03
Internal Control Beliefs	36.26 (3.74)	36.48 (5.14)	35.03 (3.55)	.77 / .01	6.36** / .04	8.30*** / .06
Positive Relations with Others	3.81 (.63)	3.78 (.60)	3.56 (.43)	.16 / .00	8.79*** / .05	11.72*** / .08
Investment into Friendships	3.38 (.78)	3.52 (.70)	3.15 (.84)	1.74 / .01	5.41** / .03	11.11*** / .08

Investment into Occupation-like Activities	3.19 (1.05)	3.21 (1.12)	2.70 (1.07)	.51 / .00	4.92** / .03	6.75*** / .05
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Notes. * $p < .10$; ** $p < .05$; *** $p < .01$;

^(a) F -values for VTP – ACG with 1,128 degrees of freedom

^(b) F -values for VTP – ICG with 1,166 degrees of freedom

^(c) F -values for ACG – ICG with 1,134 degrees of freedom

Summary of Findings

The findings regarding baseline differences between the three groups are in accordance with the hypotheses. The finding that the inactive control group differed significantly on all baseline measures compared to the active control group and the VTP group is in line with empirical evidence showing that non-volunteers differ significantly from volunteers. Thus, these basic group comparisons fulfilled their purpose. They showed that the active control group really is an active and therefore comparable control group.

It is important to note that the analyses and the results reported in the following sections focus on the investigation of the effect of the VTP. Therefore, the following analyses are only conducted for the VTP group and for the active control group.

As has been shown in Chapter 8 (Table 6), the VTP group as well as the active control group do not differ with regard to demographic variables such as age, gender and educational level. Furthermore, as just reported, both groups do not show differences on baseline measures, including those of personality adjustment, personality growth as well as social support measures (Table 10). This implies that it is not necessary to control for these variables in the analyses.

9.3 Manipulation Check of the Intervention - Was the VTP Successful?

H2.1: Compared to the active control group, only participants of the VTP group invest more energy into “*friendships*” at T2 (compared to T1). However, this investment decreases again from T2 to T3.

H2.2: Only participants of the VTP report to have more “*positive relations with others*” at T2 (compared to T1). These higher ratings of positive relations decline again from T2 to T3.

H2.3: Only participants of the VTP invest more energy into the domain “*occupational-like activity*” at T2 (compared to T1). This investment remains elevated at T3 (compared to T2).

H2.4: The evaluation of the *volunteering activities* at T3 should be better for the VTP group than for the active control group.

In this chapter, analyses are presented that check on the effect of the VTP independently of the major dependent variables of the study in the sense of a manipulation check. It was assumed that the VTP would intensify social relations as well as increase the amount of invested energy into the domain “*occupation-like activities*” from T1 to T2. While this investment was expected to stay elevated from T2 to T3, social relations were expected to decrease again from T2 to T3.

Furthermore, at T3 the evaluation of the volunteering activities after T2 was assessed (cf. Section 8.3.5.3). If the VTP was effective, these evaluations should be better for the VTP group than for the active control group. Means, standard deviations and percentages of the measures for the manipulation check are given in Table 11.

Table 11. Means, Standard Deviations and Percentages of the Measures for the Manipulation Check

		VTP Group			Active Control Group		
		T1	T2	T3	T1	T2	T3
Investment into Friendships	<i>M</i> (<i>SD</i>)	3.32 (.78)	3.66 _a (.70)	3.33 (.68)	3.51 (.75)	3.32 _b (.76)	3.56 (.63)
Positive Relations with Others	<i>M</i> (<i>SD</i>)	3.81 (.62)	4.14 _a (.52)	3.90 (.59)	3.79 (.64)	3.85 _b (.62)	3.87 (.66)
Investment into Occupation-like Activities	<i>M</i> (<i>SD</i>)	2.96 (1.14)	3.74 _a (1.00)	3.50 _c (.82)	3.10 (1.14)	3.24 _b (1.10)	3.07 _d (1.13)
Evaluation of the Volunteer Work at T3							
Number of Projects	<i>M</i> (<i>SD</i>)			2.22 _a (1.54)			3.56 _b (2.12)
<i>Type of Projects:</i>							
1. Administrative Work				14 (20 %)			6 (17 %)
2. Sports				3 (4 %)			1 (3 %)
3. Educational work				21 (30 %)			3 (9 %)
4. Social Domain				33 (46 %)			25 (71 %)
Work was Self-initiated	Yes No			37 (54%) 31 (46%)			18 (49%) 19 (51%)
Work was Conducted Alone	Yes No			24 (37%) 41 (63%)			12 (36%) 21 (64%)
Satisfied with Work	<i>M</i> (<i>SD</i>)			3.61 (.86)			3.40 (1.10)
Work Fulfilled Expectations	<i>M</i> (<i>SD</i>)			3.56 (.78)			3.63 (.93)
Encountered Unpleasant Experiences During Work	<i>M</i> (<i>SD</i>)			2.32 (.72)			2.40 (1.00)
Feelings of Self-Determination During Work	<i>M</i> (<i>SD</i>)			3.68 _a (.85)			3.17 _b (1.18)

Notes. Scores that do not share the same subscripts are significantly different: a-b; c-d

Multivariate repeated-measures analyses of variance (MANOVA) for the three outcome measures (positive relations, investment into “friendships” and investment into “occupation-like activities”) yielded a significant time x group interaction (T1-T2-T3: $F_{(6, 426)}(\text{time} \times \text{group}) = 3.20, p < .04, \eta^2 = .19$).

Follow-up analyses concerning the significant effect of the overall MANOVA revealed significant interaction effects for all three measures (*positive relations*: T1-T2-T3: $F_{(2, 214)}(\text{time} \times \text{group}) = 3.00, p < .10, \eta^2 = .03$; *investment into "friendships"*: T1-T2-T3: $F_{(2, 214)}(\text{time} \times \text{group}) = 5.06, p < .01, \eta^2 = .05$; *investment into "occupation-like activities"*: T1-T2-T3: $F_{(2, 214)}(\text{time} \times \text{group}) = 2.70, p < .10, \eta^2 = .02$).

Within factor contrasts (T1-T2 and T2-T3) demonstrated significant interaction effects for the two time intervals on both social relations measures (*positive relations*: T1-T2: $F_{(1, 107)}(\text{time} \times \text{group}) = 3.80, p < .10, \eta^2 = .03$; T2-T3: $F_{(1, 107)}(\text{time} \times \text{group}) = 5.73, p < .05, \eta^2 = .05$; *investment into "friendships"*: T1-T2: $F_{(1, 107)}(\text{time} \times \text{group}) = 8.00, p < .01, \eta^2 = .07$; T2-T3: $F_{(1, 107)}(\text{time} \times \text{group}) = 7.32, p < .01, \eta^2 = .06$).

More specific follow-up analyses demonstrated that the VTP group improved significantly on both social relations measures from T1 to T2 and declined from T2 to T3 (*positive relations*: T1-T2: $F_{(1, 71)}(\text{time}) = 14.48, p < .01, \eta^2 = .17$; T2-T3: $F_{(1, 71)}(\text{time}) = 10.51, p < .01, \eta^2 = .13$; *investment into "friendships"*: T1-T2: $F_{(1, 70)}(\text{time}) = 5.94, p < .05, \eta^2 = .08$; T2-T3: $F_{(1, 70)}(\text{time}) = 7.09, p < .05, \eta^2 = .09$). These changes are depicted in Figure 2 and Figure 3.

The active control group neither differed between T1 and T2 nor between T2 and T3 on both measures (*positive relations*: T1-T2: $F_{(1, 40)}(\text{time}) = .37, \text{n.s.}, \eta^2 = .01$; T2-T3: $F_{(1, 40)}(\text{time}) = .15, \text{n.s.}, \eta^2 = .00$; *investment into "friendships"*: T1-T2: $F_{(1, 40)}(\text{time}) = 1.62, \text{n.s.}, \eta^2 = .04$; T2-T3: $F_{(1, 40)}(\text{time}) = 2.05, \text{n.s.}, \eta^2 = .05$).

Within factor contrasts for the amount of energy invested into "*occupation-like activities*" yielded a significant interaction effect for the first time interval (T1-T2: $F_{(1, 107)}(\text{time} \times \text{group}) = 5.70, p < .05, \eta^2 = .05$), however not for the second time interval (T2-T3: $F_{(1, 107)}(\text{time} \times \text{group}) = .12, \text{n.s.}, \eta^2 = .00$). Follow-up analyses revealed that the VTP group increased from T1 to T2 (T1-T2: $F_{(1, 70)}(\text{time}) = 27.20, p < .01, \eta^2 = .28$). In contrast to the two social relations measures, the amount of energy invested into "*occupation-like activities*" remained elevated at T3, that is no significant changes were found between T2 and T3 (T2-T3: $F_{(1, 69)}(\text{time}) = 2.72, \text{n.s.}, \eta^2 = .04$; see Figure 4). Please note that the amount of invested

energy of the VTP group at T3 was significantly higher than the baseline assessment (T1-T3: $F_{(1, 68)}(\text{time}) = 8.31, p < .01, \eta^2 = .11$).

For the active control group, the amount of invested energy into “*occupation-like activities*” did not change between T1 and T2, nor between T2 and T3 (T1-T2: $F_{(1, 40)}(\text{time}) = .47, \text{n.s.}, \eta^2 = .01$; T2-T3: $F_{(1, 40)}(\text{time}) = .56, \text{n.s.}, \eta^2 = .01$) (Figure 4).

Figure 2. Positive relations with others increased only for the VTP group from T1 to T2 and decreased again from T2 to T3.

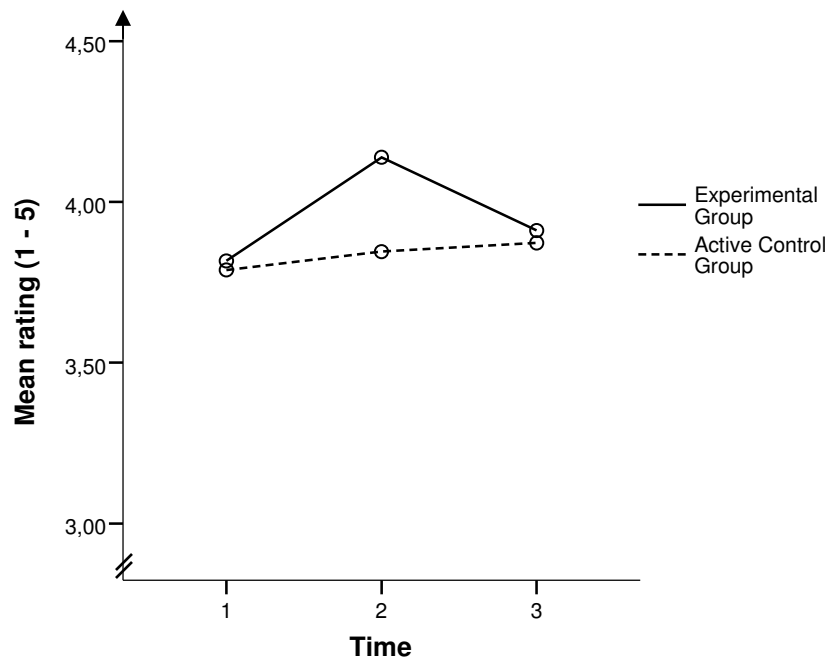


Figure 3. The amount of invested energy into the domain “**friendships**” increased significantly for the VTP group from T1 to T2 and decreased again from T2 to T3. The active control group did not change significantly.

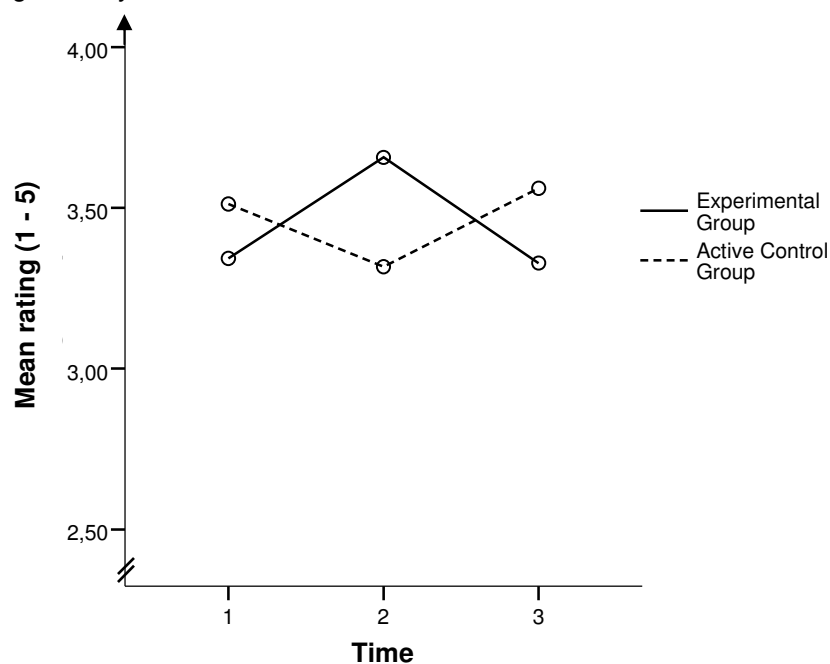
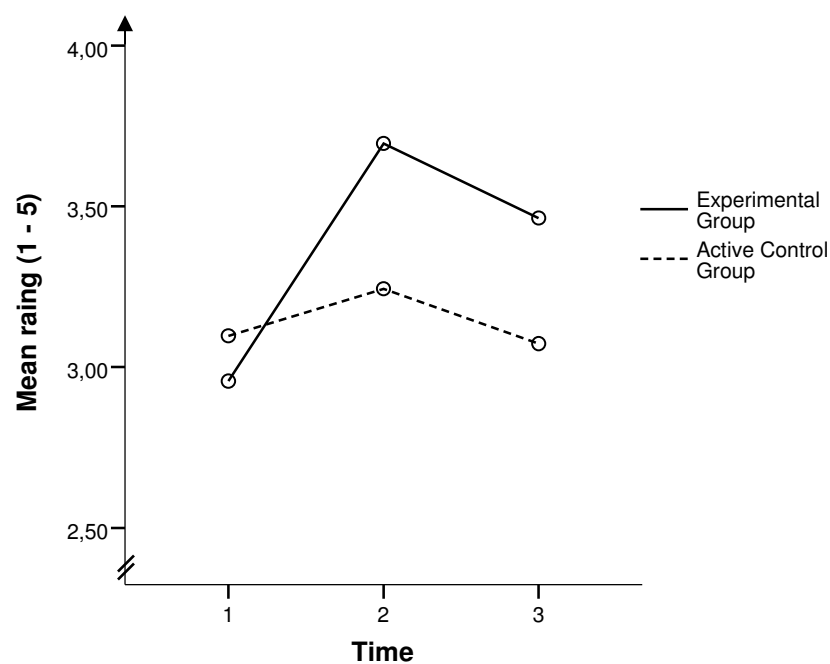


Figure 4. The amount of invested energy into the domain “**occupation-like activities**” increased only for the VTP group from T1 to T2 and remained elevated, that is no significant changes are found between T2 and T3. The active control group did not change significantly.



As another way of checking the overall effectiveness of the VTP, at T3 the VTP group and the active control group were asked to evaluate their volunteering work in the past year (cf. Table 11).

Multivariate analyses for the four evaluations (satisfied with work, work fulfilled expectations, encountered unpleasant experiences during work, feelings of self-determination) revealed a significant group effect ($F_{(4, 103)}(\text{group}) = 2.72, p < .05, \eta^2 = .10$).

Follow-up analyses showed that the VTP group had a stronger feeling of self-determination compared to the active control group ($F_{(1, 106)}(\text{group}) = 5.54, p < .05, \eta^2 = .05$). The other three evaluations did not differ between the two groups (satisfied with work: $F_{(1, 106)}(\text{group}) = .96, \text{n.s.}, \eta^2 = .01$; work fulfilled expectations: $F_{(1, 106)}(\text{group}) = .18, \text{n.s.}, \eta^2 = .00$; encountered unpleasant experiences during work: $F_{(1, 106)}(\text{group}) = .60, \text{n.s.}, \eta^2 = .01$).

In addition, participants had to specify whether or not the projects they did during their volunteer work were initiated on their own (yes or no) and whether they conducted them on their own (yes or no). The VTP group and the active control group did not differ on these two judgments (self-initiative: $\chi^2_{(1, N=105)} = .32, \text{n.s.}, \eta^2 = .06$; conduct work alone: $\chi^2_{(1, N=98)} = .00, \text{n.s.}, \eta^2 = .01$).

Both groups were also asked to specify the number of projects which they conducted during the past year. The VTP group conducted significantly fewer projects than the active control group ($F_{(1, 99)}(\text{group}) = 13.00, p < .01, \eta^2 = .12$).

Furthermore, participants were requested to briefly describe these projects which were assigned to four main categories: (1) administrative work, (2) sports, (3) providing training to others (Bildungsarbeit) and (4) work within the social domain. Analyses revealed a significant difference between the two groups when comparing the type of projects ($\chi^2_{(3, N=106)} = 7.44, p < .10, \eta^2 = .13$). Only 46% of the VTP group reported to have worked within the social domain, as compared to 71% of the active control group. Instead, the VTP group seemed to focus more on providing training to others (30%). In contrast, only 9% of the active control group reported to provide training to others.

Summary of Findings

Overall, the findings regarding the manipulation check of the VTP support the hypotheses. The VTP seems to be effective socially and generally. The amount of invested energy into “occupation-like activities” increased only for the VTP group from T1 and T2 and even remained elevated at T3, one year after the VTP. No changes were found for the active control group on this investment measure.

Also, as hypothesized, both social relation measures increased from T1 to T2 and decreased again from T2 to T3 only for the VTP group. In contrast, the active control group did not report changes on these social relation measures.

The evaluations at T3 concerning the volunteering work in the past year revealed that in contrast to the active control group, the VTP group felt more self-determined during their volunteering work.

Furthermore, the VTP group reported to have worked on significantly fewer projects than the active control group. Significant differences between the two groups also emerged regarding the type of volunteer work. The VTP group was more involved with training projects and less with social projects compared to the active control group.

9.4 Stability in Cognitive Functioning

H3.1: Compared to the active control group, no improvements on *fluid measures of intelligence* are expected for the VTP group at T2 (compared to T1).

H3.2: Compared to the active control group, no improvements on *crystallized measures of intelligence* are expected for the VTP group at T2 (compared to T1).

As mentioned earlier, measures of cognitive functioning were only administered at T1 and T2. A 2 (within-subject factor: time) x 2 (between-subject factor: group) repeated-measures analysis for the dependent variables fluid

intelligence and crystallized intelligence (MANOVA) did not reach significance ($T1-T2$: $F_{(2, 107)} (time \times group) = 1.07$, n.s., $\eta^2 = .02$). Univariate follow-up analyses also did not reveal significant changes for the two measures (fluid intelligence: $T1-T2$: $F_{(1, 108)} (time \times group) = 1.18$, n.s., $\eta^2 = .01$; crystallized intelligence: $T1-T2$: $F_{(1, 108)} (time \times group) = .76$, n.s., $\eta^2 = .01$). Means and standard deviations are given in Table 12. These findings are in line with the hypotheses and support the argumentation that the VTP cannot be compared to a cognitive training program.

Table 12. Means and Standard Deviations for Measures of Cognitive Functioning

		VTP Group		Active Control Group	
		T1	T2	T1	T2
Fluid Intelligence	<i>M</i>	49.50	54.00	46.89	48.34
	(<i>SD</i>)	(12.16)	(13.66)	(10.87)	(10.43)
Crystallized Intelligence	<i>M</i>	32.08	32.31	31.79	31.57
	(<i>SD</i>)	(2.98)	(2.37)	(2.73)	(3.58)

9.5 Improvements in Personality Adjustment

One general objective of the present study was to determine if participation in the VTP would lead to improvements on indicators of personality adjustment. Means and standard deviations for the five indicators of personality adjustment are given in Table 13.

H4.1: Only the VTP group will report increased levels of *positive affect* and *extraversion* at T2 (compared to T1). These increased levels will decrease again from T2 to T3.

H4.2: No changes are expected for the VTP group with regard to *negative affect* and *neuroticism* neither at T2 nor at T3 compared to the active control group.

H4.3: *Life satisfaction* will increase only for the VTP group from T1 to T2 and will decrease again from T2 to T3.

Table 13. *Means and Standard Deviations for Indicators of Personality Adjustment*

		VTP Group			Active Control Group		
		T1	T2	T3	T1	T2	T3
Positive Affect	<i>M</i>	3.61	3.66	3.64	3.64	3.55	3.57
	(<i>SD</i>)	(.52)	(.46)	(.44)	(.43)	(.51)	(.43)
Negative Affect	<i>M</i>	1.92	1.71 _a	1.71 _c	1.90	1.90 _b	1.90 _d
	(<i>SD</i>)	(.89)	(.45)	(.46)	(.52)	(.54)	(.56)
Life Satisfaction	<i>M</i>	24.49	26.61 _a	25.10	24.70	25.00 _b	25.48
	(<i>SD</i>)	(4.71)	(5.8)	(4.45)	(4.44)	(3.81)	(3.62)
Extraversion	<i>M</i>	3.42	3.46	3.41	3.38	3.37	3.42
	(<i>SD</i>)	(.46)	(.48)	(.52)	(.60)	(.51)	(.42)
Neuroticism	<i>M</i>	2.36	2.08 _a	2.07 _c	2.31	2.28 _b	2.28 _d
	(<i>SD</i>)	(.54)	(.57)	(.61)	(.52)	(.58)	(.52)

Notes. Scores that do not share the same subscripts are significantly different: a-b; c-d

Multivariate repeated-measures analyses for the five measures (MANOVA) yielded a significant overall interaction effect (T1-T2-T3: $F_{(10, 418)}$ (time x group) = 1.85, $p < .10$, $\eta^2 = .04$). Follow-up analyses revealed significant interaction effects for three of the five measures (*negative affect*: T1-T2-T3: $F_{(2, 212)}$ (time x group) = 3.47, $p < .05$, $\eta^2 = .03$; *neuroticism*: T1-T2-T3: $F_{(2, 212)}$ (time x group) = 2.72, $p < .10$, $\eta^2 = .03$; *life satisfaction*: T1-T2-T3: $F_{(2, 212)}$ (time x group) = 3.54, $p < .05$, $\eta^2 = .03$). No significant interaction effect was found for *positive affect* (T1-T2-T3: $F_{(2, 212)}$ (time x group) = .53, n.s., $\eta^2 = .01$) and for *extraversion* (T1-T2-T3: $F_{(2, 212)}$ (time x group) = .13, n.s., $\eta^2 = .00$).

For the depended measures *negative affect* and *neuroticism*, within factor contrasts (T1-T2 and T2-T3) demonstrated significant interaction effects for T1-T2 but not for T2-T3 (*negative affect*: T1-T2: $F_{(1, 106)}$ (time x group) = 4.76, p

$< .05$, $\eta^2 = .04$; T2-T3: $F_{(1,106)}(\text{time} \times \text{group}) = .00$, n.s., $\eta^2 = .00$; *neuroticism*: T1-T2: $F_{(1, 106)}(\text{time} \times \text{group}) = 4.00$, $p < .05$, $\eta^2 = .04$; T2-T3: $F_{(1, 106)}(\text{time} \times \text{group}) = .03$, n.s., $\eta^2 = .00$).

Within factor contrasts for *life satisfaction* showed significant interaction effects for both time intervals (T1-T2: $F_{(1, 106)}(\text{time} \times \text{group}) = 3.90$, $p < .10$, $\eta^2 = .04$; T2-T3: $F_{(1, 106)}(\text{time} \times \text{group}) = 6.35$, $p < .05$, $\eta^2 = .06$).

Contrasts for *positive affect* and *extraversion* were not significant, neither for T1-T2 nor for T2-T3 (*positive affect*: T1-T2: $F_{(1, 106)}(\text{time} \times \text{group}) = .37$, n.s., $\eta^2 = .00$; T2-T3: $F_{(1, 106)}(\text{time} \times \text{group}) = .19$, n.s., $\eta^2 = .00$; *extraversion*: T1-T2: $F_{(1, 106)}(\text{time} \times \text{group}) = .07$, n.s., $\eta^2 = .00$; T2-T3: $F_{(1, 106)}(\text{time} \times \text{group}) = .46$, n.s., $\eta^2 = .00$).

More specific analyses for *negative affect* and *neuroticism* demonstrated that the VTP group reported significant decreases on both of these measures from T1 to T2 (Figure 5 and Figure 6). However, from T2 to T3 no significant changes were found implying that the lowered levels at T2 remained decreased at T3 (*negative affect*: T1-T2: $F_{(1, 71)}(\text{time}) = 14.21$, $p < .01$, $\eta^2 = .17$; T2-T3: $F_{(1, 71)}(\text{time}) = .02$, n.s., $\eta^2 = .00$; *neuroticism*: T1-T2: $F_{(1, 71)}(\text{time}) = 15.20$, $p < .01$, $\eta^2 = .18$; T2-T3: $F_{(1, 71)}(\text{time}) = .03$, n.s., $\eta^2 = .00$). Please note that the levels of negative affect and neuroticism of the VTP group at T3 were significantly lower than the baseline assessment (*negative affect*: T1-T3: $F_{(1, 71)}(\text{time}) = 13.11$, $p < .01$, $\eta^2 = .16$; *neuroticism*: T1-T3: $F_{(1, 71)}(\text{time}) = 13.60$, $p < .01$, $\eta^2 = .16$).

No changes were found for the active control group, neither between T1 and T2 nor between T2 and T3 (*negative affect*: T1-T2: $F_{(1, 40)}(\text{time}) = .02$, n.s., $\eta^2 = .00$; T2-T3: $F_{(1, 40)}(\text{time}) = .04$, n.s., $\eta^2 = .00$; *neuroticism*: T1-T2: $F_{(1, 40)}(\text{time}) = .07$, n.s., $\eta^2 = .00$; T2-T3: $F_{(1, 40)}(\text{time}) = .00$, n.s., $\eta^2 = .00$).

Bivariate Pearson correlations demonstrated significant correlations between neuroticism and negative affect (Table 14) as well as between extraversion and positive affect (Table 15).

Table 14. *Bivariate Pearson Correlations for Negative Affect and Neuroticism for each Time Point*

Neuroticism	Negative Affect		
	T1 <i>r</i>	T2 <i>r</i>	T3 <i>r</i>
T1	.48***		
T2		.38***	
T3			.31***

Notes. * $p < .10$; ** $p < .05$; *** $p < .01$

Table 15. *Bivariate Pearson Correlations for Positive Affect and Extraversion for each Time Point*

Extraversion	Positive Affect		
	T1 <i>r</i>	T2 <i>r</i>	T3 <i>r</i>
T1	.36***		
T2		.50***	
T3			.38***

Notes. * $p < .10$; ** $p < .05$; *** $p < .01$

Figure 5. **Negative Affect** decreased only for the VTP group from T1 to T2 and remained decreased one year after the VTP (T2-T3).

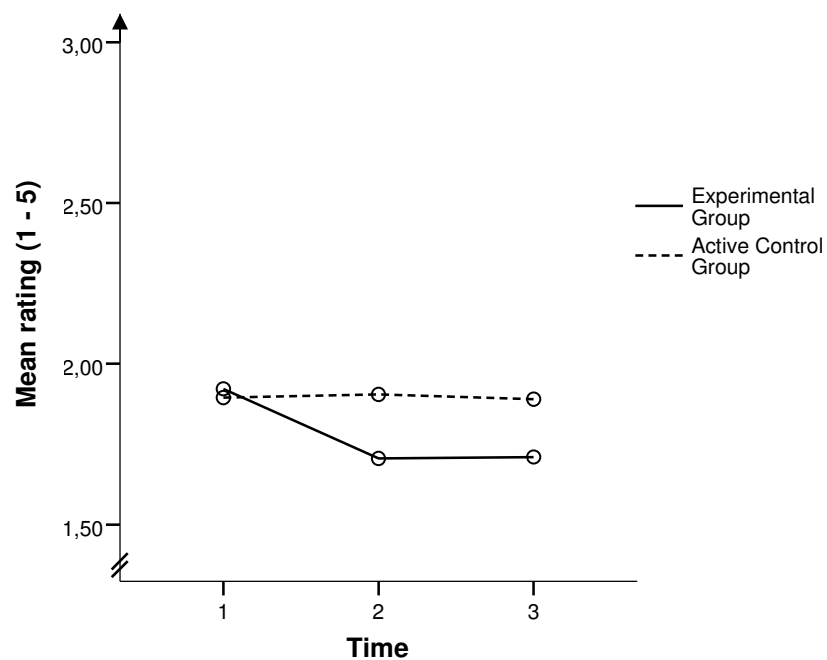
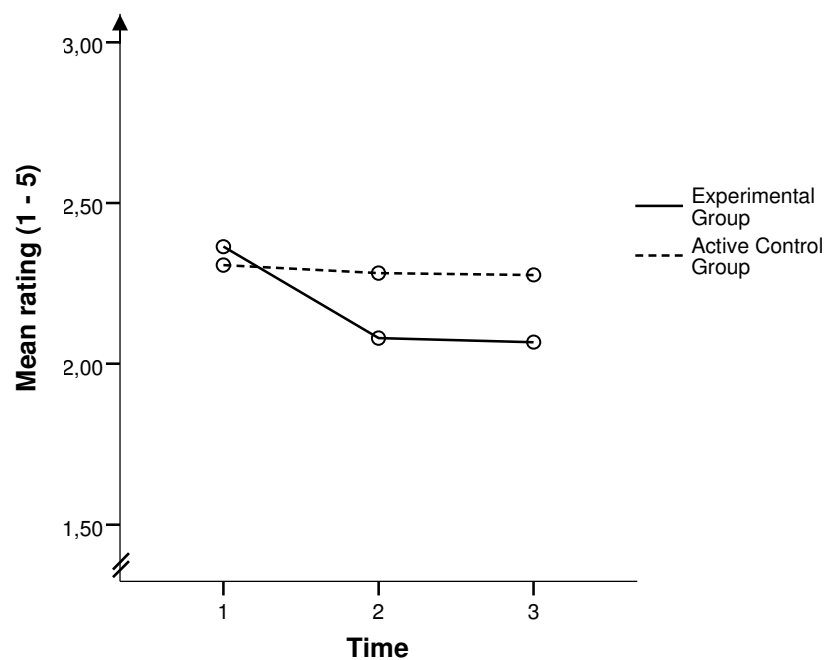
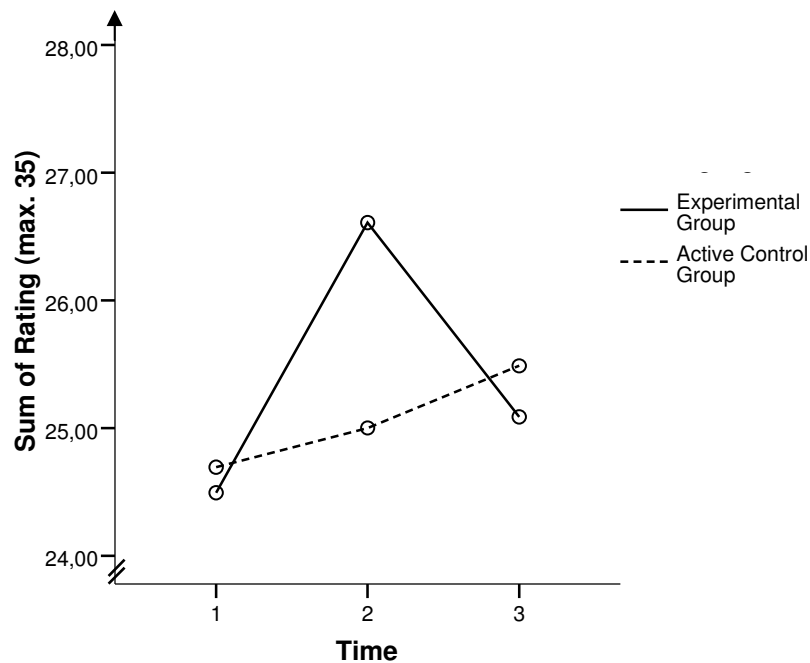


Figure 6. **Neuroticism** decreased only for the VTP group from T1 to T2 and remained decreased one year after the VTP (T2-T3).



With regard to *life satisfaction*, the VTP group reported significant increases from T1 to T2 and decreases from T2 to T3 (T1-T2: $F_{(1, 70)}(\text{time}) = 15.20, p < .01, \eta^2 = .18$; T2-T3: $F_{(1, 68)}(\text{time}) = 9.00, p < .01, \eta^2 = .12$; Figure 7). In contrast, the active control group did not report changes between T1 and T2 nor between T2 and T3 (T1-T2: $F_{(1, 38)}(\text{time}) = .20, \text{n.s.}, \eta^2 = .01$; T2-T3: $F_{(1, 38)}(\text{time}) = .75, \text{n.s.}, \eta^2 = .02$).

Figure 7. Life Satisfaction increased from T1 to T2 only for the VTP group and decreased again from T2 to T3. No significant changes were found for the active control group.



Summary of Findings

Contrary to the hypotheses, participation in the VTP did not increase positive affect or extraversion. Instead, negative affect and neuroticism decreased from T1 to T2 and remained decreased from T2 to T3. In line with the hypotheses, life satisfaction increased from T1 to T2 and decreased again from T2 to T3. No changes were found for the active control group on any of these measures.

9.6 Improvement in Personality Growth

9.6.1 Main Effects for Personality Growth

H5.1: Participation in the VTP will not lead to improvements in “*personal growth*” neither at T2 nor at T3 for the VTP group.

H5.2: No improvements will be found in “*openness to experience*” neither at T2 nor at T3 for the VTP group.

Multivariate repeated-measures analysis for “openness to experience” and “personal growth” (MANOVA) did not reach significance (T1-T2-T3: $F_{(4, 442)}(\text{time} \times \text{group}) = .50$, n.s., $\eta^2 = .01$), nor did the univariate follow-up analyses (“openness”: T1-T2-T3: $F_{(2, 222)}(\text{time} \times \text{group}) = .55$, n.s., $\eta^2 = .01$; “personal growth”: T1-T2-T3: $F_{(2, 222)}(\text{time} \times \text{group}) = .58$, n.s., $\eta^2 = .01$).

Within contrasts depicting changes from T1 to T2 and from T2 to T3 were also non-significant (“openness”: T1-T2: $F_{(1, 111)}(\text{time} \times \text{group}) = .70$, n.s., $\eta^2 = .01$; T2-T3: $F_{(1, 111)}(\text{time} \times \text{group}) = .00$, n.s., $\eta^2 = .00$; “personal growth”: T1-T2: $F_{(1, 111)}(\text{time} \times \text{group}) = 1.04$, n.s., $\eta^2 = .01$; T2-T3: $F_{(1, 111)}(\text{time} \times \text{group}) = .77$, n.s., $\eta^2 = .01$). Means and standard deviations are given in Table 16.

Table 16. Means and Standard Deviations for Indicators of Personality Growth

		VTP Group			Active Control Group		
		T1	T2	T3	T1	T2	T3
Personal Growth	<i>M</i>	4.07	4.25	4.17	3.92	4.00	4.00
	(<i>SD</i>)	(.53)	(.57)	(.59)	(.60)	(.51)	(.61)
Openness To Experience	<i>M</i>	3.55	3.66	3.77	3.54	3.52	3.63
	(<i>SD</i>)	(.59)	(.75)	(.83)	(.56)	(.67)	(.48)

9.6.2 The Moderating Effect of Internal Control Beliefs on Personality Growth

H5.3: Only participants of the VTP with *high internal control beliefs* (above median) will improve in “*personal growth*” from T1 to T2. At T3, these increased levels will remain stable (compared to T2).

H5.4: Only participants of the VTP with *high internal control beliefs* (above median) will improve in “*openness to experience*” from T2 to T3. At T3, these increased levels will remain stable (compared to T2).

Table 17. Means (SD) for “Openness to Experience” and “Personal Growth” and the Moderator Internal Control Beliefs

		VTP Group			Active Control Group		
		T1	T2	T3	T1	T2	T3
<i>Openness</i>	<i>M</i>	3.61	3.52	3.42	3.49	3.64	3.73
Low Control	(<i>SD</i>)	(.62)	(.73)	(.74)	(.70)	(.66)	(.49)
<i>Openness</i>	<i>M</i>	3.49	3.85 _a	4.20 _c	3.59	3.45 _b	3.60 _d
High Control	(<i>SD</i>)	(.55)	(.75)	(.73)	(.46)	(.70)	(.47)
<i>Personal Growth</i>	<i>M</i>	4.12	4.15	4.10	3.80	4.00	4.01
Low Control	(<i>SD</i>)	(.58)	(.60)	(.62)	(.72)	(.60)	(.60)
<i>Personal Growth</i>	<i>M</i>	4.01	4.37 _a	4.27 _c	4.01	4.00 _b	3.99 _d
High Control	(<i>SD</i>)	(.46)	(.55)	(.55)	(.50)	(.45)	(.63)

Notes. Scores that do not share the same subscripts are significantly different: a-b; c-d

To explore the effect of internal control beliefs on indicators of personality growth, internal control beliefs (median split: high vs. low internal control beliefs) were entered as the moderator and “openness to experience” and “personal growth” as the dependent factors into a multivariate repeated-measures analysis (MANOVA). Means and standard deviations are presented in Table 17.

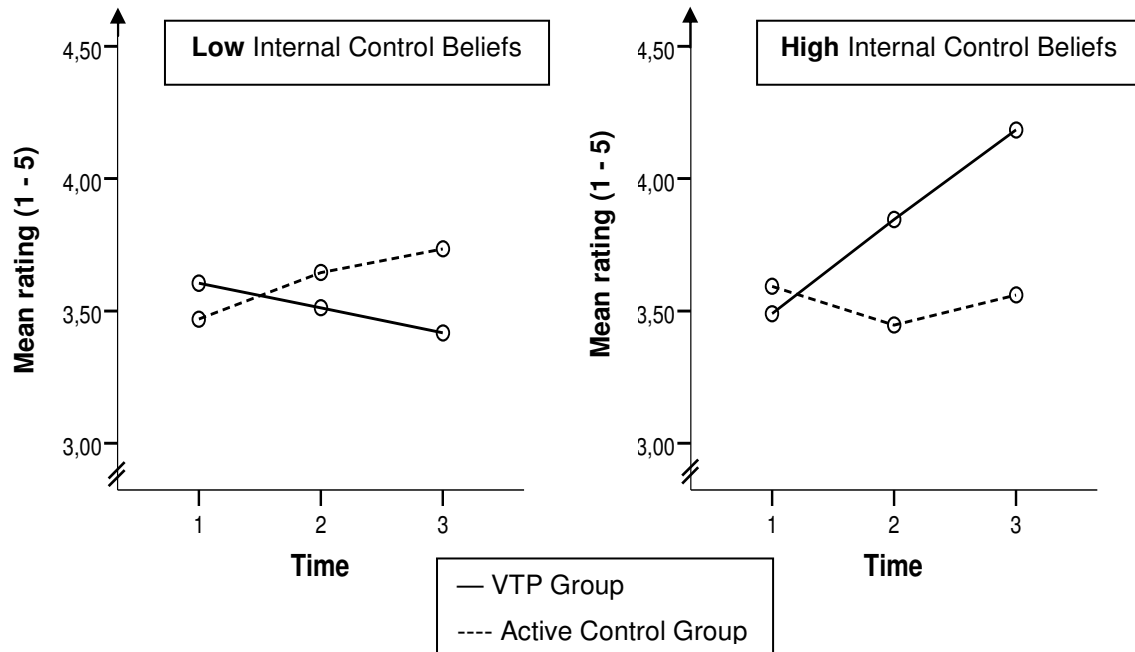
The results indicated a significant overall time x group x control beliefs interaction (T1-T2-T3: $F_{(4, 434)} \text{ (time x group x control beliefs)} = 5.70, p < .01, \eta^2 = .05$). Follow-up analyses revealed significant interaction effects for both measures ("*openness*": T1-T2-T3: $F_{(2, 218)} \text{ (time x group x control beliefs)} = 9.06, p < .01, \eta^2 = .08$; "*personal growth*": T1-T2-T3: $F_{(2, 218)} \text{ (time x group x control beliefs)} = 4.32, p < .05, \eta^2 = .04$).

While within factor contrasts for T1-T2 showed significant changes for both measures, the changes from T2 to T3 were only significant for "*openness*" but not for "*personal growth*" ("*openness*": T1-T2: $F_{(1, 109)} \text{ (time x group x control beliefs)} = 5.89, p < .05, \eta^2 = .05$; T2-T3: $F_{(1, 109)} \text{ (time x group x control beliefs)} = 3.00, p < .10, \eta^2 = .03$; "*personal growth*": T1-T2: $F_{(1, 109)} \text{ (time x group x control beliefs)} = 7.16, p < .01, \eta^2 = .06$; T2-T3: $F_{(1, 109)} \text{ (time x group x control beliefs)} = .03, \text{ n.s.}, \eta^2 = .00$).

To test whether the VTP group with high internal control beliefs changed as hypothesized, more specific analyses were conducted. Indeed, only the VTP group with high internal control beliefs, as compared to those with low control beliefs, reported increases on "*openness*" from T1 to T2 and even from T2 to T3 (VTP_{high control beliefs}: T1-T2: $F_{(1, 32)} \text{ (time)} = 6.38, p < .05, \eta^2 = .17$; T2-T3: $F_{(1, 32)} \text{ (time)} = 12.05, p < .01, \eta^2 = .27$). No changes were found for the VTP group with low control beliefs (VTP_{low control beliefs}: T1-T2: $F_{(1, 38)} \text{ (time)} = .55, \text{ n.s.}, \eta^2 = .01$; T2-T3: $F_{(1, 38)} \text{ (time)} = .65, \text{ n.s.}, \eta^2 = .02$; Figure 8).

For the active control group, members with high control beliefs as well as members with low control beliefs did not report changes between T1-T2 nor between T2-T3 (ACG_{high control beliefs}: T1-T2: $F_{(1, 24)} \text{ (time)} = 1.11, \text{ n.s.}, \eta^2 = .04$; T2-T3: $F_{(1, 24)} \text{ (time)} = 1.60, \text{ n.s.}, \eta^2 = .06$; ACG_{low control beliefs}: T1-T2: $F_{(1, 15)} \text{ (time)} = .55, \text{ n.s.}, \eta^2 = .04$; T2-T3: $F_{(1, 15)} \text{ (time)} = .51, \text{ n.s.}, \eta^2 = .03$).

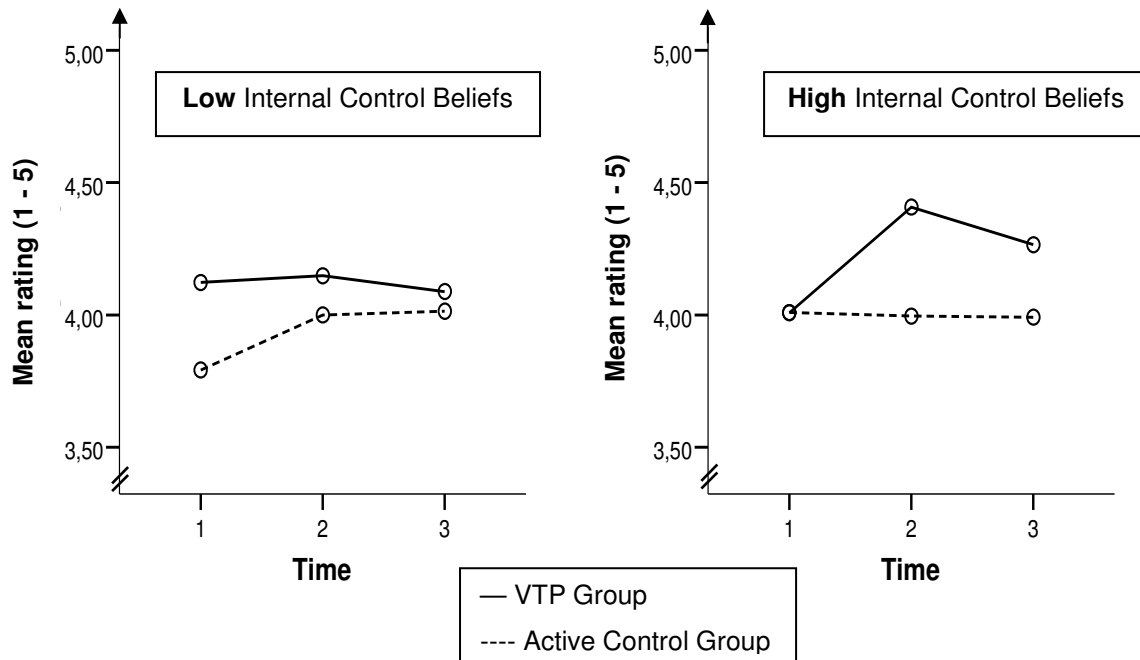
Figure 8. Only participants of the VTP group with *high* internal control beliefs reported increases in “**openness to experience**” from T1 to T2 and also from T2 to T3. Participants of the VTP group with *low* internal control beliefs and the active control group did not change significantly.



Apart from for one exception, similar results were obtained for “*personal growth*”. Just as for “openness”, only the VTP group with high internal control beliefs reported increases from T1 to T2. However, while “openness” increased further from T2 to T3 “*personal growth*” did not change from T2 to T3 (Figure 9; VTP_{high control beliefs}: T1-T2: $F_{(1, 32)}(\text{time}) = 9.93, p < .01, \eta^2 = .24$; T2-T3: $F_{(1, 32)}(\text{time}) = .96, \text{n.s.}, \eta^2 = .03$). It is noteworthy to point out that levels at T3 are significantly higher than baseline measures (T1-T3: $F_{(1, 32)}(\text{time}) = 5.31, p < .05, \eta^2 = .14$).

The VTP group with low control beliefs did not report changes from T1 to T2 nor from T2 to T3 for “*personal growth*” (VTP_{low control beliefs}: T1-T2: $F_{(1, 38)}(\text{time}) = .12, \text{n.s.}, \eta^2 = .00$; T2-T3: $F_{(1, 38)}(\text{time}) = .50, \text{n.s.}, \eta^2 = .01$). No changes were found for the active control group, whether with or without high control beliefs (ACG_{high control beliefs}: T1-T2: $F_{(1, 24)}(\text{time}) = .65, \text{n.s.}, \eta^2 = .03$; T2-T3: $F_{(1, 24)}(\text{time}) = .96, \text{n.s.}, \eta^2 = .04$; ACG_{low control beliefs}: T1-T2: $F_{(1, 15)}(\text{time}) = 2.36, \text{n.s.}, \eta^2 = .14$; T2-T3: $F_{(1, 15)}(\text{time}) = .01, \text{n.s.}, \eta^2 = .00$).

Figure 9. “Personal Growth” only increased for participants of the VTP group with *high* internal control beliefs from T1 to T2. These levels remained increased from T2 to T3. Participants of the VTP group with *low* internal control beliefs and the active control group did not change significantly.



Summary of Findings

The findings support the hypotheses that personality growth is a rare event in older adulthood. As hypothesized, the context of the VTP was not sufficient to promote changes in “personal growth” and “openness to experience”. Similarly, no changes were found for the active control group.

Staudinger and Kunzmann (2005) proposed that for personality growth to occur, a special combination of personal and contextual factors might be necessary. Indeed, the findings support this proposition. Only participants of the VTP with high internal control beliefs reported increases in “personal growth” and “openness to experience” from T1 to T2. As hypothesized, this increase remained elevated from T2 to T3 for “personal growth”. However, for “openness to experience” participants with high internal control beliefs reported even further increases from T2 to T3.

In contrast, for participants of the VTP group with low internal control beliefs no changes were found. Members of the active control group, whether with high or with low internal control beliefs, also did not report changes.

9.7 Control Analyses

The most impressive yet unexpected finding, namely the further increase in “openness to experience” between T2 and T3 only for participants of the VTP with high internal control beliefs, raises the question of why “openness to experience” increased even further and whether other factors have facilitated this increase.

The results of the evaluation of the volunteering work revealed that participants of the VTP felt more self-determined while choosing the course of their volunteering work as compared to the active control group. In addition, the VTP group differed significantly from the active control group with regard to the type of their projects and the number of their projects.

One could argue that these factors interfere with the impact of the VTP and thus contribute to the improvements in personality adjustment and personality growth. Therefore, these three variables were entered as covariates into the prior analyses in order to control for their effect. As the following analyses reveal, controlling for these factors did not alter prior results, neither for “openness to experience” and “personal growth” nor for measures of personality adjustment (neuroticism, negative affect, life satisfaction).

9.7.1 Control Analyses for “Openness to Experience” and Moderator Internal Control Beliefs

All three variables mentioned above were entered simultaneously as covariates into the repeated-measures analysis of variance with “openness to experience” as the dependent variable and internal control beliefs as the moderator. Please note that similar results were obtained for all following analyses when entering the covariates independently. A significant time x group x control beliefs interaction emerged (T1-T2-T3: $F_{(2, 184)} \text{ (time x group x control beliefs)} = 7.12, p < .01, \eta^2 = .07$). The within factor contrasts also revealed significant interaction effects for both time intervals (T1-T2: $F_{(1, 92)} \text{ (time x group x control beliefs)} = 4.27, p < .05, \eta^2 = .04$; T2-T3: $F_{(1, 92)} \text{ (time x group x control beliefs)} = 2.85, p < .10, \eta^2 = .03$).

Follow-up analyses for each group and each time interval were conducted with values controlled for the three covariates³. These analyses did not change the prior results. Only the VTP group with high control beliefs reported improvements in “*openness to experience*” from T1 to T2 (VTP_{high control beliefs}: T1-T2: $F_{(1, 29)}(\text{time}) = 3.30, p < .10, \eta^2 = .10$) and from T2 to T3 (VTP_{high control beliefs}: T2-T3: $F_{(1, 29)}(\text{time}) = 3.32, p < .10, \eta^2 = .10$).

In contrast, no changes were found for the VTP group with low internal control beliefs, neither for changes from T1 to T2 nor for changes from T2 to T3 (VTP_{low control beliefs}: T1-T2: $F_{(1, 36)}(\text{time}) = .83, \text{n.s.}, \eta^2 = .02$; VTP_{low control beliefs}: T2-T3: $F_{(1, 36)}(\text{time}) = 1.42, \text{n.s.}, \eta^2 = .04$).

Similarly, no changes were found for the active control group. Members of the active control group with high control beliefs as well as members with low control beliefs did not report changes between T1-T2 nor between T2-T3 (ACG_{high control beliefs}: T1-T2: $F_{(1, 20)}(\text{time}) = 1.53, \text{n.s.}, \eta^2 = .07$; ACG_{high control beliefs}: T2-T3: $F_{(1, 20)}(\text{time}) = .02, \text{n.s.}, \eta^2 = .00$; ACG_{low control beliefs}: T1-T2: $F_{(1, 10)}(\text{time}) = .05, \text{n.s.}, \eta^2 = .01$; ACG_{low control beliefs}: T2-T3: $F_{(1, 10)}(\text{time}) = .35, \text{n.s.}, \eta^2 = .03$).

9.7.2 Control Analyses for “Personal Growth” and Moderator Internal Control Beliefs

As described above, all three variables were entered simultaneously as covariates into the repeated-measures analysis of variance with “*personal growth*” as the dependent variable. Please note that similar results were obtained for all following analyses when entering the covariates independently. In accordance with the prior analyses without covariates, the time x group x control beliefs interaction did not reach significance (T1-T2-T3: $F_{(2, 184)}(\text{time} \times \text{group} \times \text{control beliefs}) = 2.21, \text{n.s.}, \eta^2 = .02$) and only the within factor contrast for the first time interval revealed a significant interaction effect (T1-T2: $F_{(1, 92)}(\text{time} \times \text{group} \times$

³ In order to partialize out the effect of the three covariates, regression analyses were calculated first for each dependent variable for each of the three time points with the three covariates entered simultaneously. These partialled values were saved as standardized residuals. Follow-up repeated measures ANOVAs were then conducted for each group with these residuals.

control beliefs) = 3.18, $p < .10$, $\eta^2 = .03$; T2-T3: $F_{(1, 92)}$ (time x group x control beliefs) = .11, ns, $\eta^2 = .00$).

As described above, follow-up analyses were conducted with partialled values and revealed similar results as the analyses without covariates. Only the VTP group with high internal control beliefs showed significant increase on “personal growth” from T1 to T2 (VTP_{high control beliefs}: T1-T2: $F_{(1, 29)}$ (time) = 4.05, $p < .10$, $\eta^2 = .12$). From T2 to T3 no further changes were found implying that these increased values remained stable from T2 to T3 (VTP_{high control beliefs}: T2-T3: $F_{(1, 29)}$ (time) = .91, n.s., $\eta^2 = .03$).

In contrast, no changes were found for participants of the VTP with low internal control beliefs, neither from T1 to T2 nor from T2 to T3 (VTP_{low control beliefs}: T1-T2: $F_{(1, 36)}$ (time) = .75, n.s., $\eta^2 = .02$; VTP_{low control beliefs}: T2-T3: $F_{(1, 36)}$ (time) = .10, n.s., $\eta^2 = .00$).

Also, no changes were found for members of the active control group with high internal control beliefs as well as for members with low internal control beliefs (ACG_{high control beliefs}: T1-T2: $F_{(1, 20)}$ (time) = .17, n.s., $\eta^2 = .01$; ACG_{high control beliefs}: T2-T3: $F_{(1, 20)}$ (time) = .05, n.s., $\eta^2 = .00$; ACG_{low control beliefs}: T1-T2: $F_{(1, 10)}$ (time) = .00, n.s., $\eta^2 = .00$; ACG_{low control beliefs}: T2-T3: $F_{(1, 10)}$ (time) = .42, n.s., $\eta^2 = .04$).

9.7.3 Control Analyses for Neuroticism, Negative Affect and Life Satisfaction

To make sure that the obtained results in indicators of personality adjustment were not influenced by the significant differences between the VTP group and the active control group regarding the number of projects, the type of projects as well as feelings of self-determination, analyses were repeated with these three factors as covariates. Please note that similar results were obtained for all following analyses when entering the covariates independently.

For *neuroticism*, the time x group interactions for the three time points reached significance (T1-T2-T3: $F_{(2, 188)}$ (time x group) = 3.17, $p < .05$, $\eta^2 = .03$). Within factors contrasts revealed a significant decrease from T1 to T2 which did

not change from T2 to T3 implying that values remained decreased (T1-T2: $F_{(1, 94)}(\text{time} \times \text{group}) = 3.02, p < .10, \eta^2 = .03$; T2-T3: $F_{(1, 94)}(\text{time} \times \text{group}) = .71, \text{n.s.}, \eta^2 = .01$)

Follow-up analyses with the partialled values showed that only participants of the VTP decreased significantly from T1 to T2 and that these values remained decreased from T2 to T3 (VTP: T1-T2: $F_{(1, 66)}(\text{time}) = 3.30; p < .10; \eta^2 = .10$; T2-T3: $F_{(1, 66)}(\text{time}) = .78, \text{n.s.}, \eta^2 = .01$). In contrast, no changes were found for the active control group, neither from T1 to T2 nor from T2 to T3 (ACG: T1-T2: $F_{(1, 31)}(\text{time}) = .09, \text{n.s.}, \eta^2 = .00$; T2-T3: $F_{(1, 31)}(\text{time}) = .02, \text{n.s.}, \eta^2 = .00$).

For *negative affect*, the time \times group interactions for the three time points also reached significance (T1-T2-T3: $F_{(2, 188)}(\text{time} \times \text{group}) = 6.30, p < .05, \eta^2 = .06$). Within factor contrasts revealed that from T1 to T2 participants of the VTP decreased significantly. From T2 to T3 these levels remained decreased (T1-T2: $F_{(1, 94)}(\text{time} \times \text{group}) = 9.90, p < .05, \eta^2 = .10$; T2-T3: $F_{(1, 94)}(\text{time} \times \text{group}) = .31, \text{n.s.}, \eta^2 = .00$)

Follow-up analyses with the partialled values showed that only participants of the VTP decreased significantly from T1 to T2 and did not change from T2 to T3 (VTP: T1-T2: $F_{(1, 66)}(\text{time}) = 8.22; p < .05; \eta^2 = .21$; T2-T3: $F_{(1, 66)}(\text{time}) = .03, \text{n.s.}, \eta^2 = .00$). In contrast, no changes were found for the active control group, neither from T1 to T2 nor from T2 to T3 (ACG: T1-T2: $F_{(1, 31)}(\text{time}) = 2.14, \text{n.s.}, \eta^2 = .03$; T2-T3: $F_{(1, 31)}(\text{time}) = .33, \text{n.s.}, \eta^2 = .01$).

And finally, for *life satisfaction* the time \times group interactions for the three time points also reached significance (T1-T2-T3: $F_{(2, 180)}(\text{time} \times \text{group}) = 2.73, p < .10, \eta^2 = .03$). Within factor contrasts showed that from T1 to T2 participants of the VTP decreased significantly. However, from T2 to T3 these levels increased again (T1-T2: $F_{(1, 90)}(\text{time} \times \text{group}) = 4.00, p < .05, \eta^2 = .04$; T2-T3: $F_{(1, 90)}(\text{time} \times \text{group}) = 3.69, \text{n.s.}, \eta^2 = .04$).

Follow-up analyses with the partialled values showed that only participants of the VTP decreased significantly from T1 to T2 and increased from T2 to T3 (VTP: T1-T2: $F_{(1, 65)}(\text{time}) = 6.10; p < .05; \eta^2 = .17$; T2-T3: $F_{(1, 63)}(\text{time}) = 3.51, p < .10; \eta^2 = .11$). In contrast, no changes were found for the active control

group, neither from T1 to T2 nor from T2 to T3 (ACG: T1-T2: $F_{(1, 30)}(\text{time}) = .65$, n.s., $\eta^2 = .01$; T2-T3: $F_{(1, 30)}(\text{time}) = .94$, n.s., $\eta^2 = .02$).

9.7.4 Summary of Findings Regarding Control Analyses

The evaluation of the volunteering work at T3 revealed that participants of the VTP and the active control group differed significantly with regard to the number of their projects, the type of their projects and the feeling of self-determination while choosing the course of their volunteering work. Therefore, analyses were repeated with these three factors as covariates. As the results showed, controlling for these factors did not alter prior results, neither for the moderating effect of internal control beliefs on “openness to experience” and on “personal growth” nor for measures of personality adjustment (neuroticism, negative affect, life satisfaction). These findings imply that the improvements obtained only for participants of the VTP on indicators of personality adjustment and growth cannot be attributed to these factors.

10 Discussion

The central objective of the present study was to investigate whether participation in a volunteer training program (VTP) can promote personality development in older age. Theoretically, the present study was embedded in the conceptual agenda of lifespan developmental psychology and its emphasis on the potential of individual development into old age (P. B. Baltes et al., 2006; Staudinger, 2005).

Specifically, the approach of the present study was guided by two central propositions of lifespan psychology, the concept of lifespan contextualism as well as the concept of plasticity, both of which highlight the potential for personality development, even in older age. In addition, the proposition to distinguish between two forms of positive personality development, personality adjustment and personality growth (Staudinger & Kunzmann, 2005), closes the theoretical framework of the present study. Hence, the present study was structured around these two forms of positive personality development.

The general discussion is divided into three parts. The first part addresses the central findings of the study and puts them into the larger context of extant research findings. This part is organized around the five sets of hypotheses, which are summarized in Table 18. Limitations of the present study are considered in part two. The chapter ends with a general conclusion (part three).

10.1 Main Findings of the Present Study

Table 18 gives an overview of the five sets of hypotheses, according to which the present section will be structured. To begin with, the important “precondition” regarding baseline differences between the three groups is discussed. After that, the effect of the intervention in terms of the manipulation check will be evaluated. Findings regarding cognitive functioning are discussed thereafter. Only then will the focus shift to the main sets of hypotheses focusing on the central objective of the present study: the two positive forms of personality development - personality adjustment and personality growth.

Table 18. *Overview of Specific Research Hypotheses and Main Findings*

Hypotheses	Predictions for T1-T2 and T2-T3 supported by results?	
	T1-T2	T2-T3
<i>Hypotheses Concerning Baseline Differences between the Three Groups</i>		
H1.1: Both groups of active volunteers, that is the <i>VTP group</i> and the <i>active control group</i> , do NOT differ at baseline on all outcome measures (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).	Yes	-
H1.2: The <i>VTP group</i> differs significantly at baseline on all outcome measures compared to the <i>inactive control group</i> (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).	Yes	-
H1.3: The <i>active control group</i> differs significantly at baseline on all outcome measures from the <i>inactive control group</i> (e.g., measures of personality adjustment and growth, social relation measures, invested energy into “occupation-like activity”, cognitive functioning, demographics).	Yes	-
<i>Hypotheses Guiding the Manipulation Check of the Intervention</i>		
H2.1: Compared to the active control group, only participants of the VTP group invest more energy into “ <i>friendships</i> ” at T2 (compared to T1). However, this investment decreases again from T2 to T3.	Yes	Yes
H2.2: Only participants of the VTP report to have more “ <i>positive relations with others</i> ” at T2 (compared to T1). These higher ratings of positive relations decline again from T2 to T3.	Yes	Yes
H2.3: Only participants of the VTP invest more energy into the domain “ <i>occupational-like activities</i> ” at T2 (compared to T1). This investment remains elevated at T3 (compared to T2).	Yes	Yes
H2.4: The evaluation of the <i>volunteering activities</i> at T3 should be better for the VTP group than for the active control group.	<i>partially</i>	
<i>Hypotheses Concerning Cognitive Functioning</i>		
H3.1: Compared to the active control group, no improvements on <i>fluid measures of intelligence</i> are expected for the VTP group at T2 (compared to T1).	Yes	Yes

H3.2: Compared to the active control group, no improvements on *crystallized measures of intelligence* are expected for the VTP group at T2 (compared to T1). **Yes** **Yes**

Hypotheses Concerning Personality Adjustment

H4.1: Only the VTP group will report increased levels of *positive affect* and *extraversion* at T2 (compared to T1). These increased levels will decrease again from T2 to T3. **No** **No**

H4.2: No changes are expected for the VTP group with regard to *negative affect* and *neuroticism* neither at T2 nor at T3 compared to the active control group. **No** **No**

H4.3: *Life satisfaction* will increase only for the VTP group from T1 to T2 and will decrease again from T2 to T3. **Yes** **Yes**

Hypotheses Concerning Personality Growth

H5.1: Participation in the VTP will not lead to improvements in "*personal growth*" neither at T2 nor at T3 for the VTP group. **Yes** **Yes**

H5.2: No improvements will be found in "*openness to experience*" neither at T2 nor at T3 for the VTP group. **Yes** **Yes**

Moderation Hypotheses

H5.3: Only participants of the VTP with *high internal control beliefs* (above median) will improve in "*personal growth*" from T1 to T2. At T3, these increased levels will remain stable (compared to T2). **Yes** **Yes**

H5.4: Only participants of the VTP with *high internal control beliefs* (above median) will improve in "*openness to experience*" from T2 to T3. At T3, these increased levels will remain stable (compared to T2). **Yes** **No**

10.1.1 Is the Main Control Group Active?

Perhaps one of the most important conclusions in the literature is the finding that volunteers differ significantly on a number of variables (e.g., socio-demographic variables as well as psychological variables) compared to non-volunteers, and even compared to individuals who are otherwise very active (e.g., Adelman, 1994; Hunter & Linn, 1981; Shmotkin et al., 2003). Since the present study wanted to test the specific effect of a volunteer training program and not the effect of volunteering as such, it was very important to choose a volunteering control group. Only then can the findings be attributed to the impact of the VTP and not to other confounding variables.

Therefore, the present study assessed two control groups: one active group of volunteers and one inactive group of older adults (non-volunteers). To rule out confounding factors, the inactive group was matched with regard to age, education and gender to the active control group. By comparing the active and inactive control group at baseline it was demonstrated that indeed volunteers are a positively selected group.

Three hypotheses were put forward focusing on baseline differences between the three groups. The results confirmed all three hypotheses. It was shown that both active groups, the VTP group (experimental group) and the active control group, did not differ on the psychological measures assessed at baseline. In addition, the two active groups did not differ on important socio-demographic variables such as age, education and gender.

In contrast, the two control groups, the active and the inactive control group, differed significantly on these baseline measures. As expected, these significant differences on baseline measures were also found when comparing the VTP group and the inactive control group. These findings are in line with the literature highlighting the differences between volunteers and non-volunteers.

Thus, these basic group comparisons fulfilled their purpose. They showed that the active control group really was an active and therefore comparable control group. Thereby the present study offered the unique opportunity to investigate the effect of participation in a volunteer training program by comparing two active groups of older volunteers.

10.1.2 Manipulation Check of the Intervention - Did the VTP have an Effect?

Unfortunately, measures focusing on mechanisms, dynamics or processes of personality change were not administered. However, three other measures were available, two of which focused on social relations while the third measured the amount of invested energy into the domain “occupation-like activities”. Therefore, these three measures were used to capture the general and the social effectiveness of the VTP in the sense of a manipulation check.

Social Effectiveness

It was assumed that due to the social and supportive nature of the VTP, participation in the VTP would lead to an increase on both social measures. These increases were expected to level off again once the VTP was over. The results confirmed the hypotheses. Compared to the active control group, only participants of the VTP reported an increase in the amount of energy invested into “friendships” as well as an increase in “positive relations with others” from T1 to T2. As hypothesized, both measures decreased again from T2 to T3.

Apparently, especially during the VTP participants have the opportunity to meet other people with similar interests and goals. Considering the recurring contact with these people and the wish or need for colleagues and solidarity, it is not surprising that participants invest more energy into “friendships” during the VTP (T1-T2). This investment seems to be fruitful resulting in an increase in “positive relations with others” (T1-T2). A similar effect was found in a study investigating the impact of a volunteer support program (Sork & Rorkin, 2003). Only participants of the Foster Grandparent Program reported to have formed more new relationships during the program, as compared to two control groups.

A possible explanation for the decrease in the amount of energy invested into “friendships” from T2 to T3 refers to the development of friendships and the fact that meeting new people and making new friends is usually connected with more effort and energy than maintaining good friends. Assuming that one year after the VTP only the good friendships remained, an increased investment of

energy is perhaps not essential anymore. Another explanation is more negative and interprets the decrease in the amount of energy invested into “friendships” as a certain disappointment in the sense that once the VTP is over, so called “friends” also disappear, making the investment of energy not necessary anymore.

The decline in “positive relations with others” from T2 to T3 could be interpreted similarly by pointing to a decrease of contacts or friends after the VTP. One reason could be that there are no more regular meetings which have to be attended. A more negative explanation could be that those relations which were rated as positive directly after the VTP turned out to be not that positive in the long run.

Overall, the results support the assumption that the VTP was socially effective. It seems as if participation in the VTP encourages participants to meet new people and even to make new friends. Perhaps the reported decreases one year after the VTP could be avoided if there was some sort of continuing program and therefore the opportunity to meet on a regular basis.

General Effectiveness

With regard to the general effectiveness of the VTP, participants reported an increase in the amount of energy invested into the domain “occupation-like activities” from T1 to T2. One year after the VTP (T2-T3) these increased levels remained elevated. In the context of the present study, the assumption is that participation in the VTP, the development and pursuit of a personal project as well as the volunteering work are regarded as an activity which is comparable to an occupation. Considering that participants are taught skills and competencies and are encouraged and supported to develop and implement their personal project, the increased investment into this domain does seem understandable.

Similarly, the elevated levels one year after the VTP (T2-T3) can result from the fact that participants continue to work with their self-initiated project. In this respect, the skills and competencies learned during the VTP help to solve problems and to successfully master the demands arising within volunteering work and the pursuit of the project. Thus, the findings imply that the VTP was

generally effective and thereby support the hypotheses of the manipulation check.

Evaluation of Volunteering Activities

In addition to the longitudinal measures, measures concerning the evaluation of the volunteering work in the past year were also available. At T3 participants were asked to rate how satisfied they were with their volunteering work, how many negative experiences they had encountered, whether they had the feeling that their work was self-determined and whether their work fulfilled their expectations. It was assumed that if the VTP would be effective, these evaluations would be better for participants of the VTP than for the active control group.

Results revealed that the only significant difference between the two groups emerged for the feeling of self-determination, with the VTP group feeling more self-determined than the active control group. It is surprising that the VTP group did not indicate to feel more satisfied with their work or that their work fulfilled their expectations. As a possible explanation for this, one could draw on the finding that at T3 life satisfaction also did not differ anymore between the two groups. As will be described in more detail in Section 10.1.4.2, it is argued that the decrease in life satisfaction for the VTP group from T2 to T3 ensues from the cognitive evaluation at T3, which compares aspirations and expectations with actual achievements. Accordingly, the decrease in life satisfaction would imply that expectations were not met by the actual achievements. Consequently, this might also explain why participants felt that their work did not fulfill their expectations thereby also influencing the satisfaction with their work.

Considering the increase in self-determination only for participants of the VTP and in particular the importance of self-determination with regard to personality adjustment, as will be evaluated in a subsequent section, these results do show that the VTP had an effect on participants.

Summary

Overall, the findings suggest that the manipulation check of the VTP was successful. The increase in social relations as well as the enduring increase in the amount of energy invested into “occupation-like activities” can be interpreted as evidence that the VTP was effective generally as well as socially. In addition, the VTP seemed to foster a feeling of self-determination. Therefore, changes obtained in personality adjustment and/or growth can most likely be attributed to the VTP.

10.1.3 Does the VTP Promote Cognitive Functioning?

As hypothesized, participation in the VTP did not promote cognitive functioning. These findings are in accord with previous studies showing that only explicit cognitive training could improve cognitive functioning (e.g., P. B. Baltes & Willis, 1982; Lindenberger & Kray, 2005). Considering that the primary aim of the VTP was to promote skills and competencies to develop a personal project and to work successfully as a volunteer, skills needed to improve on measures of cognitive functioning (e.g., perceptual speed and vocabulary knowledge) were not explicitly trained. Thus, these findings support the contention that the VTP cannot be compared to a cognitive training study.

Since personality development and cognitive functioning are related (e.g., Ackermann, 1996; Ackermann & Heggestad, 1997; Staudinger & Pasupahti, 2000), the finding that participation in the VTP did not lead to improvements on measures of cognitive functioning is important. Especially since there is evidence that “openness to experience” is positively related to measures of intelligence and other cognitive abilities (e.g., Goff & Ackermann, 1992; McCrae, 1987; McCrae & Costa, 1997). Therefore, these results imply that potential changes in personality adjustment and/or growth cannot be attributed to changes in cognition.

10.1.4 Effects of the VTP for Personality Adjustment

As predicted, participation in the VTP led to an overall increase in well-being. In concordance with the hypotheses, life satisfaction increased from T1 to T2 and decreased from T2 to T3. In contrast to the assumptions, no changes were found for positive affect or extraversion. Instead, negative affect and neuroticism decreased significantly from T1 to T2 and even remained low from T2 to T3. Please note that similar results were obtained when controlling for the differences obtained between the VTP group and the active control group in the number of projects carried out during the study, the type of the projects and the feeling of self-determination during the volunteering work.

The discussion of these findings is structured into three parts. Part one is dedicated to the reduction in negative affect and neuroticism. Part two focuses on the changes obtained in life satisfaction. The overall importance of goals for well-being will be described in part three.

10.1.4.1 Neuroticism and Negative Affect

Broadening the Cross-Domain Effect to Other Factors

The decreases in negative affect as well as in neuroticism were not expected. The finding that the experience of a positive event such as the VTP reduced negative affect contradicts the assumption that positive events usually only improve positive affect. This assumption has been termed the same-domain effect and has been postulated within the literature on life events. Hence, the findings of the present study can be interpreted as evidence for a cross-domain effect. However, research suggests that cross-domain effects are particularly rare (e.g., Suh et al., 1996; Zautra & Reich, 1983).

Most of the evidence for cross-domain effects is found for the experience of negative events and the subsequent reduction in positive affect. Several investigators have found that negative life experiences often lead to depressive episodes thereby reducing positive affect (e.g., Brown & Harris, 1978; Paykel, Prusoff, & Meyers, 1975).

Evidence that the experience of a positive event can influence negative affect also exists. However, a meta-analytic study by Zautra & Reich (1983) revealed that only four of a total of 63 comparisons between positive events and measures of distress showed a significant negative correlation, while the majority of the comparisons revealed no correlation. Three of these four studies focused on children's distress after experiencing a positive event. The study that employed older participants aged 45-64 investigated the impact of daily hassles and uplifts (Kanner, Coyne, Schaefer, & Lazarus, 1981). The study found that the frequency of experiencing positive, daily uplifts (e.g., joy from hearing good news or the pleasure of a good night's rest) decreased negative affect for men.

Reich, Zautra and Hill (1987) also found evidence for a cross-domain effect. They found that not the number of positive events, but instead the way individuals reacted to the event and dealt with the event reduced negative affect. They concluded that other factors besides the type or the number of events may be important for reducing negative affect. For example, Zautra and Reich (1983) proposed that "a success experience, for example, may orient a person toward personal action and problem solving" (p. 129) and therefore can reduce negative affect.

With regard to the present study, one could indeed argue that participation in the VTP was a success experience encouraging personal action and conveying skills and competencies. This competence does not only help to master adversities arising within volunteering work but can also reduce the likelihood to encounter failure. The ability to master problems and to encounter less failure can reduce stress, insecurity and anxiety thereby making individuals feel less neurotic and more stable and thus could lead to the reduction of negative affect and neuroticism.

Empowerment

The prior reasoning that the VTP increased participants' competence is closely related to the conception of empowerment. Empowerment refers to increasing the personal strength of the individual. The goal of empowerment is to encourage older persons to discover their strengths, talents and solutions and to

enhance the possibilities for individuals to exert control over their own lives (Levine & Greenlick, 1991; Perkinson, 1992). It often involves the empowered developing confidence in their own capacities. According to Rappaport (1984) “empowerment is viewed as a process: the mechanism by which people, organizations and communities gain mastery over their lives” (p. 4).

Empowerment implies that many competencies are already present or possible and that “new competencies are learned in a context of living life, rather than being told what to do by experts” (p. 4; Rappaport, 1984). According to Rappaport (1981; 1984) empowerment may be the result of programs designed to foster the active participation of the individual. Such programs provide training and opportunities for older persons to assume power and influence and encourage them to become active, to develop and use their own talents.

This approach has been shown to enhance a sense of independence and self-determination in older participants (Perkinson, 1992). There is evidence that the feeling of self-determination and self-confidence increases initiative and motivation (Thomas & Velthouse, 1990). This influences self-belief, resilience when faced with set-backs, the ability to visualize oneself overcoming problems and therefore can increase well-being. Similarly, research suggests that the opportunity to exercise personal discretion/choice and to complete meaningful work is an important element contributing to engagement and well-being (Langer & Rodin, 1976; Rodin & Langer, 1977; Slivinske & Fitch, 1987).

Even more, there is evidence that programs comparable to the empowerment approach reduce depression. For example, emphasizing the importance of engagement and meaning, an intervention geared to increase happiness was able to reduce depressive symptoms lastingly (Seligman, Steen, Park, & Peterson, 2005). Similarly, Fordyce (1977; 1983) demonstrated in seminal studies that a multipronged program to increase happiness not only successfully raised individuals’ happiness but also decreased depression and anxiety for an extended period of time. Pinquart and Sorensen (2001) also found that supportive treatments for older adults reduced depression - not only self-rated depression but also clinician-rated depression. They defined supportive treatments as treatments that “are focused on the provision of understanding, support in the individual’s striving toward goal attainment, and

opportunities for social interaction. This intervention is carried out primarily in groups led by professionals or peers (self-help groups)” (p. 209). Following this definition, supportive treatments can be regarded as programs promoting empowerment.

With regard to the present study, it seems appropriate to conclude that the VTP can be regarded as a program promoting empowerment. The finding that participants of the VTP reported to feel more self-determination during their volunteering work than the active control group also supports this proposition. Among other things, the empowering effect of the VTP refers to the conveyance of skills and competencies, the encouragement for active participation, the feedback and support to overcome problems and the enhancement of self-determination. These factors can strengthen the feeling of being in control of one's life and of being able to manage problems and can therefore reduce insecurity, anxiety and negative emotions and can also make individuals feel less neurotic and more stable. Therefore, the decreases in neuroticism and negative affect obtained in the present study can be explained by the empowering effect of the VTP and fit well with the reduction in depression and anxiety reported by other empowering studies (Fordyce, 1977, 1983; Pinquart & Sörensen, 2001; Seligman et al., 2005).

Self-Determination Theory

Another possible explanation for the reduction in neuroticism and negative affect also acknowledges the importance of competence and self-determination. The self-determination theory focuses on the social-contextual conditions that facilitate versus forestall the natural processes of self-motivation and healthy psychological development (Ryan & Deci, 2000). According to self-determination theory the fulfillment of three innate psychological needs are the principal factors that foster well-being (Ryan & Deci, 2001). These three needs are competence, autonomy and relatedness.

The assumption is that all three needs were fulfilled through participation in the VTP. The fact that participants not only choose their personal project but

also are responsible for the development and the implementation of the project should lead to a feeling of autonomy. Assuming that autonomy and self-determination describe the same feeling, participants of the VTP did indeed report more self-determination than the active control group. Being surrounded by people in a similar situation, receiving feedback and social support should fulfill the need of relatedness. And finally, since participants learn skills and competencies in addition to receiving recurrent feedback, they should feel competent.

It was argued before that competence is important for solving problems and reducing the likelihood to encounter failure. The feeling of self-determination or autonomy may also be helpful in overcoming problems. The feeling of relatedness may imply potential social support which is important for solving and overcoming problems as well. Hence, one can argue that all three factors, that is competence, autonomy and relatedness, help to solve and overcome problems and therefore reduce the experience of failure. As outlined in the previous section, this can decrease negative emotions, fear or anxiety and thus can lead to the reduction in negative affect and neuroticism.

Resolving a Crisis

Another explanation for the decreases in negative affect and neuroticism also highlights the importance of empowerment but shifts its focus to the classical theories like Erikson's theory of psychosocial crisis (1968) and Levinson's theory of life structure (1978, 1986). The proposition is that the VTP helps individuals resolve the crisis inherent in the transition of retirement.

According to the age trajectories depicted within Erikson's and Levinson's theories, participants of the present study (the VTP group as well as the active control group) are in a transitional phase of their lives since they are faced with the concomitants of retirement. Both theories view this phase as a time of confrontation and management of role transitions. The successful resolution of a transition and its crisis is seen as a necessary step to maturity and even growth.

Focusing on the concomitants of retirement, role theory (Sieber, 1974; Thoits, 1983) claims that especially the entrance into retirement and the loss of

the work role and of other opportunities for meaningful and productive social involvement may lead to the experience of usefulness, and to the loss of identity, self-esteem and mental health. They argue that the resolution of this crisis is not easy, especially since in older age opportunities for meaningful and purposeful engagement are often still missing.

Therefore, participation in the VTP could be viewed as a “buffer” against the negative effects of retirement. By providing a unique opportunity for participants to commence a meaningful and productive activity while being embedded in a supportive social setting and therefore enhancing the development of a new social role, the VTP can help to solve the transition and to successfully master the crisis of retirement. However, I argue that only by empowering participants the way the VTP does (e.g., teaching new skills and competencies, fostering new positive relations, promoting a feeling of self-determination and encouraging participant to develop a personal project), participants regain a meaning in life and develop the necessary confidence and strength to resolve the crisis of retirement and therefore feel less neurotic and have less negative affect. Hence, the fact that the reduction in negative affect and neuroticism was only found for participants of the VTP, could also be interpreted as evidence for a successful resolution of the crisis of retirement.

However, this proposition does have a shortcoming. It would imply that neuroticism and negative affect increase as soon as individuals enter the transitional phase of retirement. Empirical evidence on the age trajectories of neuroticism and negative affect however shows that neuroticism and negative affect both decrease with age. Due to this shortcoming this proposition has to be treated with caution.

The Source of Experience

Another conceivable explanation for the decrease in negative affect and neuroticism refers to the sources relevant for experiencing emotional well-being. Negative affect appears primarily to be a function of sources that lie inside the person. For example, negative affect has been demonstrated to result from the evaluation of one's health, chronic pain and discomfort, but also from one's

subjective distress or low self-esteem (e.g., Bradburn, 1969; Watson & Pennebaker, 1989). The assumption is that the empowering effect of the VTP can decrease subjective distress and increases self-esteem. One can also argue that the combination of experiencing empowerment and participating in a meaningful way in society, to be active and involved might even increase health and decrease discomfort. Indeed, numerous studies have found a solid link between activity and various measures of health (e.g., Musick et al, 1999; Thoits & Hewitt, 2001; Van Willigen, 2000).

Hence, since participation in the VTP can improve the sources and factors which are evaluated to derive a judgment concerning negative affect, negative affect should consequently decrease. The considerable evidence that neuroticism and negative affect correlate (e.g., Bradburn, 1969; Fujita, 1991; Costa & McCrae, 1980; Watson & Clark 1992) would imply that neuroticism also decreases.

Stability of Negative Affect and Neuroticism from T2 to T3

With regard to the changes from T2 to T3, the question arises why neuroticism and negative affect did not revert to baseline levels one year after the VTP as suggested by the hedonic treadmill theory (e.g., Headey & Wearing, 1989). Certainly, the finding that neuroticism and negative affect remained decreased one year after the VTP does not imply that they will remain decreased forever. Perhaps results would have been different if the third measurement point would have been 1.5 years after the VTP. This proposition would be in accordance with the finding that the extent of adaptation varies for different life events and may very well take several years (Lucas et al., 2003; Lucas, Clark, Georgellis, & Diener, 2004).

The most obvious explanation for the stability of negative affect and neuroticism from T2 to T3 refers to the empowering effect of the VTP. Accordingly, the assumption is that even one year after the VTP participants of the VTP still feel empowered and competent. Therefore, they are still able to deal with problems and encounter less failure. Consequently, as outlined in more detail in a

previous section, they should experience less negative affect and feel less neurotic.

Drawing on the sources underlying the experience of negative affect as explained in the previous section can also help explain the decreased levels from T2 to T3. Assuming that the empowering effect does not simply wane after T2, the factors considered for the evaluation of negative affect, such as subjective distress and self-esteem, should also remain decreased and increased, respectively. Consequently, levels of negative affect should remain decreased from T2 to T3. Referring to the correlations between negative affect and neuroticism, neuroticism should also remain decreased from T2 to T3.

Trying to determine why people adapt to circumstances, Diener (2000) proposed that “one determinant of people’s adaptation to conditions often might be the extent to which they alter their goals when new circumstances prevail” (p. 38). With regard to the present study, the assumption is that participants regard the pursuit of their project after the VTP as one of their goals. Since participants continue to work with their project and invest effort and energy into their goal after the VTP, as the elevated investment into “occupation-like” activities” from T2 to T3 suggests, one could argue that they do not alter their goal and therefore should not adapt to the circumstance.

Newer theories of adaptation (Kahneman & Thaler, 2006; T. D. Wilson, Gilbert, & Centerbar, 2003) propose that adaptation depends on an individual’s attention to a particular life event. According to Kahneman and Thaler (2006), only circumstances that draw attention maintain well-being. The problem is that often the novelty of circumstances wears off, thereby also decreasing attention. However, Wilson and Gilbert (2003) suggest that people naturally seek to make sense of life events and circumstances. Features that cannot be explained continue to draw attention and therefore effect one’s emotions and prevent well-being from adapting.

With regard to the present study, the assumption could be that during the time after the VTP, when participants are working with their personal project, they

are eager to secure the success of their project. This implies that they constantly need to pay attention to their project to discover weak points and thus to improve the project. This attention can maintain the increased levels of well-being from T2 to T3.

Another possible explanation for the enduring reduction in negative affect and neuroticism focuses on the adaptation to internal conditions (Sheldon & Houser-Marko, 2001). While the hedonic treadmill theory claims that individuals adjust to external conditions, Sheldon and Houser-Marko propose that individuals might also adjust to internal conditions and motivations. They “believe that a person may become accustomed to a new level of well-being, if he or she can maintain that level for a sufficient period of time, and if her or she can attribute the change to his or her own successful life efforts” (p. 163).

It is very likely that participants attribute the increased feelings of well-being to their own doing. After all, they invest effort and time to regularly participate in the VTP and to develop a personal project. Considering that the VTP lasts about 3 months and that participants continue to invest effort and energy during the year after the VTP, as the stable levels of energy invested into “occupation-like activities” imply, it seems reasonable to assume that participants maintained the level of well-being for a sufficient period of time. Thus, according to the proposition of Sheldon and Houser-Marko, the internal adjustment to the decreased levels of neuroticism and negative affect could explain the sustained levels at T3.

Stability in Positive Affect and Extraversion

A question that remains open is why participation in the VTP did not affect positive affect and extraversion. As described detailed in the previous sections, it appears that the empowering effect of the VTP can strengthen the individual in a way that enables him/her to successfully deal with negative states, thereby reducing negative affect and neuroticism. Certainly, future studies are needed to replicate these findings.

10.1.4.2 Life Satisfaction

Life Satisfaction: Increase (T1-T2) and Decline (T2-T3)

The findings that life satisfaction increased from T1 to T2 and leveled off again one year later (T2-T3) are in line with the hypotheses. Both, the increase from T1 to T2 as well as the decrease in life satisfaction from T2 to T3 are also in accordance with the literature.

Various studies found that the experience of a positive event led to an increase in life satisfaction (Headey & Wearing, 1991; Suh et al., 1996; Mroczek & Spiro, 2005). However, as proposed by the hedonic treadmill theory (Brickman & Campbell, 1971; Headey & Wearing, 1989), studies reveal that people adapt to the changed circumstances after a period of six month to one year leading to a reduction in life satisfaction back to baseline levels (e.g., Suh et al., 1996; Lucas et al., 2003; Winter et al., 1999).

The increase in life satisfaction from T1 to T2 can also be attributed to the empowering effect of the VTP. As explained in the previous sections, such an empowering effect can enhance a sense of independence and self-determination. Furthermore, participants get the unique opportunity to take part in something special and to participate in a meaningful way in society. Combined with the increased knowledge of skills and competencies and the development of a personal project, it seems understandable that life satisfaction increased from T1 to T2.

Similarly, an intervention study focusing on the effect of a leisure education program to enhance a sense of independence and personal control in older adults reported comparable results (Searle et al., 1995, 1998). In contrast to a control group, life satisfaction increased after the program, which lasted about 16 weeks, and decreased again four months later at the follow-up assessment. The study can be regarded as a program promoting empowerment - just like the VTP. Therefore, the finding that life satisfaction decreased again after the program fits well with the decreases obtained after the VTP.

Overall, the evidence suggests that the experience of a life event but also participation in an empowering program can increase life satisfaction, however only for a certain amount of time. So far, the explanation for the decline in life

satisfaction referred to the hedonic treadmill theory. Another possible explanation for the decline in life satisfaction from T2 to T3 is described in the following section.

Another Explanation for the Decline in Life Satisfaction (T2-T3)

Life satisfaction refers to a judgmental process and captures the cognitive evaluation of one's life. The judgmental process involves a comparison between current circumstances or achievements and personal criteria, standards, expectations, ideals or aspirations. To the degree that current conditions match these self-imposed criteria, the person reports high life satisfaction (Diener & Suh, 1998).

However, the comparison between current achievements with aspirations is highly dependable on the judgmental standards and reference points available to the individual. Diener and Lucas (2000) propose that life satisfaction can be influenced by several judgmental standards. According to their Evaluation Theory (Diener & Lucas, 2000), the standards which are most relevant for life satisfaction depend in part on a person's temperament, culture, goals and values. Highly relevant standards are likely to be chronically salient to the person, and therefore to influence his or her life satisfaction most of the time. According to Diener and Lucas (2000), goals represent a standard that is usually very salient to the person - because it is what the person is working on and planning to obtain - and therefore, goals are likely to be a standard for the evaluation of life satisfaction that is used most of the time. Similarly, Rapkin and Fischer (1992) proposed that personal goals are a critical aspect of the frame of reference older adults use to evaluate their lives.

In particular the perceived improvements towards a goal are important for life satisfaction. The idea is that a person will be happy if she/he is improving on goals, but will be unhappy if she/he is declining (Brunstein, 1993). According to Caspi and Elder (1986), life satisfaction "reflects a comparison of one's aspirations with actual achievements, and a sense of progress toward the attainment of desired goals" (p. 18). Similarly, George (1979) defined life satisfaction as "a cognitive assessment of one's progress toward desired goals"

(p. 210). Thus, there seems to be agreement that a person's goal and the improvement towards this goal can be seen as a standard frame of reference for the evaluation of life satisfaction.

With regard to the present study, the assumption is that the development and the implementation of a personal project is one of the major goals of participants of the VTP. The reported increase in life satisfaction from T1 to T2 would imply that participants evaluate their actual achievements at T2 as being more in accordance with their aspirations than their achievements at T1. One could argue that this is fostered by the sense of progress toward the attainment of their personal project.

In contrast, the decline in life satisfaction from T2 to T3 would imply that participants do not regard their actual achievements as corresponding to their aspirations anymore. A reason for this divergence could be that the successful development of a personal project during the VTP and the resulting enthusiasm led to increased aspirations for the time after the VTP. However, the findings imply that these aspirations could not be matched with actual achievements. As the elevated investment of energy into the domain "occupation-like activities" suggests, participants did continue to work with their project after the VTP. Still, perhaps once the VTP was over and participants resumed their lives, there was not sufficient time to commence other projects and thus to fulfill these high aspirations.

10.1.4.3 The Importance of Goals for Subjective Well-Being

The importance of goals and goal attainment for subjective well-being has been mentioned in previous sections. It has been assumed that one of the goals of participants of the VTP is the pursuit of the personal project. The enduring decline even one year after the VTP in negative affect and neuroticism represent long-term improvements in well-being. Therefore, the aim of the present section is to give a general overview of the importance of goals for well-being.

According to goal models, the successful pursuit of meaningful goals plays an important role in the development and maintenance of individuals' well-being

(e.g., Brunstein, 1993; Emmons, 1986; Little, 1983; Omodei & Wearing, 1990; Palys & Little, 1983). Resources may facilitate well-being indirectly by allowing individuals to pursue and attain important goals. Indeed, the goal model is supported by the finding that the resources which are most related to a person's well-being are those resources that help with his or her particular goals (Diener & Fujita, 1995b). Freund and Riediger (2006) even regard goals as the building blocks of personality. They argue that the concept of personal goals is particularly well suited for a developmental approach to personality

According to Cantor and Sanderson (1999) "Well-being should be enhanced when individuals are able to pursue their distinct personal goals in ways that are intrinsically valued and autonomously chosen, approached at a feasible level, and facilitated in their daily life context" (p. 232). Commitment to a set of goals is also important for well-being since it provides a sense of personal agency and purpose. Furthermore, commitment to goals may help individuals cope with various problems in daily life and hence maintain personal well-being in times of adversity (Cantor & Sanderson, 1999). This proposition is supported by the finding that a high level of commitment, along with a sense of progress, contributed to higher levels of subjective well-being (Brunstein, 1993).

Cantor and Sanderson (1999) even transferred the concept of the goal model to the more general proposition that life task participation enhances well-being. They argue that the structure and meaning that participation in valued activities gives to daily life is important for well-being, in particular for those facing newly constrained daily life opportunities, such as retirement. Similarly, Little (1989) concluded "that well-being will be enhanced to the extent that individuals are engaged in personal projects that are meaningful, well-structured, supported by others, not unduly stressful, and which engender a sense of efficacy" (p. 20).

Thus, the finding that participation in the VTP led to long-term improvements in well-being could be interpreted as evidence for the goal model and for the life task participation proposition. In this respect, the stable investment of energy into the domain "occupation-like activities" could also be understood as a sense of commitment. The fact that only participants of the VTP, who pursued their goal to develop and initiate their own project, reported these improvements

in well-being points to the importance of pursuing goals, but also to the importance of active participation in meaningful activities.

10.1.5 Effects of the VTP for Personality Growth

In the present study, "openness to experience" and "personal growth" were assessed as two indicators of personality growth to investigate the potential effects of the VTP on personality growth. It has been argued throughout the study that personality growth in older adulthood is not a normative developmental process. However, given a special combination of contextual and personal factors, personality growth might occur (Staudinger & Kunzmann, 2005). Empirical evidence supports this proposition. Most studies focusing on the potential for personality growth find that under certain circumstances and participants with certain personality characteristics reported personality growth (e.g., Bursik, 1991; M. S. White, 1985). Therefore, it was assumed that the context of the VTP is not sufficient to promote personality growth. Instead, the proposition was that a personal factor in addition to the context of the VTP would be necessary for personality growth to occur. Internal control beliefs were chosen as the personal factor for the present study.

Indeed, the results showed that participation in the VTP did not promote "personal growth" or "openness to experience", neither at T2 nor at T3. However, for participants of the VTP with high internal control beliefs, "personal growth" and "openness to experience" increased from T1 to T2. From T2 to T3 "personal growth" remained elevated while "openness to experience" increased even more. Similar results were obtained when controlling for the differences obtained between the VTP group and the active control group in the number of projects, the feeling of self-determination and the type of the projects.

Since participation in the VTP did not lead to improvements on measures of cognitive functioning, the increases in "personal growth" and "openness to experience" cannot be attributed to changes in cognition. This is particularly important for "openness to experience" since "openness to experience" is positively related to measures of intelligence and other cognitive abilities (e.g.,

Goff & Ackermann, 1992; McCrae, 1987; McCrae & Costa, 1997; Staudinger et al., 1997).

“Personal Growth”: Increase (T1-T2) and Stability (T2-T3)

An explanation for the increases in “personal growth” only for participants with high internal control beliefs refers to the attitudes and characteristics of having high internal control beliefs. In general, individuals with high internal control beliefs are increasingly aware that their choices and actions have consequences. This encourages attention to setting goals, directing actions toward the goals, evaluating apparent consequences, and revising efforts. Research suggests that internals are likely to exhibit greater intrinsic motivation and be more achievement oriented (Renn & Vandenberg, 1991; Spector, 1982). Furthermore, it was found that internals have more positive attitudes toward training opportunities because they are more likely to feel that training will result in tangible benefits (Noe, 1986).

Therefore, it is most likely that participants of the VTP with high internal control beliefs worked particularly hard at initiating and developing their personal project. This might have led to a feeling of having achieved something and having expanded their “normal horizon”, thereby increasing the feeling of “personal growth”.

Once the VTP is over, participants with high internal control beliefs should continue to feel responsible for their project and therefore continue to work on their project in an attempt to optimize the efficiency and the success of the project. Since participants of the VTP were taught skills and competencies to deal with adversities, especially participants with high internal control beliefs should be able to continue working successfully with their project, even one year after the VTP. Due to the continuing work with the project and the enduring feeling of success, the feeling of “personal growth” should also remain stable. This could be a possible explanation for the stable levels of “personal growth” from T2 to T3.

But why did “personal growth” remain stable from T2 to T3 and did not increase further like “openness to experience”? A possible explanation for this stability focuses on the number of projects. Comparing the number of reported

projects at T3, a significant difference between participants of the VTP and the active control group was found. As reported earlier, results were not altered when controlling for this difference in the number of projects. 80 % of participants of the VTP with high internal control beliefs continued to work with their first project one year after the VTP, while only 22 % of participants with low internal control beliefs worked with their first project at T3. In comparison, 19 % of the active control group with high control beliefs and only 15 % of the active control group with low control beliefs reported to work with only one project at T3. One could argue that being busy and satisfied with one project might reduce the necessity to set new goals and to initiate new projects, thereby impeding further increases in the feeling of “personal growth”. In fact, this proposition is supported by the finding that the invested energy into “occupation-like activities” also remained stable from T2 to T3.

“Openness to Experience”: Increase (T1-T2) and Further Increase (T2-T3)

The increase in “openness to experience” from T1 to T2 only for participants with high internal control beliefs can be explained in a similar fashion as the increase in “personal growth”. Attributing the outcome of an event to their own behavior, individuals with high internal control beliefs are more encouraged and motivated to direct actions toward a goal and therefore they are more likely to be successful. This encourages internals to address difficulties but also new situations more confidently and actively. Overall, this positive behavior-outcome expectation results in a more positive perception of new situations and also increases the willingness to encounter new situations and experiences.

Since participants of the VTP were taught skills and competencies to work successfully with their own project but also received feedback and support during the VTP, internals of the VTP should feel particularly competent and successful. This should increase the confidence to master new situations and therefore lead to the increase in “openness to experience” from T1 to T2.

Even though the further increase in “openness to experience” from T2 to T3 was not expected, it can best be described with the concept of a beneficial developmental spiral (Mirowsky & Ross, 2007). The positive behavior-outcome

expectation of internals described before reduces the fear of new situations and even increases the confidence to approach new situations. Believing in one's competencies and investing effort, internals will most likely deal with and handle these new situations successfully. This encourages the motivation to encounter even more new situations and experiences. Thus, the resulting success, effectiveness and resilience can strengthen the sense of personal efficacy and competence in a beneficial developmental spiral, increasing the confidence to approach more new situations and experiences. Hence, this concept of a beneficial developmental spiral may be a possible explanation for the further increases found for "openness to experience" from T2 to T3.

10.2 Limitations of the Present Study

Several shortcomings of the present study have to be acknowledged. Even though the VTP can be regarded as a complex intervention program with the aim of promoting competencies and skills to work successfully as a volunteer, providing support and feedback and encouraging participants to develop a new role identity, precise instruments to measure each of these intentions were not available. For example, it was not possible to assess whether participants of the VTP learned new competencies and skills or whether they developed a new role identity. Therefore, the success of the VTP could not be attributed to specific components, processes or underlying mechanisms of change. The fact that the effectiveness of the VTP could only be ascribed to the overall impact of multiple components can certainly be regarded as a major limitation of the present study.

Since it is important for the understanding of developmental processes to be able to specify mechanism-cause linkages, future research should develop conceptual frameworks which integrate components that can be measured and should not spare expenses and effort to assess these single components. As mentioned before, for the present study it would have been important to assess whether participants developed a new role identity and whether they learned new skills and competencies. In addition, a specification of their main goals, goal progress, goal attainment and satisfaction with the goal would have been

important. The availability of different resources such as self-esteem and social-support resources, and whether participants engaged in life reflection would have been useful as well. Such factors can contribute enormously to the understanding of the mechanisms of change and thus can help improve future intervention studies. Even the absence of effects in a theoretically derived intervention would provide a useful opportunity to revise the theory and to inspire new applied research.

Besides these measures focusing on the underlying dynamics of change, further improvements can be made regarding the evaluation of the volunteering work. For example, the catalogue of these questions should be broadened and made more specific, focusing on questions like satisfaction with the VTP, feelings of success and satisfaction with the personal project, motivation to continue after the VTP and the like. This would allow for a more comprehensive evaluation of the impact of the VTP. In addition, these questions should also be administered at T2 and not only at T3.

Finally, even though the present study did assess various outcome measures, future studies should employ other measures, in particular with regard to personality growth. For example, it would be interesting to investigate also the effect of the VTP on ego-development, wisdom and “purpose in life”.

The previous paragraphs point to another limitation of the present study, the assessment of self-report measures. The study relied exclusively on subjective indicators of development. Tendencies to respond in socially desirable ways and processes of self-deception, construed demand characteristics or memory biases as well as features of the specific context can bias personal reports (L. F. Clark, Collins, & Henry, 1993). Therefore, future research should include more objective indicators such as behavioral measures (e.g., physical health, productivity and activity level) and include ratings from others (e.g., ratings of spouses, volunteer agencies, team leaders of the VTP or even other participants).

In addition, a program evaluation could serve as an objective measure to capture some of the underlying dynamics of the VTP. In the context of the present study, it would have been of interest whether participants really did get

encouraged to life reflect during the VTP and whether the focus really was on developing a new role identity. The type and range of skills and competencies taught could also be assessed objectively.

Another aspect that needs to be mentioned is the longitudinal design. When investigating the effect of an intervention a longitudinal design certainly is necessary - only then it is feasible to make causal inferences. However, shortcomings of longitudinal studies also exist. One such caveat is the problem of defining appropriate test-retest intervals between the occasions of data collection. Of course, the time interval between measurement points depends on the content area of interest. Therefore, no general rule for this topic exists.

For the present study, it is unclear how the timing of the retest at T3 has affected the results. For example, empirical evidence suggests that life satisfaction remains elevated for about six to twelve months after the experience of a positive event but - in accordance with the hedonic treadmill model - decreases thereafter (e.g., Brickman & Campbell, 1971; Headey & Wearing, 1989). Thus, for life satisfaction a shorter time interval after the VTP could have made a difference.

Certainly, the question arises whether “openness to experience” would have shown further increases if the follow-up assessment (T3) would have been closer to the VTP. The potential for a “sleeper effect” points to the necessity of leaving sufficient time between assessment points. For example, Hall, Carol and Sirin (1996) found evidence for a strong “sleeper effect” in response to their training program. While they found no changes after the end of the one-term counseling module, significant changes were reported one year later. Considering these points, it seems appropriate to conclude that future research would benefit from assessing more measurement points with shorter time intervals. This would allow assessing the impact of the program more precisely.

10.3 Conclusion

The present study was a unique opportunity to investigate the impact of participation in a special volunteer training program (VTP) on personality development of older adults in a longitudinal, quasi-experimental field study. Generally speaking, the findings of the present study are in line with lifespan theory, in particular with the concept of contextualism and plasticity, emphasizing the importance of stimulating contexts and resources and advocating the potential for personality development even in old age. Distinguishing between two forms of positive personality development, personality adjustment and personality growth (Staudinger & Kessler, in press; Staudinger & Kunzmann, 2005), the present study provided evidence for the importance of this differentiation.

Personality Adjustment

Even though life satisfaction did not remain elevated from T2 to T3, the enduring decline in neuroticism and negative affect even one year after the VTP (T2-T3) can be summarized as long term improvements on measures of personality adjustment. It has been argued that these improvements can be attributed to the empowering effect of the VTP. Not only the skills and competencies taught during the VTP, but also the social support, feedback and the encouragement to develop and implement a project and thus to pursue a personal goal seem to be important factors that promote empowerment increasing the feeling of self-determination and competence.

Apparently, participation in such an empowering program endows participants with the necessary resources, competence and self-determination to master the demands arising while working as a volunteer but also the demands of getting along in society as a whole (Staudinger & Kunzmann, 2005). Indeed, according to Helson and Wink (1987), “adjustment is the ability to meet the various expectations set by society with a sense of comfort and congeniality” (p. 532).

Personality Growth

To my knowledge, this is the first study that has systematically investigated the positive impact of an intervention on older individuals and found improvements in “openness to experience” and “personal growth”, however only for participants with high internal control beliefs. Thereby the results support the proposition that for personality growth to occur, a special combination of contextual and personal factors is needed (Staudinger & Kunzmann, 2005).

These findings suggest that an empowering context like the VTP is not sufficient to promote personality growth. Apparently, personality characteristics, such as internal control beliefs, are important to be able to profit from the empowerment in a way that leads to personality growth.

Implications for Society

An implication of these findings is that it is not sufficient to just provide opportunities for older individuals to participate in society. Rather, as the findings suggest, the attainment of meaningful goals seems to be an important factor for increasing well-being. As Diener, Suh, Lucas and Smith (1999) emphasize, the ability to reach goals depends on the environmental circumstances; certain goal strivings may only be beneficial within situational contexts where those goal strivings are likely to be supported and rewarded.

Thus, institutions involved with developing programs for elderly should focus on the development of contexts and social structures which provide the opportunity for elderly people to successfully attain a goal and thus to participate in a meaningful way in society. Important factors for this endeavor are, for example, to provide resources such as the infrastructure where individuals can meet regularly and offering trained personnel who are able to teach new skills and competencies and give constructive feedback. In addition, it is essential to create contexts with a friendly atmosphere where social relations can develop thus leading to social support and a feeling of relatedness. The provision of such empowering contexts would give older people the opportunity to attain goals and

thus to feel competent, self-determined and empowered. Such an empowering effect will most likely enhance overall levels of well-being.

With regard to personality growth, the findings of the present study reveal that in addition to feeling empowered, high internal control beliefs seem to be an important characteristic for experiencing personality growth. Hence, the results of the study may encourage service providers to investigate whether an empowering program like the VTP, but which also explicitly focuses on increasing internal control beliefs, can promote personality growth for all participants.

When developing programs, the consideration of a theoretical basis which allows the testing of single components is particularly helpful. The knowledge of specific mechanisms-cause linkages could not only increase the effectiveness of a program but would also ease and thus promote the replication and repetition of such programs.

Implications for (Older) Individuals

The findings of the present study support the general view of the importance of engagement and of productive activities for maintaining and enhancing well-being. Especially volunteering seems to be an activity providing a number of benefits.

However, the findings also show that the benefits of volunteering can be increased even further when certain factors are considered. Of particular relevance is the involvement in meaningful activities, the increase in competence by broadening knowledge and skills, social support including feedback and encouragement, and especially the pursuit and attainment of a personal goal. Together, these factors have been termed empowerment.

Generally speaking, feeling empowered might simply imply the belief in oneself. This includes the belief in one's competencies, feeling self-determined, and feeling responsible for one's action. Thus, it may not necessarily be essential to participate in a program in order to feel empowered. Knowing these factors, other ways and possibilities to improve them surely also exist. For example, every person usually has goals. Initiating action to attain this goal is sometimes not easy but as the results suggest, it is worth a try. However, it is important to

remember that only goals which are attainable may enhance well-being. Goals which cannot be reached may actually decrease well-being (e.g., Kasser & Ryan, 1996). Also, every individual can reinforce cultivating friendships by meeting friends and doing activities together. Choosing meaningful activities or activities geared at increasing competencies is especially useful.

Hence, the overall implication for the individual is to belief in one self, to maintain and cultivate friendships, to participate in meaningful and stimulating activities and to mobilize effort and energy to attain goals. This will most likely improve overall levels of well-being and, given certain personal characteristics, might eventually even promote personality growth.

Concluding Remarks

In sum, the present study is a unique attempt to provide insight into the differentiation of personality adjustment and personality growth and contributes to the understanding of these two forms of positive personality development. Contrary to the assumption that personality development ends in young adulthood (Costa & McCrae; 1994), the study demonstrated that in older age even personality growth is possible, given the right circumstances and personality characteristics. Intervention research interested in promoting personality adjustment and/or growth might benefit from these findings. The knowledge of such factors, experiential as well as personal, which are important for personality development, opens up new vistas for future research.

Considering the currently still present structural lag phenomenon, implying that there are not enough opportunities for older people to participate in a meaningful way in society, the primary aim of society and the relevant institutions should be to develop empowering contexts and opportunities that allow and promote the active participation of the elderly. Such opportunities would not only benefit the individual enormously, but will also become increasingly indispensable in our aging society.

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12 Appendices

12.1 Appendix A: Appendix to Methods Chapter

Table A1. *Baseline Differences Between the Three Groups Regarding Marital Status, Living Arrangements, Occupational Status and Subjective Health.*

	VTP Group	Active Control Group ACG	Inactive Control Group ICG
Measurement-Point	T1-T2	T1-T2	T1-T2
<i>Marital Status</i>			
Married	59 (59%)	25 (52%)	66 (68%)
Single	5 (5%)	8 (16%)	0 (0%)
Divorced/separated	19 (19%)	7 (14%)	17 (18%)
Widowed	14 (14%)	8 (16%)	9 (9%)
Long-term relationship	3 (3%)	1 (2%)	5 (5%)
	VTP - ACG: $\chi^2_{(4, N = 149)} = 5.86, n.s., \eta^2 = .02$ VTP - ICG: $\chi^2_{(4, N = 197)} = 7.05, n.s., \eta^2 = .05$ ACG - ICG: $\chi^2_{(4, N = 146)} = 19.72, p < .05, \eta^2 = .07$		
<i>Living Arrangements</i>			
Living alone	35 (36%)	22 (46%)	26 (27%)
Living together	64 (64%)	26 (54%)	72 (73%)
	VTP - ACG: $\chi^2_{(1, N = 147)} = 1.50, n.s., \eta^2 = .10$ VTP - ICG: $\chi^2_{(1, N = 197)} = 1.80, n.s., \eta^2 = .10$ ACG - ICG: $\chi^2_{(1, N = 146)} = 5.44, p < .05, \eta^2 = .19$		
<i>Occupational Status</i>			
Full-time employed	0 (0%)	0 (%)	0 (0%)
Retired	78 (84%)	39 (83%)	75 (79%)
Part-time employed	6 (7%)	3 (6%)	9 (9%)
Unemployed	7 (7%)	4 (9%)	10 (10%)
Other	2 (2%)	1 (2%)	2 (2%)
	VTP - ACG: $\chi^2_{(3, N = 140)} = .04, n.s., \eta^2 = .01$ VTP - ICG: $\chi^2_{(3, N = 189)} = 1.14, n.s., \eta^2 = .06$ ACG - ICG: $\chi^2_{(3, N = 143)} = .55, n.s., \eta^2 = .04$		
<i>Subjective Health</i>			
M	3.12	3.10	3.16
SD	.69	.79	.82
	VTP - ACG: $F_{(1, 146)} (\text{group}) = .02, n.s., \eta^2 = .00$ VTP - ICG: $F_{(1, 197)} (\text{group}) = .15, n.s., \eta^2 = .00$ ACG - ICG: $F_{(1, 145)} (\text{group}) = .17, n.s., \eta^2 = .00$		

Table A2. *Selectivity Analyses Between Participants of the 2. Wave of the Program of the German Federal Ministry and Participants of the Present Study*

	VTP Group	Participants of the 2. Wave
<i>N</i>	148	205
<i>Gender</i>		
Men	55 (39%)	82 (40%)
Women	85 (41%)	125 (60%)
	$\chi^2 (1, N = 345) = .02, n.s., \eta^2 = .01$	
<i>Education</i>		
Hauptschule	19 (13%)	23 (11%)
Realschule	37 (25%)	59 (29%)
Gymnasium & University	90 (62%)	123 (60%)
	$\chi^2 (2, N = 351) = .67, n.s., \eta^2 = .00$	
<i>Age</i>		
55-59	20 (15%)	39 (22%)
60-64	75 (56%)	102 (56%)
65-69	32 (24%)	37 (22%)
Over 70	3 (5%)	2 (1%)
	$\chi^2 (3, N = 313) = 5.67, n.s., \eta^2 = .12$	

Table A3. *Selectivity Analyses between T1 and T2 for the VTP Group and the Active Control Group*

	T1 N=148		T1-T2 N=100		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>
VTP Group					
Education	13.47	3.60	13.37	3.69	$t_{(243)} = -.19$
Age	62.80	4.12	63.52	3.34	$t_{(243)} = 1.40$
Gender	1.61	.49	1.65	.48	$t_{(231)} = .58$
Positive Affect	3.65	.51	3.63	.51	$t_{(244)} = -.31$
Negative Affect	1.88	.56	1.88	.57	$t_{(244)} = .04$
Life Satisfaction	24.35	5.29	24.58	5.18	$t_{(245)} = .34$
Neuroticism	2.35	.59	2.32	.62	$t_{(245)} = -.41$
Extraversion	3.43	.47	3.43	.49	$t_{(245)} = .03$
Openness	3.59	.52	3.57	.55	$t_{(245)} = -.29$
Personal Growth	4.02	.64	3.98	.69	$t_{(245)} = -.48$
"Friendships"	3.40	.75	3.38	.78	$t_{(232)} = -.19$
"Occupation-like Activities"	3.29	1.11	3.11	1.11	$t_{(234)} = -1.24$

Fluid Intelligence	50.39	12.57	49.93	12.33	$t_{(201)} = -.26$
Crystallized Intelligence	32.08	2.98	32.11	2.94	$t_{(222)} = .06$
Active Control Group					
Education	12.89	3.63	13.10	3.85	$t_{(135)} = .33$
Age	62.92	6.12	64.76	5.69	$t_{(122)} = 1.61$
Gender	1.63	.49	1.68	.47	$t_{(133)} = .64$
Positive Affect	3.61	.42	3.62	.40	$t_{(144)} = .24$
Negative Affect	1.91	.48	1.83	.50	$t_{(144)} = -.86$
Life Satisfaction	23.87	5.19	24.78	4.04	$t_{(142)} = .28$
Neuroticism	2.32	.53	2.29	.51	$t_{(144)} = -.29$
Extraversion	3.40	.55	3.40	.58	$t_{(144)} = .01$
Openness	3.57	.50	3.54	.53	$t_{(144)} = -.29$
Personal Growth	4.00	.52	3.91	.55	$t_{(144)} = -1.02$
"Friendships"	3.46	.73	3.52	.70	$t_{(137)} = .47$
"Occupation-like Activities"	3.33	1.06	3.21	1.13	$t_{(137)} = -.64$
Fluid Intelligence	49.06	13.50	47.04	9.81	$t_{(136)} = -.93$
Crystallized Intelligence	31.97	2.96	31.98	2.60	$t_{(138)} = .03$

Table A4. *Selectivity Analyses between T2 and T3 for the VTP Group and the Active Control Group*

Measures	T2		T2-T3		t
	N=100		N=72		
	M	SD	M	SD	
VTP Group					
Education	13.37	3.69	13.86	3.66	t ₍₁₆₉₎ = .86
Age	63.52	3.34	63.62	3.45	t ₍₁₅₁₎ = .17
Gender	1.65	.48	1.68	.47	t ₍₁₅₇₎ = .48
Positive Affect	3.65	.46	3.66	.46	t ₍₁₇₀₎ = .15
Negative Affect	1.71	.48	1.71	.45	t ₍₁₇₀₎ = -.07
Life Satisfaction	26.23	4.12	26.51	3.60	t ₍₁₆₈₎ = .45
Neuroticism	2.11	.58	2.08	.57	t ₍₁₇₀₎ = -.34
Extraversion	3.49	.49	3.46	.48	t ₍₁₇₀₎ = -.42

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Openness	3.68	.77	3.66	.75	$t_{(170)} = -.10$
Personal Growth	4.14	.81	4.25	.57	$t_{(170)} = 1.01$
"Friendships"	3.59	.85	3.63	.72	$t_{(169)} = .32$
"Occupation-like Activities"	3.71	1.01	3.74	1.01	$t_{(169)} = .19$
Fluid Intelligence	54.56	14.34	54.68	13.88	$t_{(149)} = .05$
Crystallized Intelligence	32.26	2.33	32.44	2.22	$t_{(153)} = .47$
Active Control Group					
Education	13.10	3.85	12.82	3.78	$t_{(84)} = -.35$
Age	64.76	5.69	64.10	5.22	$t_{(70)} = -.50$
Gender	1.68	.47	1.70	.46	$t_{(82)} = .21$
Positive Affect	3.51	.48	3.55	.51	$t_{(91)} = .32$
Negative Affect	1.88	.57	1.90	.54	$t_{(91)} = .23$
Life Satisfaction	24.38	4.24	25.00	3.81	$t_{(87)} = .72$
Neuroticism	2.28	.55	2.28	.58	$t_{(91)} = .04$
Extraversion	3.38	.47	3.37	.51	$t_{(91)} = -.06$
Openness	3.54	.65	3.52	.67	$t_{(91)} = -.08$
Personal Growth	3.95	.69	4.00	.51	$t_{(91)} = .39$
"Friendships"	3.33	.71	3.32	.76	$t_{(90)} = -.11$
"Occupation-like Activities"	3.18	1.05	3.24	1.09	$t_{(90)} = .30$
Fluid Intelligence	48.93	10.60	47.66	11.00	$t_{(70)} = -.50$
Crystallized Intelligence	31.60	3.55	31.77	3.41	$t_{(76)} = .21$

Table A5. *Internal Consistency (Cronbach's Alpha) for Different Sample Sizes*

	T1-T2		T1-T2-T3		
	Sample present at T1 and T2		Sample present at T1,T2 and T3		
	VTP: $N=100$		VTP: $N=72$		
	ACG: $N=52$		ACG: $N=41$		
<i>Baseline Measures</i>	T1	T2	T1	T2	T3

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Positive Affect	.84	.84	.80	.81	.78
Negative Affect	.86	.88	.85	.83	.83
Life Satisfaction	.83	.85	.83	.72	.78
Neuroticism	.90	.92	.77	.84	.84
Extraversion	.77	.78	.70	.75	.75
Personal Growth	.78	.86	.74	.75	.83
Openness to Experience	.81	.88	.73	.86	.87
Internal Control Beliefs	.63	.73	.67	.74	.61
Positive Relations with Friend (Ryff)	.79	.84	.82	.83	.83

Notes. Investment into Friendship (PLI) and into Recreational Activity (PLI) are only single items, therefore no Cronbach's Alpha is given. The same applies to the two measures of cognitive functioning.
VTP: VTP group; ACG: Active Control Group

12.2 Appendix B: Recruitment of the Inactive Control Group

Examples of articles advertising the project in local newspapers:



Wie wandelbar sind wir?

Verändern wir uns im Laufe des Lebens, oder bleiben wir die Gleichen? Dieser spannenden Frage versucht zurzeit das „Jacobs Center“ an der „International University Bremen“ (IUB) auf den Grund zu gehen. „In jeder Altersphase – von der Jugend bis ins hohe Alter – haben Menschen die Möglichkeit, sich zu verändern“, meint Professor Ursula Staudinger, Entwicklungspsychologin am „Jacob Center“. Nun will sie erforschen, ob sich Einstellungen und Meinungen je nach Alter unterscheiden. Für diese Studie sucht das „Jacobs Center“ freiwillige

Männer und Frauen zwischen 55 und 70 Jahren, die – wichtig – nicht ehrenamtlich tätig sind.

Die TeilnehmerInnen sollten zweimal an die IUB kommen. Der zweite Termin findet drei Monate nach dem ersten statt. Alle Angaben bleiben anonym.

Als kleines Dankeschön bekommt jeder Teilnehmer nach dem zweiten Termin eine Aufwandsentschädigung von 10 Euro und nimmt an einer Lotterie mit Sachpreisen teil.

Weitere Informationen für interessierte Freiwillige bei Andrea Mühlig-Versen. Tel. (0421) 200-4707.

Wie sich Meinungen ändern

International University Bremen sucht Teilnehmer für neues Forschungsprojekt

Grohn – Verändern wir uns im Laufe des Lebens oder bleiben wir die Gleichen?

Diese Frage beschäftigt das Jacobs Center an der IUB, das nun für eine Studie Teilnehmer zwischen 35 und 70 Jahren sucht, die nicht ehrenamtlich tätig sind. Ziel des Projektes ist

es festzustellen, ob sich Einstellungen und Meinungen zwischen verschiedenen Altersgruppen unterscheiden.

Die TeilnehmerInnen müssen verschiedene Fragebögen über ihre Einstellungen und Meinungen ausfüllen. Diese Angaben bleiben anonym. Insgesamt sind

zwei Termine vorgesehen, wobei der zweite drei Monate nach dem ersten stattfindet. Nach dem zweiten Termin bekommt jeder Teilnehmer als kleinen materiellen Anreiz eine Aufwandsentschädigung von zehn Euro.

Zusätzlich nimmt man an einer Lotterie mit verschiedenen

Sachpreisen teil. Die Verlosung findet nach dem zweiten Termin statt. Die Untersuchung wird in Grohn an der IUB durchgeführt.

Wer Interesse an dem Projekt hat und gerne teilnehmen möchte, kann sich bei Andrea Mühligen unter Telefon 20947077 melden.

CD

WESER KURIER
online
DIE NORDDEUTSCHE

Montag, 20.02.2006 10:22

**Aktuelle News: +++ Zwölf Tote bei Anschlägen im Irak
(10:11 Uhr) +++**

**Verändern wir uns mit der Zeit?
Teilnehmer zwischen 55 und 70 Jahren für
psychologische Studie an der IUB gesucht**

Von unserer Mitarbeiterin
Julia Ladebeck

GROHN. "Einstellungen und Meinungen in verschiedenen Altersgruppen" ist das Thema einer Studie, für die das Jacobs Center für lebenslanges Lernen und institutionelle Entwicklung an der International University Bremen (IUB) Teilnehmer und Teilnehmerinnen zwischen 55 und 70 Jahren sucht, die nicht ehrenamtlich tätig sind. "In jeder Altersphase - von der Jugend bis ins hohe Alter - haben Menschen die Möglichkeit, sich zu verändern", meint Professor Ursula Staudinger, Entwicklungspsychologin am Jacob Center. "Wir gehen davon aus, dass jede Altersphase ihre speziellen Eigenheiten und Charakteristiken hat." Die Bremer Professorin vertritt eine in der heutigen Psychologie noch ungewöhnliche Perspektive, die allerdings immer populärer wird: Die Beschäftigung damit, was im Prinzip möglich ist, der Plastizität der menschlichen Entwicklung. Es geht darum, wie die verschiedenen Lebensalter besser ausgestaltet werden können. In diesen Forschungsbereich fällt auch das Forschungsziel des anstehenden Forschungsprojekts. Ziel des Projektes ist es festzustellen, ob sich Einstellungen und Meinungen zwischen verschiedenen Altersgruppen unterscheiden. Dafür werden die Teilnehmer gebeten, während einer einstündigen Sitzung verschiedene Fragebögen über ihre Einstellungen und Meinungen auszufüllen. Alle Angaben bleiben anonym. Nach drei Monaten findet ein weiterer Termin statt. Als kleinen materiellen Anreiz bekommt jeder Teilnehmer nach dem zweiten Termin eine Aufwandsentschädigung von 10 Euro. Zusätzlich nehmen alle Teilnehmer automatisch an einer Lotterie mit verschiedenen Sachpreisen teil, die nach dem zweiten Termin verlost werden. Die Untersuchung findet auf dem Gelände der IUB in Grohn statt. Weitere Informationen und Anmeldungen bei Andrea Mühlig-Versen unter 200 /47 07.

12.3 Appendix C: Information Regarding the Program of the Federal Ministry “Erfahrungswissen für Initiativen” (EFI)



Bundesministerium
für Familie, Senioren, Frauen
und Jugend

Erfahrungswissen für Initiativen: 2002 bis 2006

Ein Modellprogramm des
Bundesministeriums für Familie,
Senioren, Frauen und Jugend

Die Beteiligten des EFI-Programms

Unterstützungsstruktur/Begleitgremien

Wissenschaftlicher Beirat	→ 14 Mitglieder
Projektkoordination und Beratung der Programmakteure	→ Institut für sozialwissenschaftliche Analysen und Beratung (ISAB), Köln
Evaluation	→ Institut für Sozialforschung und Gesellschafts- politik (ISG), Köln
Curriculumentwicklung zur Qualifizierung der seniorTrainer/innen	→ Fachhochschule Neubrandenburg

Kooperationsverbund in 10 Bundesländern

12 überörtliche Bildungsträger	Anlaufstellen für freiwilliges Engagement in 35 Kommunen: Seniorenbüros, Freiwilligen- agenturen, Selbsthilfekontaktstellen
Bayern	
Institut für Soziale und Kulturelle Arbeit (ISKA), Nürnberg	Augsburg, Gemering, Mühlendorf/Inn, Nürnberg, Regensburg, Würzburg
KAB Institut für Fortbildung und angewandte Sozialethik, Waldmünchen	
Brandenburg	
Akademie 2. Lebenshälfte, Teltow	Cottbus, Prenzlau, Rathenow
Hamburg	
Kobalt - Koordinierung von Bildung und Kultur im Alter e.V., Hamburg	Seniorenbüro, Freiwilligenzentrum
Hessen	
Bildungswerk der Hessischen Wirtschaft e.V., Bad Nauheim	Dillenburg, Dreieich, Kassel
Mecklenburg-Vorpommern	
Landesring M/V des Deutschen Senioren rings e.V., Schwerin	Neubrandenburg, Rostock, Schwerin
Niedersachsen	
Ludwig-Windthorst-Haus, Lingen-Holthausen	Edewecht, Hannover, Lathen
Nordrhein-Westfalen	
Ev. Erwachsenenbildungswerk Nordrhein e.V., Düsseldorf	Aachen, Arnsberg, Düsseldorf, Herford, Köln, Minden
Stätte der Begegnung e.V., Vlotho	
Rheinland-Pfalz	
Ev. Arbeitsstelle Kirche, Bildung und Gesellschaft, Kaiserslautern	Kaiserslautern, Ludwigshafen, Trier
Schleswig-Holstein	
Ev. Landvolkshochschule Koppelsberg	Lübeck, Meldorf, Neumünster
Thüringen	
Soziokulturelles Forum der Marie-Seebach-Stiftung, Weimar	Eisenach, Erfurt, Jena

700 seniorTrainer/innen:

je 21 seniorTrainer/innen in 35 Kommunen

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seniorTrainerin
Erfahrungswissen für Initiativen



Bundesministerium
für Familie, Senioren, Frauen
und Jugend

Das EFI-Programm

in zehn Bundesländern
und 35 Kommunen



Schleswig-Holstein

- Seniorenbüro Neumünster
- Agentur für bürgerschaftliches Engagement EVE, Meldorf
- Freiwilligen-Agentur für Lübeck e.V.

Hamburg

- Freiwilligen-Zentrum Hamburg
- Seniorenbüro Hamburg

Mecklenburg-Vorpommern

- Seniorenbüro Schwerin
- Rostocker Seniorenakademie
- Seniorenbüro Neubrandenburg

Brandenburg

- Soziale Regiestelle Havelland, Rathenow
- REKIS Uckermark, Prenzlau
- Freiwilligenagentur Cottbus

Niedersachsen

- REBEKA, Edeweicht
- Freiwilligenagentur Lathen
- Freiwilligenzentrum Hannover

Nordrhein-Westfalen

- StadtteilTREFF Süd, Herford
- MachMit-Servicebüro für freiwilliges Engagement, Düsseldorf
- „Wendepunkt“ der Stadt Arnsberg
- Öcher Börse für Wissen, Interessen und Kontakte, Aachen
- Freiwilligen-Agentur Minden
- Ceno-Centrum zur nachberuflichen Orientierung, Köln

Thüringen

- Seniorenbüro „55plus“, Jena
- Seniorenbüro und Freiwilligenagentur Erfurt
- Seniorenbüro Eisenach

Hessen

- Freiwilligenzentrum Kassel
- Freiwilligenzentrum Dillenburg
- Seniorenbüro Winkelsmühle, Dreieich

Rheinland-Pfalz

- Ehrenamtsbörse Vehr, Ludwigshafen
- Ehrenamtsagentur Trier Palais Walderdorff
- Freiwilligenagentur Kaiserslautern

Bayern

- Beratungsstelle für Senioren der Stadt Würzburg
- Treffpunkt Seniorenbüro Regensburg
- Zentrum Aktiver Bürger, Nürnberg
- InselAgentur Germering
- Freiwilligenzentrum Augsburg
- Haus der Begegnung und Selbsthilfekontaktstelle, Mühldorf

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Das EFI-Programm im Spiegel der Presse

Das Programm will älteren Menschen neue Chancen eröffnen, ihr Erfahrungswissen weiterzugeben. Es basiert auf folgenden Leitideen:

- ➔ Ältere Menschen haben einen Platz in der Mitte der Gesellschaft
- ➔ Erfahrungswissen besitzt eine hohe Wertigkeit
- ➔ Ältere Menschen übernehmen Verantwortung für das Gemeinwesen
- ➔ Ältere Menschen zeigen gelebte Generationensolidarität
- ➔ Engagement für andere vermittelt Lebenssinn und -freude



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Bundesministerium
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und Jugend

Eine neue Verantwortungsrolle für Ältere

Der Weg zum seniorTrainer
bzw. zur seniorTrainerin

Kontaktaufnahme und Information

Interessierte Frauen und Männer wenden sich an eine der örtlichen Anlaufstellen im EFI-Programm (Seniorenbüros, Freiwilligenagenturen, Selbsthilfekontaktstellen).



Bewerbung und Auswahl

Die örtlichen Anlaufstellen wählen aus dem Pool der Interessierten aus – vorzugsweise aus dem Einzugsgebiet.



Vermittlung an Bildungsträger

Die örtlichen Anlaufstellen vermitteln die zukünftigen seniorTrainer und seniorTrainerinnen an den überörtlichen Bildungsträger.



Teilnahme an der seniorTrainer/in-Fortbildung

Der überörtliche Bildungsträger bietet einen Kurs von dreimal drei Tagen an. Diese Kurse werden durch zwei Praxisphase begleitet.



Abschluss des Kurses und Übergabe der Seneka

Nach Abschluss der Fortbildung erhalten die Teilnehmer/innen die Seneka. Diese ist Ausweis für die Tätigkeit als seniorTrainer bzw. seniorTrainerin und bietet Versicherungsschutz bei der Tätigkeit.



Tätigkeit als seniorTrainer bzw. seniorTrainerin

Die seniorTrainer und seniorTrainerinnen werden bei ihrer Tätigkeit durch die örtliche Anlaufstelle unterstützt.



Ergänzende Fachkurse

Auf Wunsch können seniorTrainer und seniorTrainerinnen an Fachkursen zu einzelnen Schwerpunktthemen teilnehmen.

seniorTrainer und seniorTrainerinnen können auf der Grundlage ihres Erfahrungswissens und unterstützt durch die Angebote des Modellprogramms bestehende Gruppen, Projekte, Initiativen etc. beraten und begleiten, wenn diese es wünschen. Sie können außerdem in bislang unzureichend oder gar nicht abgedeckten Engagementbereichen neue Initiativen ins Leben rufen oder übergreifende Aktivitäten zur Förderung des freiwilligen Engagements unterstützen.



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Rollen und Wirkungsbereiche

Verantwortungsrollen von seniorTrainer/innen in verschiedenen gesellschaftlichen Bereichen

Auf der Basis der von ISAB ermittelten Rollen und Tätigkeiten der seniorTrainer/innen nach dem ersten EFI-Kurs üben seniorTrainer/innen in ihrer Kommune folgende Verantwortungsrollen aus:



Engagementbereiche

- ➔ Sozialer Bereich
- ➔ Bildungsbereich
- ➔ Gesundheitsbereich
- ➔ Freizeit, Geselligkeit, Brauchtum
- ➔ Kultur, Musik, Theater
- ➔ Politik und Interessenvertretung
- ➔ Kirchlicher/religiöser Bereich
- ➔ Sport und Bewegung
- ➔ Schule, Kindergarten und Jugendarbeit
- ➔ Umwelt-, Natur- und Tierschutz
- ➔ Rettungsdienste, freiwillige Feuerwehr, Katastrophenschutz
- ➔ Justiz und Kriminalität
- ➔ Sonstige bürgerschaftliche Aktivitäten

Rollen und Wirkungsbereiche

seniorTrainer/in als Unterstützer bestehender Freiwilligen-Organisationen und Initiativen

Für Initiativen, Vereine, Einrichtungen, Verbände, Selbsthilfegruppen wird eine neue Leistung erbracht (z.B. fachliche Beratung in Vereinsrecht, Öffentlichkeitsarbeit; Zugangswege/Kontakte herstellen)

seniorTrainer/in als Initiator neuer Projekte und Gruppen

Ein Vorhaben oder eine Initiative wird in neuem organisatorischem Rahmen aufgebaut

seniorTrainer/in als allgemeiner Unterstützer von bürgerschaftlichem Engagement in Kommune

➔ Gemeinwesenunterstützer/Vernetzer
 ➔ Koordinator des seniorTrainer/innen-Teams
 ➔ Vermittler sonstiger Themen zur Förderung des freiwilligen Engagements

Tätigkeiten

- ➔ Organisation und Durchführung von Treffen/Veranstaltungen
- ➔ Öffentlichkeitsarbeit organisieren
- ➔ Interessenvertretung und Mitsprache organisieren
- ➔ In Leitung von Gruppe, Verein, Verband mitwirken
- ➔ Gruppen, Vereine, Initiativen sporadisch unterstützen
- ➔ Beratung
- ➔ Mittelbeschaffung
- ➔ Kontakt- und Vernetzungsarbeit
- ➔ Bürger/innen für freiwilliges Engagement aktivieren
- ➔ Informieren, Lebenserfahrung und Wissen vermitteln

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seniorTrainerin
Erfahrungswissen für Initiativen



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und Jugend

Qualifizierung von seniorTrainer/innen:

Struktur und Inhalt der Kurse

1. Kursmodul / 3 Tage

- Lernformen und Erfahrungswissen
- Rollenannäherungen durch Rollen(beil)spiele
- Lernschwerpunkte / Themenspeicher
- Bürgerschaftliches Engagement

Vorbereitung 1. Praxisphase

2. Kursmodul / 3 Tage

Auswertung 1. Praxisphase

Vermittlung rollenspezifischer Kompetenzen:

- Kommunikation und Gesprächsführung
- Beraterrolle und Gestaltung von Beratungsbeziehungen
- Arbeit mit Gruppen
- Initiierung von Projekten

Vorbereitung 2. Praxisphase

3. Kursmodul / 3 Tage

Auswertung 2. Praxisphase

Vermittlung rollenspezifischer Kompetenzen:

- Anregung, Förderung, Vernetzung von bürgerschaftlichem Engagement
- Vermittlung von Lebenserfahrung und Fachthemen
- Vortrags- und Präsentationstechniken

Rollenangebote als seniorTrainer/in
Übergang in die Praxis

Die Kurse werden von 12 Bildungsträgern durchgeführt. An jedem Kurs nehmen 20 seniorTrainer/innen teil. Die Gewinnung und Auswahl der Kursteilnehmer/innen erfolgt durch die Anlaufstellen für freiwilliges Engagement in 35 Kommunen.

1. Praxisphase (4–8 Wochen)

Erkundungen des bürgerschaftlichen Engagements durch Hospitationen, Praktika, Strukturanalyse, Übung, Feld-erkundung, Bedarfsanalyse

Basis der Kurse ist das Rahmencurriculum zur Qualifizierung von seniorTrainer/innen und dessen jährliche Fortschreibung. Die Durchführung der Kurse wird durch regelmäßige Abstimmungen zwischen den Bildungsträgern und den Anlaufstellen für freiwilliges Engagement unterstützt. Hauptziel der Qualifizierung ist die Rollenvielfalt zu illustrieren und die seniorTrainer/innen auf ihre möglichen Rollen vorzubereiten.

2. Praxisphase (4–8 Wochen)

Erprobung von Tätigkeiten eines seniorTrainers durch ein individuelles Kleinprojekt, Gruppenprojekt

Nach Abschluss des Kurses erhalten die seniorTrainer/innen eine Seniorenehrenamtskarte (Seneka). Sie ist Ausweis für die Tätigkeit und bietet Versicherungsschutz für die Rollenausübung.

Im Modellprogramm werden drei Kursdurchgänge 2002/2003, 2003/2004 und 2004/2005 jeweils von September bis Januar durchgeführt. In den drei Kursen werden insgesamt ca. 700 seniorTrainerinnen und seniorTrainer qualifiziert.

www.efi-programm.de





Declaration

I hereby declare that this thesis is my own work and that I have completed it without undue help from third parties. Any thoughts and ideas taken directly or indirectly from others are clearly marked as such. This thesis has not been submitted to any other university for the conferral of a degree.

Bremen, 30. July 2008

Dipl.-Psych. Andrea Mühlig-Versen
