Health Psychology Research
**1 Objectives and research area**

The Health Psychology Research Program was formerly known as the research program ‘Disorder, Disability and Quality of Life’ (DDQ). It was labeled as such in the previous self-evaluation assessment. In recent years, there has been a clear re-direction in the program towards research that is predominantly rooted in health psychology. In order to better reflect our distinct research profile, as of 2007, we renamed it the Health Psychology Research Program.

**Objectives**
The Health Psychology Research Program (HPR) aims to gain insights that will be useful in resolving the psychological problems experienced by people with chronic somatic illness and that will add to the body of knowledge on those psychological and social processes that enable or impede people’s adaptation to chronic somatic illness. This knowledge can be used to develop and provide adequate psychosocial care for people who experience difficulties in adapting to a chronic somatic disease. In pursuing these objectives, the program aims to uphold the highest standards of scientific research and to share its knowledge through publication of its findings in renowned international journals. The training of junior researchers, both at MA and PhD level, constitutes an essential part of the program.

**Research area**
Research in the Health Psychology Research program integrates insights from the field of Health Psychology with insights from related fields, including Medical Sociology and Behavioral Medicine, in order to study the psychological adaptation to chronic somatic disease. Insights from basic psychological fields, including Social Psychology and Personality Psychology, are used to understand the adjustment to chronic illness. The program covers two major research lines:

- Research aimed at gaining insight into the course of outcomes of adaptation, including quality of life, depression and distress, and the role psychological and social predictors play in these, while taking into account medical factors, and
- Research aimed at developing and evaluating psychosocial screening programs and psychological interventions for patients with a chronic somatic disease, and identifying psychological and social mechanisms underlying the effectiveness of interventions, while also taking into account medical factors.

The psychological factors under study include individual characteristics (personality and social cognitions, including perceived control, goal adjustment and mindfulness). Social factors include the partner relationship, dyadic coping and social support. Psychological and social factors can influence the adjustment to chronic illness, while at the same time they too can be influenced by the disease as well. To design effective interventions, it is important to gain insight into this dual influence of psychological and social factors, and how they affect adjustment to illness. Outcomes encompass quality of life in general; negative outcomes include depressive symptoms, distress, anxiety, while positive outcomes include positive affect, personal growth and benefit finding. The outcomes studied depend on the nature of the disease under study.

In our research we focus on a selected number of somatic diseases which include cancer, cardiovascular disorders, diabetes, pulmonary disease, rheumatoid arthritis, and renal disease. Traditionally, there has been a strong focus on the elderly and aspects of aging in the HPR program, for example, with the Groningen Longitudinal Aging Study (GLAS), a longitudinal study among 5279 elderly in the northern part of the Netherlands. This tradition has been continued and intensified with the recent affiliation with the HPR program of Dr N Steverink, an accomplished researcher in the field of psychosocial gerontology, whose specific focus is on the study of Healthy Aging.
Research themes
Within the two research lines, six major themes can be distinguished.

Outcomes of disease and its treatment
This research theme is aimed at describing the course of outcomes of disease and its treatment. Both patients and partners are the focus of this research theme. We aim to contribute to the existing literature by applying methodologically sound research designs and using advanced statistical techniques, which results in more detailed knowledge on the course of outcomes.

Individual characteristics
In this research line, the role of individual characteristics in the adjustment to chronic illness is the focus of study. Individual characteristics, including perceived control and personality, are considered as personal resources that facilitate or impede patients’ adjustment to chronic illness. While the focus was on personality and perceived control, recently, goal adjustment style and mindfulness have been added as important topics in this research theme. Specific research topics include the predictive value of individual characteristics for patients’ adaptation, and identification of underlying mechanisms, both mediators and moderators, and the impact of disease on individual characteristics is being studied. Most of the studies apply a longitudinal or prospective research design. Cancer, renal disease and organ transplantation, along with coronary heart disease (atrial fibrillation and heart failure) are the main diseases under study.

Social factors
Studies within this research line are based on the relational perspective of coping with illness; in other words, dealing with illness is considered a dyadic affair. Consequently, the studies not only focus on the role of social relationships in patients’ adjustment, but also on the impact that illness and patients’ adjustment has on intimate partners and functioning as couples. The majority of the studies collect (longitudinal) data from couples, and examine the role of spousal behavior and the interplay of spousal behavior along with individual characteristics on patients’ adjustment as well as their partners’. For partners the focus is on emotional adjustment; for patients, however, we also focus on disease self-management (e.g., self-efficacy, glycemic control). Research within this line has, over the last five years, been extended from cancer to diabetes and renal disease.

Psychosocial screening and intervention
In this research line we focus on three interrelated topics, that is: (1) research on the development and evaluation of screening measures which assess psychosocial problems and unmet needs in patients with various somatic illnesses, and (2) projects in which the effectiveness of psychological treatments are tested (e.g., among patients with cancer, diabetes and COPD). The kind of treatments we are currently testing are cognitive-behavioral treatments (CBT; e.g., problem solving), mindfulness-based along with a mix of CBT with experiential techniques. And, lastly, (3) research aimed at gaining insight into the process and mechanism of change in the treatments. We have started working on finding out more about treatment integrity and how to link processes in the intervention with the outcome.

Aging
The overall aim of this research theme is to gain insight into what happy and healthy aging consists of, why and under which circumstances well-being and health are achieved, maintained
or threatened, and whether and how well-being and health can be modified by interventions. The strong theory-driven approach is focused on basic human physical and social needs, resources, and self-management ability as core constructs in understanding happy and healthy aging. Studies are executed in (1) persons without specific health or psychosocial problems, (2) persons being physically and/or socially vulnerable, and (3) older persons being institutionalized (e.g., in nursing homes). The concrete implementation of self-management interventions in health care is part of this theme.

Methodological issues
Traditionally, there has been a strong focus on methodological issues as a theme integrated within all research lines within the program. During the previous review cycle, a great deal of attention was paid to the development and evaluation of self-report questionnaires. Since then, this theme has evolved and has been integrated with screening research in the intervention research line. During the current review cycle, our attention has shifted towards another theme, that is, data synthesis, including systematic reviews and meta-analyses. We also conduct meta-analyses (see Hagedoorn et al., 2008; a Cochrane review of psychological interventions for cancer patients is forthcoming) that include invited reviews of others’ published meta-analyses of health psychology interventions and contributions to the existing literature that address methodological issues concerning meta-analysis and systematic review.

Strategy and policy
In order to accomplish our mission, we have addressed a few issues raised in 2004 by the Peer Review Committee 1997-2002, while at the same time continuing some activities and strategies that have proven to be successful.

First, we are trying to achieve our goals by focusing on specific themes within the research program. The PRC 1997-2002 suggested choosing between either a theoretical research line or an intervention research line. After careful consideration of the suggestion of the PRC, we decided to focus on both research lines, because the two lines are mutually fostering and both are essential to our ultimate goal of helping people cope better with chronic illness. At that time, the intervention research line was less well developed than the theoretical research line. Extensive effort has been put into the intervention research line, resulting in a number of research projects funded by external funding organizations and supported by the Board of the UMCG. In order to increase the focus of the program, a distinction was made between two prevailing themes within the theoretical line: individual characteristics and social factors. These developments have resulted in three distinct research themes that together provide the basis for a coherent and focused research program.

Second, in order to promote the development of innovative research within the three research themes, we have slightly reorganized the program such that as of 2007 our research is organized in separate labs, each of which is supervised by one of the three tenured professors in the program, namely, individual characteristics (Prof AV Ranchor), social factors (Prof M Hagedoorn) and intervention research (Prof R Sanderman). The research theme of psychosocial gerontology is mostly embedded within the intervention lab, while methodological topics are embedded in all three labs. In practice, the distinction is not that strict, meaning that research topics that fit within one of these broader themes can be carried out and supervised by members of other labs as well. There is also clear collaboration between the labs, which is evident in joint research projects (e.g., the research project regarding adjustment to renal transplantation in patients and partners) and joint publications. With each tenured staff member focusing on specific themes, expertise on the topics under study is increased, which forms the basis for challenging research proposals.
Third, new research is being developed from both a clinical and a theoretical perspective. Frequent interactions with medical specialists generate research questions that can be addressed by using theoretical health psychology concepts and models. At the same time, these concepts and models may generate research questions that are both theoretically and clinically relevant. By integrating these two perspectives, we are able to develop studies that address topics that are both clinically and theoretically relevant.

Fourth, for all three research themes, we have continued our focus on the same limited number of diseases, that is, cancer, coronary heart disease, diabetes mellitus, pulmonary disease, rheumatoid arthritis, and renal disease. This enhances our knowledge of the specific diseases, which is needed when trying to study psychological processes in the adaptation to disease. In addition, it also benefits the development of new research, because we keep track of relevant developments in clinical practice.

Fifth, we have continued our local collaboration in the UMCG and our national collaboration within the field of health psychology. The PRC advised putting more focused effort into our international collaboration, that is, by actively seeking collaboration with related research groups instead of collaboration on an ad hoc basis. We have pursued this recommendation by the PRC, which has resulted in more focused collaboration with research groups working on similar themes. More details concerning our collaboration partners are provided in Section 3.

Sixth, we have sharpened our publication strategy by focusing on journals in the field of health psychology and other relevant disciplines (e.g., behavioral medicine, psycho-oncology, psycho-gerontology). This is in line with the recommendation by the PRC to choose either psychological or medical journals. We decided to focus on psychological journals in order to reach the targeted scientific audience, which is the most effective way to disseminate the insights derived from our research and, in the end, to increase our chances of being cited. More details about this topic are provided in Section 5.
2 Composition of the research program

Description of the composition of the program
Given the focus on health psychology research, members of the HPR program most often have a background in psychology. Tenured staff have a background in personality psychology (Prof AV Ranchor), social psychology (Prof M Hagedoorn), clinical psychology (Prof R Sanderman), medical sociology (Dr J Bouma) and developmental psychology (Dr N Steverink). PhD students most often have had a background in social psychology or health psychology, but recently we have taken on postdocs and PhD students with a clinical psychology background in order to realize our ambitions with respect to the intervention research line.

Tenured staff were made complete with the appointment of Prof JC Coyne from the University of Pennsylvania as honorary professor in our group. His honorary appointment will be upgraded to a part-time appointment from 2010 onwards. He will be involved in co-authoring papers with faculty and graduate students, linking the program with international collaborations, and leading workshops and classes on how to write high-impact papers. In addition, a number of senior researchers and postdocs have joined the research program, each with a specialized expertise. Dr JC Keers from the department of Internal Medicine has joined the program, contributing expertise on self-management with respect to diabetes, and is involved in the LifeLines study of the UMCG. Dr MJ Schroevers, who was trained as a health psychology researcher and as a health care psychologist, brings expertise on the topic of intervention research in general and mindfulness specifically, both from a research and a clinical perspective. She and Dr J Fleer are specialists in the field of goal adjustment, and are also active in research on screening and intervention. Dr G Pool is clinical supervisor of interventions projects and has expertise in the field of finding benefit and meaning in life. Dr FLP van Sonderen is affiliated to the research program as a methodological and statistical consultant.

Research input by type of appointment
Table 1 provides a description of research staff. An explanation of the way research fte’s are computed is given in chapter 1.

<table>
<thead>
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<th>Table 1</th>
<th>Research staff</th>
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<tr>
<td></td>
<td>2003</td>
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<td></td>
<td>fte</td>
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<tr>
<td>Tenured staff</td>
<td></td>
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<tr>
<td>Professor</td>
<td>0.20</td>
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<tr>
<td>Associate prof</td>
<td>0.40</td>
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<tr>
<td>Assistant prof</td>
<td>0.42</td>
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<tr>
<td>Total tenured</td>
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<tr>
<td>Non tenured staff</td>
<td></td>
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<tr>
<td>Post doc</td>
<td>1.73</td>
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<tr>
<td>PhD</td>
<td>4.03</td>
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<tr>
<td>Total staff</td>
<td>6.78</td>
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Compared to the previous 1997-2002 peer review, tenured staff numbers have slightly increased, from 1.02 in 2003 to 1.40 FTE in 2008. While there was considerable fluctuation in the FTE and the number of tenured staff members in the previous review cycle, from 2006 onwards tenured-staff size has stabilized. One important difference compared to the previous review period is that previously the number of FTEs was distributed across five to eight researchers with a small tenured position, while in the current review period the FTEs are distributed across five researchers. This ensures both continuity and a natural evolution within research themes, which is important in achieving our aim of keeping our research program focused.

The number of PhD students showed a reversal from 2003 to 2005, but since 2008 the number has been restored to a level comparable to 2003. This can be considered as a normal fluctuation over time. More critical is the postdoc staff, which was low from 2005-2007, but since 2008 has been restored. This fluctuation is worrisome because postdocs are important players in our research program, both because of their input with respect to research as well as because of their input regarding the training of PhD students. Therefore, one of our ambitions for the future is to take on more postdoc researchers and to prolong the appointments of current postdocs. Currently, one fulltime postdoc and three part-time postdocs are affiliated with our program; from 2010 onwards, another full-time postdoc (a research fellow funded by the Dutch Cancer Society) will be affiliated with our program.

Table 2 provides an overview of the various types of PhD students, as well as their progress.

### Table 2  PhDs, types and progress

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<td>n</td>
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<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>12</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>16</td>
</tr>
</tbody>
</table>

**Type:**

- AIO, MD/PhD: 7 5 3 4 5 5
- Bursary: 2 2 3 4 4 5
- Clinical: 1
- Ext. funding: 5
- External: 5 5 5 5 4 6

**Progress:**

- Graduated: 2 2 4 3 2
- In progress: 13 10 11 8 10 14
- Stopped: 1
Research input by sources of financing

Because of the fluctuation in number of PhD students and postdocs, the proportion of tenured and non-tenured staff is variable over time. For funding of PhD and postdoc studies, we depend on both the university and third party organizations. Financing of PhD students is partly funded by the university and partly by third party funding organizations. Postdoc studies are all funded by third party funding.

Table 3 provides the proportion between internal funding (‘tenured staff’) and externally obtained resources (‘other research input’). An overview of large projects acquired will be presented hereafter in section 6: Earning capacity.

Table 3  Funding

<table>
<thead>
<tr>
<th>Year</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
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<tbody>
<tr>
<td></td>
<td>€</td>
<td>%</td>
<td>€</td>
<td>%</td>
<td>€</td>
<td>%</td>
</tr>
<tr>
<td>Tenured staff</td>
<td>86,730</td>
<td>26</td>
<td>97,740</td>
<td>32</td>
<td>99,312</td>
<td>42</td>
</tr>
<tr>
<td>Other research input</td>
<td>244,144</td>
<td>74</td>
<td>208,646</td>
<td>68</td>
<td>137,307</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>330,874</td>
<td>100</td>
<td>306,386</td>
<td>100</td>
<td>236,619</td>
<td>100</td>
</tr>
</tbody>
</table>
3 Research environment and embedding

Position and reputation
The Health Psychology Research program can be considered to be a leading research group in the field of adjustment to chronic illness, which is evident in the output obtained (see Section 5) in collaborations with top clinical research groups within the UMCG, and in our national and international collaborations with top researchers in the field. Additional support received from the Board of the UMCG in order to further develop the intervention research line reflects recognition of the program. A more detailed description of our embedding and collaborations is given below.

Embedding and collaboration
The Health Psychology Research program is embedded in the University Medical Center Groningen with a close link to the department of Clinical Psychology, with the appointment of Prof Sanderman, to this department. Within SHARE, we collaborate with the research programs Evidence-Based Medicine in Practice (EBM-P) and Rehabilitation Programs Research (RPR) and we have started collaboration with Public Health Research (PHR), showing in joint PhD projects and research proposals. There is a stable and productive scientific collaboration with relevant clinical research groups, including the departments of Cardiology, Internal Medicine Pulmonology, Internal Medicine Endocrinology, Internal Medicine Nephrology, Surgery – Oncology, Surgery – Abdominal Surgery and Radiotherapy. These research groups cover the medical disciplines related to our selection of somatic diseases. Collaboration has led to a number of joint PhD research projects and publications in the field of cardiology, pulmonology, endocrinology and surgery. Recently, collaboration with the Wenckebach Institute, School for Nursing and Health, has resulted in four joint PhD projects, where staff from the Wenckebach Institute are supervised by tenured staff in the Health Psychology Research program.

National collaboration
The Health Psychology Research program is affiliated with the Dutch Research Institute for Psychology and Health (P&H). Members of the research staff are active in the research institute by providing a workshop on psychological interventions as part of the PhD training program of the research and education committees, as well as chairing the Board of P&H and co-chairing the expert group on adjustment to chronic illness.

At a scientific level, collaboration exists with Prof MAG Sprangers, principal investigator of the Quality of Life research line of the department of Medical Psychology of the Amsterdam Medical Center. There are two joint research projects and one joint research proposal under review by Prof Sprangers. Collaboration has also begun with Prof AM Stiggelbout, department of Medical Decision Making of Leiden University Medical Center, focusing on the role of adaptation in discrepancies between patient and population evaluation of health states. In addition, we have begun a joint project with Prof PMG Emmelkamp from the University of Amsterdam on the effects of an intervention for individuals with diabetes. The long-standing collaboration with Prof GIJM Kempen from Maastricht University has been continued, as reflected in a number of publications.

International collaboration
The aim of our international collaboration is to seek partners in establishing structural collaboration around the major themes in our research program. We have continued existing collaborations and have established new collaborations based on shared research interests. Collaborations evident in joint publications or research proposals are:
• Prof JC Coyne, from the University of Pennsylvania. Intensive collaboration with him has resulted in an appointment as honorary professor in our research group as of 2007. In scientific journals he has co-authored quite a number of papers with our group and is a co-applicant for one third-party research grant. Collaboration with him focuses, among others, on the themes of depression and meta-analysis, mostly in the field of cancer, and also around strategic issues such as how to publish papers in high-impact journals.

• Prof VS Helgeson, focusing on individual characteristics in relation to adjustment, is from Carnegie Mellon University. She has co-authored a number of papers with our research group, two of which will be published after this review period (in 2009), and a few more that have been submitted.

• Prof M Scheier, focusing on goal adjustment, from Carnegie Mellon University. He has co-authored one paper and was involved in the writing of one research proposal; both are currently under review.

• Dr A DeLongis from the University of British Columbia, Canada, focusing on dyadic coping with chronic stress and illness. Dr DeLongis has co-authored two papers that are currently under review. In December 2009, she will visit our group to continue our collaboration.

• Dr B Thombs (McGill University and the Jewish General Hospital), focusing on measuring depressive symptoms in patients with somatic disease and developing and testing interventions that improve health management behavior among patients with depression. Dr Thombs has co-authored two papers with the group; one published in 2009, the other in press. We have a student exchange; two Master’s students will visit our group from September till December 2009.

• Dr AJ Mitchell (department of Psychiatry and department of Cancer & Molecular Medicine, Leicester) around the topic of screening. He has co-authored one submitted paper.

In addition, we have continued our collaboration with international colleagues, including Prof J Wardle, Prof A Steptoe (both from University College London, UK) and with Dr K Vedhara (University of Bristol / currently University of Nottingham, UK).

Guest researchers
Visits from researchers to HPR members:
• Prof J Wardle, University College London, UK
• Prof S Hampson, University of Surrey, UK
• Prof G Velikova, University of Leeds, UK
• Dr B Thombs, McGill University, Canada
• Dr K Vedhara, University of Bristol, UK
• Prof S Michie, University College London, UK

Strategy and policy
New international collaborations have been established based on shared research interests, as was recommended by the PRC. We started up new collaborations through visits of senior research staff to international research groups in 2007 (Carnegie Mellon University, University of British Columbia). This was followed by a visit of one PhD student to Carnegie Mellon University (Prof Helgeson) in 2008. In future, we need to promote international exchange more actively, not only for senior staff members, but also for PhD students.
4 Quality and scientific relevance

Most relevant results
Here we will discuss a selection of the findings of our research, for our distinct research themes.

Research theme: outcomes of disease and its treatment
We examined outcomes of disease and their treatments in multiple studies, with a strong focus on cancer and cardiovascular disease. In keeping with trends in the literature, we used increasingly advanced statistical techniques which resulted in more detailed knowledge. Detailed knowledge on the course of disease outcomes is needed for both tailoring psychological interventions to the needs of patients and for research examining the effectiveness of interventions. In a longitudinal study over an eight-years period, with cancer survivors and age-matched controls, Schroevers et al. (2004, 2006) showed that cancer had a lasting effect on physical symptoms, but not on depression and social functioning. Moreover, despite claims that patients experience positive outcomes, we did not find any differences between patients and controls with respect to positive changes in the self, social relations or life in general. We furthermore aimed at disentangling effects of the disease and effects of natural aging. Changes in quality of life domains over time seemed to be a result of aging rather than a result of the disease, as cancer patients increasingly resembled the control group over the course of eight years. An exception was found for physical symptoms in survivors aged 45-65 years compared to their age-matched counterparts, indicating that age differentially affects the course of physical symptoms.

Next, we examined the course of psychological distress among breast cancer patients and their partners during the first year after treatment was furthermore examined, was found in a longitudinal case-control study with nine assessment points every six weeks after surgery. Using multilevel analysis, we found that the patient group showed enhanced levels of distress compared to the controls, with peaks in distress shortly after surgery and after end of treatment. However, these differences were relatively small. Male partners did not show enhanced levels of distress compared to the male controls. This finding qualifies claims in the literature that cancer patients are extremely distressed as a result of their disease. The findings yielded useful results for the design of interventions.

Nsembling distinct trajectories among breast cancer patients during their treatment and six months thereafter. Following Helgeson et al. (2004), who also participated in this study, we used advanced statistical techniques that identified four distinct trajectories in non-specific psychological distress based on individual patterns over the various stages after diagnosis. There appeared to be a large group of women who experienced no distress at all (36%), a similarly large group that showed a pattern of recovery after the active treatment phase (33%), a small but substantial group that reported a delayed increase in distress in the reentry phase (15%) and a similarly sized group that was chronically distressed (15%) (Henselmans et al., in press, a).

Research theme: individual characteristics
One of the key concepts in this line is perceived control over life, in addition to personality traits like neuroticism. We examined the stability of control, its predictive value in relation to a number of outcomes and the underlying mechanisms. There are indications that perceived control may change over time, but results of its stability in the health context are scarce. We found that perceived control decreased in a group of elderly persons over an eight-year period, while at the same time disability increased. Perceived control was predictive of changes in disability, but the results were not very strong (Kempen et al., 2005). In a study among breast
cancer patients, we found that perceived control did not change as a result of the disease when compared to controls from the general population. It did change, however, in women receiving chemotherapy. One explanation for this is that chemotherapy is indicative of a worse prognosis; another explanation is that the side effects of chemotherapy may lead to lower perceptions of control.

Despite evidence showing that perceived control changed over time, most studies examining the role of perceived control have measured control after disease onset, and therefore it remained unknown whether adjustment to disease could be predicted by levels of control before disease onset. In a unique prospective design, we found that low levels of pre-morbid perceived control was predictive of depressive symptoms and anxiety one year after diagnosis, but not shortly after diagnosis. In other words, in the acute stage pre-morbid levels of control do not differentiate, but in the long term it is beneficial to patients (Van Jaarsveld et al., 2005). In the previously mentioned study of Henselmans et al. (in press, a) we found that perceived control was predictive of the four distinct trajectories of distress.

With respect to physical outcomes, we corroborated existing findings by showing that perceived control over life in general was not related to physical outcomes, while self-efficacy and perceived health competence was (Van Jaarsveld et al., 2005). In a study among COPD and heart failure patients, we extended this research by examining to which aspects of health in Wilson and Cleary’s conceptual model of health outcomes. We included four of the five levels of health outcomes that are distinguished in this model, i.e., physiological variables, physical symptoms (dyspnoea), physical functioning and general health perceptions. We found that perceived health competence was independently related to dyspnoea and general health perceptions in the two patient groups, after controlling for the other health outcomes, suggesting that control plays a role at different levels in the model, although the causal nature of this role could not be interfered on the basis of these data.

In 2004, we started a study examining the mechanisms underlying the role of perceived control in the adjustment to cancer. In the literature it has been documented that specific control beliefs may be adversely related to psychological outcomes because these beliefs may be disconfirmed, whereas others claim that it is beneficial, regardless the possibility to exert control. We found that control over cure was neither positively nor negatively related to psychological outcomes among women with breast cancer who were confronted with bad news, i.e., the prescription of chemotherapy. There rather seems to be a trend for control over cure to be more adaptive in women who received a chemotherapy prescription than in women who did not. Furthermore, control over cure was related to personality factors promoting resilience, including optimism and general perceptions of control (Henselmans et al., 2009). All in all, this study suggests that bad news does not seem to limit the adaptiveness of a belief in control over cure. In another paper of this study (Henselmans et al., in press, b), we examined cognitive and behavioral mediators in the relation between perceived control and psychological outcomes. Surprisingly little is known about how perceived control affects psychological outcomes of disease. We found that women with strong general control perceptions appraised cancer and their personal coping skills less negatively, which made them less vulnerable to distress after diagnosis. Furthermore, women with a strong sense of control seemed to regulate anxiety by remaining engaged in social life (meeting friends, not avoiding visits, paying attention to friends or family).

Research theme: social factors
The lab on social factors in dealing with illness has yielded a number of important results. First, a meta-analysis was conducted integrating existing findings on gender and role differences in distress found in couples coping with cancer, which was published in Psychological Bulletin
(Hagedoorn et al., 2008), the journal with the highest impact factor in the field of psychology. The results clearly indicate that differences in distress within couples can be ascribed to gender rather than the patient/partner role. Additional empirical work in this area has been published as well (Hinnen et al., 2008; Luttik et al., 2009; Tuinstra et al., 2004).

Second, we contributed to the existing literature by proposing and testing hypotheses on a dyadic level using the Actor Partner Interdependence Model (i.e., APIM) developed by Kenny and colleagues (2006). For example, we examined the sharing of emotions and thoughts within couples by observing conversations about cancer-related issues between patients and partners. We found that within male patient couples, the pattern in which the wife (partner) disclosed a lot while the husband (patient) was reluctant to disclose his feelings and thoughts was associated with distress in both patients and partners (Hagedoorn et al., under review).

Third, we studied how the social environment (i.e., partners, but also other patients) may motivate patients to improve or hinder self-management and enhance or decrease their emotional wellbeing, possibly depending on individual characteristics (e.g., regulatory focus and neuroticism). For example, in an intervention study among patients with diabetes, we found that overprotection by the partner was negatively associated with improvement in glycemic control (in women) and emotional wellbeing (Hagedoorn et al., 2006). Further findings were in line with the idea that overprotection decreases self-efficacy with respect to self-management, which in turn increases distress (Schokker et al., in press). We also studied the motivational effect of role models. Among patients with diabetes, we found that a positive role model (i.e., another patient who showed good diabetes management) was motivating for patients with a promotion focus (i.e., a tendency to strive for positive outcomes), while a negative role model (i.e., another patient who shows poor diabetes management) was motivating for those with a prevention focus (i.e., a tendency to prevent negative outcomes) (Schokker et al., paper invited to revise and resubmit). In another study, patients with cancer who were about to be treated with radiotherapy received one of three forms of information from other patients: about the procedure, the other patients’ emotions or their coping strategies. Information from role models was found to be most effective in terms of wellbeing if this information concerned procedures or coping strategies, especially when the recipients of the information scored high on neuroticism (Buunk et al., 2009; see also Bennenbroek et al., 2003).

Research theme: psychosocial screening and intervention
With respect to cancer we did several studies which supported evidence for effectiveness of various ways of intervening in (distressed) patients. A multidimensional rehabilitation program had statistically and clinically relevant beneficial effects on health-related quality of life, exercise capacity, and muscle force in cancer patients with different diagnoses (Van Weert et al., 2005). Furthermore, we studied patients in distress and their partners in a brief psychotherapeutic intervention. After the intervention, both patients and their partners reported lower levels of perceptions of underinvestment and overbenefit in the relation, and higher levels of relationship quality. Moreover, among patients psychological distress decreased after the intervention. These effects were generally maintained until follow-up three months later (Kuijer et al., 2004). In a third study the results supported our hypotheses and suggested that a self-management intervention (i.e., giving patients a booklet how to deal with various problems when coping with cancer) is relevant in reducing the relationship between control and illness uncertainty before radiotherapy and psychological distress after radiotherapy. This seems important, especially for high-risk patients who perceive little control and much illness uncertainty (Stiegelis et al., 2004).

In the area of diabetes we found evidence for the effectiveness of a rehabilitation program, for the importance of the role of the partner in the process of the rehabilitation and for the
Communication of Support

Together with a group of PhD students, she is working on a number of studies involving patients with a chronic illness (e.g., cancer, diabetes, or end stage renal disease) and their partners. One of the studies, COMST (Communication of Support and Adjusting to Cancer), was conducted to gain greater insight into how communication patterns between partners influence their wellbeing and satisfaction with the relationship after one of the partners has been diagnosed with colorectal cancer. In contrast to other forms of cancer, colorectal cancer is equally common among men and women. Given the differences in the way that men and women communicate, it is helpful to the study that both sexes are equally represented in this group of patients.

The study
Mariët Hagedoorn’s method for collecting and processing the data used in the COMST project was an unusual one. Patients participating in the study received a home visit from a psychologist. Both partners were asked to write down their cancer-related concerns (e.g., concerns about the future, feelings of guilt for not providing proper care and support, uncertainty about the best way to discuss the illness with children). Each partner then chose a subject, which was discussed with the other partner for ten minutes. The discussions were recorded on video, thereby revealing unique information about both partners. As well as analyzing their verbal behavior (e.g., do they disclose emotions, act dominant or withdraw from the conversation), it is also possible to analyze other aspects of the conversation, such as non-verbal communication. The recordings are studied to discover communication patterns. The aim of the project is to establish how these patterns relate to the level of satisfaction with the relationship and to distress. These latter variables were assessed several times in the first year after diagnosis.

Mariët Hagedoorn is a Professor of the Health Psychology Research program of the Graduate School for Health Research (SHARE). Her main research interests relate to the influence of chronic illness on social relationships, in particular the relationship between partners.
Some key findings
The results show that negative behavior has a long-term effect on the patient’s distress. Notably, a negative interaction affects only the wellbeing of the patient, not that of the partner. ‘Previous research has shown that good relationships can be distinguished from less good relationships by the tendency of people to suppress their impulse to react negatively to a negative action by their partner - a dominant comment, for example - and give a positive reaction for the sake of the relationship,’ Mariët explains. Not ‘paying back’ negative behavior with negative behavior appears to have a positive influence on the relationship and the level of satisfaction with it. It may be that negative behavior on the part of the patient does not affect the wellbeing of the healthy partner because the healthy partner is more forgiving towards the patient as a result of his/her illness.

The COMST study also provides an important contribution to the existing knowledge on emotional sharing. Mariët: ‘There is a widespread belief that sharing feelings and thoughts with other people in times of stress alleviates distress. However, previous research provided little empirical evidence to support this belief.’ The COMST study is unique in that it studied emotional disclosures of both partners and included couples with a male patient as well as couples with a female patient. Not surprisingly, more distressed patients and partners tended to engage in more self-disclosure about their cancer worries during the observational task. Importantly, it was shown that the association between self-disclosure and distress was moderated by disclosures of the other partner and gender. Specifically, in couples with a female patient, it was found that the more participants disclosed their emotions and thoughts, the more distress they reported. However, in couples with a male patient, both partners reported relatively high levels of distress if the female partner was high on disclosure while the husband diagnosed with cancer was reluctant to disclose his feelings and thoughts. These results suggest that sharing emotions may not be as beneficial as generally assumed.

Things to come
The response rate (20 to 30%) was not exceptionally high compared to other research. Mariët: ‘That’s quite normal in this type of study. It is more difficult to find two individuals in a relationship who are willing to participate because they must both agree to it.’ According to Mariët, patients may be reluctant to have their conversations recorded on video because they see this as an invasion of their privacy. This is compensated by the fact that the method provides a wealth of information. It is not only the couples’ words that are ‘on the record’ but also their behavior and facial expressions. In fact, a new PhD student, Meirav Dagan, will write her thesis on the associations between the couples’ nonverbal behavior and their adaptation over time.
need to screen for distress. We studied the effects and the role of facilitators of empowerment of a Multidisciplinary Intensive Education Program for diabetic patients with prolonged self-management difficulties. Patients improved in most HR-QoL domains, without any relapse at a later stage and participants no longer differed from the average outpatients in any outcome measure. Initially, the HbA1c of men and women improved equally, but at a later stage women consolidated improvement, whereas men relapsed. After the program patients became more empowered explaining additional variance in HR-QoL improvement (Keers et al., 2006). A further analysis of the data revealed that overprotection (a social support style) by the partner showed a negative association with improvement in diabetes self-management, especially for female patients (Hagedoorn et al., 2006). Another important issue that arose is that in regular care, patients’ needs with respect to glycemic control are recognized by their endocrinologist, but patients with high psychosocial diabetes-related distress are often overlooked, while they also may be in need of additional care. Integrated monitoring of diabetes-related distress in outpatients could improve this area of diabetes care (Keers, 2004). Hence, our program was effective but many patients might not be treated as a consequence of inadequate of surveillance of psychosocial problems in patients.

Finally, we were involved in a project led by the department of Cardiology in which the efficacy of two nurse-directed programs of different intensity for the counseling and follow-up of patients hospitalized for heart failure were compared with standard care by a cardiologist. Interestingly, neither moderate nor intensive disease management by a nurse specializing in management of patients with heart failure reduced the combined end points of death and hospitalization because of heart failure compared with standard follow-up. There was a non-significant, potentially relevant reduction in mortality, accompanied by a slight increase in the number of short hospitalizations in both intervention groups (Jaarsma et al., 2008).

References

Key publications (tc=times cited 1-8-2009)


   In this paper, a hierarchical model of quality of life, proposed by Spilker (1996), has been tested for several chronic conditions. The study showed that the model was useful for the conceptualization of the concept of quality of life. Moreover, it showed that the social and physical domains of quality of life exerted their influence on the overall quality of life through the psychological domain.


   The role of age in the long-term course of quality of life among cancer survivors (up to eight years after diagnosis) is described. The study shows that quality of life deteriorates more in elderly patients compared to younger patients. However, when taking into account an age and gender-matched control group, it appears that the impact of cancer is highest among younger cancer patients compared to older patients.

• Steverink N, Lindenberg S. Which social needs are important for subjective well-being? What happens to them with aging? Psychology and Aging 2006; 21:281-290. tc 11

   This study investigated how the satisfaction levels of affection, behavioral confirmation and status, as three human social needs, relate to age and physical loss as well as to subjective well-being in elderly persons. Results revealed that a) affection was relatively high, and status was relatively low in all age and loss groups; and b) the three needs relate differentially to indicators of subjective well-being: affection and behavioral confirmation relate positively to life satisfaction; status and behavioral confirmation relate positively to positive affect, and negatively to negative affect. The need for behavioral confirmation seems more difficult to satisfy with higher physical loss, but none of the three social needs becomes less important with advancing age.


   This paper presents a meta-analysis integrating existing findings concerning gender and role differences in distress found in couples coping with cancer. The results clearly indicate that differences in distress within couples can be ascribed to gender rather than the patient / partner role. The link between patient and partner distress was found to be moderate. Owing to a general lack of appropriate comparison groups, the question of how much of the distress can be ascribed to the cancer experience could not be answered satisfactorily. However, there are strong indications that elevations in distress are modest at best. The authors critically discuss the literature and provide suggestions for future research in order to address problems identified in our review as well as unanswered questions.

This paper describes the course of psychological distress among couples in whom the females were diagnosed with breast cancer and among control couples who were cancer free. The study, applying a multilevel analytic approach, showed that levels of psychological distress were slightly elevated during the active treatment period and declined thereafter, peaking directly at the end of treatment. While the study provided support for claims in the literature that distress peaked in specific periods, it also showed that the impact of cancer among couples facing breast cancer was at best moderate.

Most important books / book chapters


In this book (700 pages), a comprehensive overview is given of relevant themes, therapeutic approaches and specific interventions for a wide range of somatic diseases that are highly prevalent and / or have a major impact on the lives of patients who are suffering from these diseases. The book has received very positive reviews from health care professionals and has been adopted by a number of training / educational programs for health care psychologists in the Netherlands.


In this chapter, longitudinal research concerning the role of personality in the etiology of and survival from cancer is critically reviewed. Special attention is paid to methodological aspects that are important for this type of research. The results indicate that there is little evidence for the role of personality with respect to cancer onset and survival.


This chapter is included in a handbook for epidemiological researchers and deals with various issues concerning the development and testing of questionnaires, e.g., how to formulate questions and anwers, how to combine the two and the consequences for (face) validity reflected by questions and anwers, the use of scales and problems involved in scaling, translation of questionnaires, when to construct a new questionnaire and when to stay with existing (although possibly not always optimal) measures.
5 Quantity of scientific output

Publication strategy
To hold a position as a principal investigator within the UMCG, senior staff members (≥ 0.40 FTE research time in a fulltime position) need to have six publications over a timeframe of three years in journals that are in the top thirty percent within their field. The ultimate aim is to publish papers that are highly cited, which is obviously more likely when they are published in high-impact journals. Chances of being cited also increase when the research group is clearly recognizable, which can be achieved by publishing in a limited subset of scientific fields and publishing the core of our research in a defined set of relevant journals. In addition, we are visible at relevant conferences with paper and poster presentations, namely, the conferences of the European Health Psychology Society and the conferences of the International Psycho-Oncology Society.

To achieve our aims, we have identified a limited number of relevant scientific fields in the (S)SCI. Although our primary focus is health psychology, potentially relevant journals are distributed among different scientific fields. Within the selected fields, we have identified relevant journals within the top-thirty-percent. We have also identified relevant journals beyond this range, because these journals might be influential or relevant to our audience as well. An example of such journals is the British Journal of Health Psychology, which can be considered as an important journal within Europe in the field of health psychology, though it has not yet reached a position in the top thirty percent as of yet.

However, in general, we do explicitly target our research efforts to publishing papers in the top-thirty-percent journals. In order to get our papers accepted in these journals, we put a great deal of effort into developing the quality of our research and papers. We critically appraise a paper’s innovative value before deciding on the journal to which it will be submitted. Our aim is to find a match between content and quality of the paper, on the one hand, and the journal where we submit it for publication, on the other. This approach accelerates publication of relevant papers in relevant journals, resulting in an efficient dissemination of our work. If a paper is rejected by our first-choice journal, we next submit it to an alternative journal with a comparable scope. Most often we have been able to publish our papers in the journals of our first or second choice, hence, our current publication strategy has proven more efficient and successful when compared to the previous cycle; however, there is still room for improvement (see ‘Development and plans’).

Number of publications
Table 4 provides a description of several types of research output. An explanation of the types distinguished is given in chapter 1. Table 4 also gives the average number of top-30% articles per tenured staff member.

We have considerably improved our performance compared to the previous peer-review period. This is most evident for two indicators: (1) the number of top-thirty-percent publications in this review cycle for each staff member (average = 5.8 for each staff member a year) equals the total number of publications, regardless of impact factor of the journal, in the previous review cycle (average = 5.2 for each staff member year), and (2) the number and the proportion of papers published in top-ten-percent journals: 51 papers in the current review period (31.5%) versus 36 in the previous review period (22.5%). We could not compare top-thirty-percent publications for the two review cycles, because these data are not available for the previous cycle.

Inspection of our current output as depicted in Table 4 shows that the number of top-ten-percent and top-thirty-percent publications fluctuates over the years with the lowest number of these publications in 2005 and the highest in 2006. This is probably because of a random distribution of publications across these two years: some of the early publications in 2006
could just as well have been published in 2005. Still, top-thirty-percent publications constitute a considerable proportion of the total number of journals, ranging from 48% in 2005 to 76% in 2004 (average proportion = 67%). A relatively large proportion of these papers were published in top journals, as indicated by the number of papers in top-ten-percent journals (average proportion = 32% of all published papers). The number of top-thirty-percent publications per 0.40 FTE tenured staff (which equals the research time of a full time appointed tenured staff member) is high, ranging from 4.3 in 2005 and 2008 to 8.0 in 2006. This is well beyond the required average number of two top-thirty-percent publications in a year.

When we take a closer look at our publications, we can distinguish between publications from within our own research program and publications resulting from collaboration with other research groups. Publications originating from our own research program are defined as papers with an HPR member as the first, second or last author. Of the total number of top-thirty-percent papers, the percentage originating in our own research program varies from 63% - 73%, with an average proportion of 68%. On average 65% of all papers published in top-ten-percent journals originated in our own research program. The remaining papers originated in a collaboration with other research groups.

**Developments and plans**

To achieve our aims, we have applied different strategies that, given our output, have been proved successful. First, we have continued conducting research projects with methodologically strong designs aimed at contributing to existing knowledge by testing innovative theories and concepts, by maintaining high standards with respect to research designs and by application of advanced statistical techniques such as multilevel techniques. Second, we have put a great deal of effort into writing papers and into the supervision of PhD students writing papers. Third, we have benefited from collaboration with international colleagues in that it enabled us to adjust to often subtle cultural differences with respect to writing style and expression.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Output</th>
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<tbody>
<tr>
<td></td>
<td>2003</td>
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<tr>
<td>ISI articles</td>
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<tr>
<td>top-30%</td>
<td>15</td>
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<tr>
<td>other</td>
<td>8</td>
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<tr>
<td>Total</td>
<td>23</td>
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<tr>
<td>(top-10%)</td>
<td>(4)</td>
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<tr>
<td>Other refereed articles</td>
<td>2</td>
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<tr>
<td>Book chapters</td>
<td>2</td>
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<td>Books</td>
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<td>PhD theses</td>
<td>SHARE theses</td>
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<tr>
<td>Others, (co-)supervised</td>
<td>4</td>
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<tr>
<td># Top-30% articles per tenured staff member</td>
<td>5.7</td>
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</table>
In general, adopting a more international approach has been beneficial in that we are better informed about international developments within our field that are not yet reflected in scientific journals. Fourth, we believe that the international reputation that we have achieved over the years has also contributed to our papers’ being accepted in higher-impact journals.

For the immediate future, our aim is to continue our strategy to publish in top-thirty-percent journals and to have a larger proportion of these published in top-ten-percent journals. Critical factors for publications in top-ten-percent journals include the application of advanced multilevel techniques and innovative study designs with multiple assessment points (e.g., Hinnen et al., 2008), along with first authorship by a senior staff members (Hagedoorn et al., 2008). Therefore, to achieve our aim with respect to top-ten-percent journals, we will continue pursuing our current strategies as described above. In addition, in order to fulfill our ambitions, an important prerequisite is that senior staff, including tenured staff, should be given protected time to write papers as a first author, in addition to their teaching, training and management tasks. A considerably large percentage of publications are now being written by PhD students who are first authors under the mentorship and supervision of senior staff members. We will continue encouraging publications by PhD students – which reflects research practice concerning PhD theses in the Netherlands – but at the same time senior staff members will put more effort into writing publications as a first author. We believe that high-impact systematic reviews, and theoretical and methodological papers require the kinds of senior staff input consistent with first authorship. We will strategize how to gain the necessary protected time for first authored papers by senior staff, as we have strategized with grants and senior fellowships, and we are examining how this goal has been achieved elsewhere.
6 Earning capacity

Fund-raising strategy
With limited tenured staff, funding from third-party organizations and the university is needed in order to carry out our research. Given our emphasis on adjustment to chronic illness, funding is best derived mostly from external charity funds for chronic disease, including the Dutch Cancer Society and Dutch Heart Foundation. Most of these organizations have earmarked financial resources for psychosocial research, although this area is sometimes very broadly defined, with funded projects ranging from psychological research to epidemiological research. A prerequisite for funding is collaboration with medical disciplines and disease-specific perspectives, which is well developed within the HPR program. As to the content, research focusing on care interventions and theory-based research, which in the end is beneficial for the care of the chronically ill, is important in order to acquire funding. The HPR program has strongly invested in collaboration with clinical departments in the UMCG, not only at a logistical level but also at a scientific level. This multidisciplinary approach has proven successful in acquiring funding from third-party organizations. A quite unique result is that funding has been received from all the major third-party organizations that fund research on chronic disease, as can be seen in the overview of our projects.

To achieve our aims with respect to funding, we follow a twofold strategy: On the one hand we generate research questions based on our own research agenda, while we respond to opportunities offered by third party funding on the other. Special effort has been put into further development of the intervention research line, which has turned out to be a success. Senior researchers within the program are held responsible for the acquisition of new projects within their own field of expertise.

Results
The HPR program has proven successful in obtaining external funding for large research projects, which has meant a continuation of our achievements during the previous review cycle. From 2005-2007, there was a temporary reversion of external funding, which probably reflected the limited magnitude of tenured staff, which was rather low in the previous years; in 2008, however, we re-established our levels of 2003 and 2004. Funding has been received from all the relevant charity funds supporting research among our patient groups, including the Dutch Cancer Society, Dutch Heart Foundation, Asthma Foundation, Diabetes Foundation and the Dutch Kidney Foundation. The Dutch Cancer Society funded eight of the 14 externally funded projects, which reflects recognition of our research in the field of psycho-oncology.

Table 5 provides a list of the major research projects (> €100,000), classified by funder.

Table 5  Major projects acquired

<table>
<thead>
<tr>
<th>Dutch Cancer Society</th>
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<tbody>
<tr>
<td>• Meaning in life as a response to the trauma of cancer - an integration of coping theory, trauma theory and existential theory</td>
</tr>
<tr>
<td>• Interpersonal factors and adjustment to cancer</td>
</tr>
<tr>
<td>• Adaptation to cancer from an attachment theoretical perspective</td>
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<tr>
<td>• The interactive process of coping with curative colorectal cancer in intimate relationships: Support interaction patterns and psychological adjustment.</td>
</tr>
<tr>
<td>• Feelings of control and Adjustment to breast Cancer during the course of Treatment (FACT)</td>
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<tr>
<td>• Quality of life of testicular cancer survivors</td>
</tr>
<tr>
<td>• The impact of parental cancer on children</td>
</tr>
<tr>
<td>• Problem-solving therapy to reduce distress in patients with cancer: a randomized clinical trial and investigation of mechanisms of change</td>
</tr>
<tr>
<td>Foundation</td>
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<td>------------</td>
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<tr>
<td>Asthma Foundation</td>
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</tbody>
</table>
| Dutch Heart Foundation | • Long-term adaptation to cardiac disease in the elderly (LACE)  
• Implementation screening and interventions for people with coronary heart disease and heart failure |
| Diabetes Foundation | • Integrated psychological treatment for diabetes burnout |
| Dutch Kidney Foundation | • Development and evaluation of a psychological intervention to enhance adjustment to renal transplantation |
| Province Friesland and Healthcare Insurance Company ‘De Friesland’ | • Frail elderly patients in the hospital |
| RUG / UMCG | • Chronic heart failure, adherence to treatment guidelines and quality of life  
• The effect of psychosocial factors on the quality of life of patients with a chronic illness  
• Socioeconomic status and the outcomes of chronic diseases  
• Assessment of the nutritional state and treatment related symptoms of children with cancer, and the impact on health related quality of life  
• Supportive communication within couples coping with cancer  
• Dyadic coping with renal dialysis and renal transplantation  
• Sex differences in caregiving distress: the effects of role identity, self-theories, and feedback  
• The effects of an intensive Diabetes Education Programme on metabolic control, diabetes related health behaviour and quality of life: a comparison with conventional care  
• Diabetes education: undermining and promoting effects of self-adopted therapy goals and partner behaviour  
• Psychosocial predictors for adjustment to renal transplant  
• An investigation of social support, self-management and well-being in rheumatoid arthritis: A 12 year follow-up and cross-sectional study among patients and their partners |

A closer look at our research projects shows that half of the research projects during the review period were funded by third-party organizations, while the other half of the research projects were funded by the university. The number of research projects funded by the university reflects the recognition of our research performance: A number of research projects funded by the university were awarded to our group because of our very good performance during the previous review period. Other university-funded research projects concern PhD projects of professionals working in health care practice, who are supervised by tenured staff members from our group.
Strategy and plans
The number of research projects and PhD trajectories is good given the number of tenured staff members. While the comparable proportion of internally funded projects compared to externally funded projects reflects the recognition of our research group by the UMCG and the University of Groningen, it is our aim in the next few years to increase the number of externally funded projects.
7 Academic reputation

The previous peer review of the Health Psychology Research program has resulted in a positive rating of the program for the 1997-2002 period, with ‘very good’ qualifications in all fields and a ‘very good-to-excellent’ rating with respect to the output. The Peer Review Committee indicated that the program was likely to become a major international player in the field. We have improved our performance considerably compared to the previous peer-review period (see Section 5), which is, among other things, evident in both the number and the proportion of papers published in top-ten-percent journals. Papers have been published in top journals, including Psychological Bulletin, Health Psychology, and Annals of Behavioral Medicine. Although not included in the current review period, the output in 2009 so far seems to confirm this upward trend with (forthcoming) papers in Health Psychology, Chest, and Annals of Behavioral Medicine.

Prominence of the program director and other staff

Prof Ranchor, is professor of Health Psychology. She is director of the Health Psychology Research program and head of the individual characteristics lab, one of the three labs in the HPR program. The focus of her research is on understanding the role of individual characteristics in the adjustment to chronic illness, in close collaboration with researchers from clinical departments. She is currently a member of the Committee of Social Oncology Research of the Dutch Cancer Society, an associate editor of the British Journal of Health Psychology, and she initiated the founding of a Dutch working group on psychosocial nephrology, together with Dr S van Dijk from the LUMC and with support from the Dutch Kidney Foundation.

Prof Hagedoorn, is professor of Health Psychology. She is head of the social factors lab, one of the three labs in the HPR program. The focus of her research is adjustment to chronic illness from a relational perspective. This includes not only examination of the role of social relationships in patients’ adjustment but also studies on the impact of illness on close others and couples’ functioning, along with the interplay of individual and social factors on patients’ and close others’ adjustment. This research is carried out in close collaboration with researchers from clinical departments and the department of psychology (Faculty of Behavioral and Social Sciences). She is a member of the international network of researchers (including Prof G Bodenmann; Dr N Bolger; Prof JC Coyne; Dr A DeLongis; Prof T Revenson) who work in the field of stress and coping within couples.

Prof Sanderman, is full professor of Health Psychology and was trained as a clinical psychologist. The focus of his research is on psychological and social adaptive processes in patients with a chronic somatic disease (e.g., cancer, diabetes, heart failure and COPD). He has been president of a number of organizations within our field (Behavioral Medicine, Psycho-oncology) and is frequently asked to chair symposiums and meetings. He is chair of the Board of the Dutch Insitute for Psychology and Health and became fellow of the European Health Psychology Society. He supervised students in wide area of topics; since 1994 25 PhD students completed and defended their thesis and another 15 are under way. Since 1997 he is director of NCH and later SHARE.

Dr Bouma is a medical sociologist and has been involved in many multidisciplinary research projects. His most recent research topics are in the field of Diabetes, Dermatology, Head & Neck Cancer and Rheumatology (children), focusing on the effects of interventions on QoL and factors predicting (differences in) adaptation to chronic diseases. The majority of his time (70%) is spent working as a coordinator for the Science Shop for Health Care of the UMCG. Science Shops are organizations created as mediators between citizen groups (trade unions,
pressure groups, non-profit organizations, social groups, environmentalists, consumers, residents associations) and research institutions (universities, independent research facilities). Because of this twofold appointment, the HPR program also enjoys good contact with the society at large.

Dr Steverink is an accomplished researcher in psycho-gerontology and medical sociology. In her research program she examines the causes and consequences of social and physical well-being in a life span perspective, with a special focus on the second half of life. Core topics in this program include theory-development and testing of hypotheses in the realm of ‘successful aging’, the development and testing of measurement instruments, and the design, testing and implementation of interventions. Her line of research is acknowledged as one of the leading lines in the field of Social Gerontology in the Netherlands. She is frequently invited for symposia and workshops, both nationally and internationally. She currently is member of the Editorial Board of the European Journal of Ageing.

Prof Coyne, is professor at the University of Pennsylvania and honorary professor of Health Psychology at the department of Health Sciences of the UMCG. He is a clinical health psychologist, licensed to practice in the US. Being an organizer and boundary spanner in a large international network of collaborators allows him to be unusually productive and to bring other faculty into collaborative projects. He has published over 300 papers, many of them citation classics, and he has been identified by the Institute for Scientific Information (ISI) Web of Science as one of the 225 most cited psychologists and psychiatrists in the world. In the past he has made major contributions to stress and coping theory, interpersonal aspects of depression, coping with mental and physical illness, and mental health services research. His most recent work now focuses on data synthesis in narrative and meta-analytic reviews, screening for distress and depression in general medical settings, clinical trial methodology, and adaptation to cancer.

Prizes
• Dr F Gerritzen price for PhD-thesis in the field of Diabetes awarded by the Diabetes Foundation (Keers)

Awards
• Fellowship, Dutch Cancer Society (Fleer)
• Honorary Fellow of the European Health Psychology Society (EHPS) (Sanderman)

Conference-organizational activities
• Co-organizer of the 8th National Conference of the Dutch Gerontological Society (Steverink)
• Member of organization committee of Dutch Conference on Psychology and Health (Ranchor)
• Multiple symposiums organized at national and international conferences, e.g., European Health Psychology Society and Dutch Gerontological Society (Hagedoorn, Steverink)
Editorships

- Member of the Editorial Board of the British Journal of Health Psychology (Ranchor; as of March 2009 renamed Associate Editor, British Journal of Health Psychology)
- Member of the Scholarly Board of the British Journal of Health Psychology (Fleer, Schroevers)
- Member of the Editorial Board of the European Journal of Ageing (Steverink)
- Member of Editorial Board Dutch Journal of Psychosocial Oncology (Fleer, Hagedoorn)
- Member of Editorial Board Dutch Journal of Behavioral Medicine (Sanderman, Schroevers)

Membership of academies and committees

- Chair of the Board of the Dutch Research Institute of Psychology and Health (Sanderman)
- Chair of the Dutch Working Group on Psychosocial Aspects of Diabetes (Keers)
- Co-chairperson of the Expert Group on Adjustment to Chronic Illness of the Dutch Research Institute of Psychology and Health (Ranchor)
- Member of advisory committee on education and counseling of the Dutch Diabetes Federation (Keers)
- Member of the Educational Committee of the Research Master Clinical and Psychosocial Epidemiology (Hagedoorn)
- Member and vice-chairperson of the Education Committee of the Dutch Research Institute of Psychology and Health (Ranchor)
- Member of the Education Committee of the Graduate School for Health Research SHARE (Ranchor)
- Member of the Board of the Dutch Gerontological Society (Steverink)
- Member of the Research Advisory Board UMCG (Ranchor)
- Member and vice-chairperson of the Committee for Social Oncology Research of the Dutch Cancer Society (Sanderman)
- Member of the Committee for Social Oncology Research of the Dutch Cancer Society (Ranchor)
- Member of the Scientific Advisory Committee of the Consumer Quality-Index (CQ-Index) in the Netherlands, (Sanderman)
- Member of the working group Guidelines for Oncology Rehabilitation (Ranchor)
- President of the Dutch Behavioral Medicine Federation (Sanderman);
- President of the Dutch Society of Psychosocial Oncology (Sanderman)
- Secretary of the Dutch Working Group on Health Status Assessment (Ranchor)
8 Societal relevance

Because of improved medical treatments and the aging of the population, an increasing number of people will have to live with a chronic illness. Chronic illness can be considered as a major intrusion on people’s lives, requiring them to adjust to their disease condition. Our main objective, gaining insight into the psychological processes underlying adaptation to disease in order to help people adjust, therefore is addressing an issue that is becoming increasingly relevant to the population. Moreover, by designing and developing interventions for the chronically ill, we are actively contributing to the psychosocial care needed to help people overcome problems with their disease. While psychological problems, including depression, are a major clinical problem for those who are actually experiencing these problems, they also have serious medical consequences. For example, in one of our ongoing studies we found that depression was a predictor of survival among patients with COPD (De Voogd et al., 2009).

Similar to other countries, one of the main debates in Dutch society concerns the aging of the population and its effects on among other things health care. The UMCG has adopted Healthy Aging as the main research focus for the next few years. Aging is one of the research themes within the HPR program, that is marked among other things by the Groningen Longitudinal Aging Study (GLAS) focusing on psychological and social predictors of quality of life of the elderly and the research of Dr Steverink into theoretical understanding of healthy aging and the development and implementation of self-management interventions for the elderly.

Psychological interventions for patients with somatic disease are carried out as part of an outpatient clinic (ambulatorium) for psychological care within the UMCG. An additional societal relevance lies in the training of health care psychologists as part of the ambulatorium.

In our research, we increasingly integrate the perspective of patients by organizing focus groups as part of longitudinal studies and by involving patients in our studies as researchers or advisors.

Our societal relevance is also indicated by the publications in Dutch found in journals, along with book chapters, which are frequently read by health care professionals. By publishing in Dutch, we actively contribute to the dissemination of new knowledge to those who are actually using this knowledge in practice. We have also (co-)edited two authoritative books in Dutch for use in clinical practice: Psychological interventions for chronic-somatic patients (Pool, Heuvel, Ranchor & Sanderman, 2004) and Handbook of Psycho-oncology (De Haes, Gualtherie van Weezel & Sanderman, 2009).
9 Vitality and feasibility

Evaluation of the previous committee’s recommendations
In Section 1 we already addressed the recommendations of the previous PRC. So, to sum them all up:
1 We have paid careful attention to what the PRC considered were strong points of the HPR program and have continued these, including our close collaboration with other research groups within SHARE and clinical groups within the UMCG, as well as taking on highly able non-tenured staff and PhD students in order to compensate for the limited number of tenured staff.
2 We have followed the recommendation of the PRC to more actively pursue international collaboration based on shared scientific interests. This has resulted in a number of structural and fruitful international collaborations as evidenced by joint publications. However, international collaborations have most often been limited to senior staff members; in the near future, we will be actively promoting international experience for our PhD students.
3 We followed the recommendation of the PRC that we decide on whether to publish in either medical or in psychological journals. We have decided to focus on the latter because those journals are a better fit for our research profile.
4 We considered the recommendation of the PRC that we choose between either the theoretical or the intervention research line, but have decided to continue both lines because both are considered as relevant for our ultimate mission. This has proven to be a wise decision, because both research lines are flourishing and mutually fostering. As we had indicated in the previous self-assessment, we wanted to develop the intervention research line further, which at that time was mostly focused on psychological and social mechanisms of change. Since then, the intervention line has evolved into a vital part of the program covering a number of research projects aimed at developing and evaluating psychological interventions for all somatic diseases under study in the HPR program and – quite uniquely - is funded by all major third-party charity organizations in the Netherlands that fund psychosocial research among chronically ill. At the same time, we successfully realized our ambition as mentioned in the previous self-evaluation, to develop psychosocial research in the field of nephrology, which at that time was an underresearched topic in the Netherlands. We set up two PhD projects, one among renal transplantation patients and one among their partners. In addition, one intervention project for renal transplantation patients was granted. We have noted, however, that charity funding organizations do tend to prioritize intervention research over theoretical research. With respect to our future research plans, we will need to develop a strategy to address this factor.

SWOT analysis
We performed a thorough analysis of our strengths, weaknesses, opportunities and strengths, which are listed here:

Strengths
• Dedicated group of researchers within the program
• Integration of theoretical and clinical perspectives in our research questions
• Distinct research lines that are mutually fostering, resulting in a focused yet diverse program
• Good collaboration with clinical research groups within the UMCG
• Good collaboration with national and international researchers held in high regard.
Weaknesses
- Relatively small group of tenured staff members who are responsible for managing a relatively large number of research projects, along with the training and supervision of junior researchers.
- Little protected time for senior staff members in order to write their own publications as compared to the time devoted to management, supervision and teaching tasks.

Opportunities
- The societal relevance of our mission and research topics.
- Earmarked budgets for psychosocial aspects and specific focus on psychosocial aspects of chronic diseases, including the Dutch Heart Foundation and Dutch Kidney Foundation.
- The LifeLines study in the UMCG, with space dedicated to the assessment of psychosocial aspects offers, on the one hand, the opportunity to answer our current research questions in advanced prospective designs with large samples and, on the other, to extend the focus of our research questions, for example, by studying the role of psychological and social factors in the onset of and survival from disease.
- Tenure-track system in the UMCG with the possibility of attracting talented postdocs to a tenured position.

Threats
- Due to the economic crisis, the financial budgets of charities have decreased.
- Because of our location in the northern part of the Netherlands, it is sometimes difficult to attract new, ambitious postdoc researchers.

Strategy
Our main objective is to gain insights that are useful in resolving the psychological problems experienced by people with chronic somatic illness. To achieve this, we have fulfilled a number of important prerequisites needed to carry out our research, including a focused research program and collaboration with relevant groups and individuals. In order to fully utilize the opportunities we have to ensure that tenured staff will have more time to first-author future publications. In addition, we have to make use of the opportunity to take on talented postdocs into a tenured position. This will help to increase the magnitude of tenured staff. The decrease of financial budgets of charity funds forces us to develop competitive research, which we consider as an interesting challenge for the immediate future. Continuing our focus on high quality research on the one hand and broadening our research themes while still maintaining our main research themes, such that there are more possible funding organizations, are ways to achieve this. We will address the SWOT-analysis and possible strategies in a retreat meeting in the immediate future, with faculty members and other senior staff members. Moreover, to stay tuned we will organize follow-up meetings in the next few years. These retreat meetings are an addition to biweekly meetings we have with all senior staff members, where we discuss current and future plans as well as strategic issues including publication strategy and collaborations.
10 Next generation

Future perspectives: training of junior researchers
The HPR program has a long-held tradition in the training and supervision of junior researchers, both at the MA and the PhD levels. Training at the MA level takes place within the Research Master Clinical and Psychosocial Epidemiology, where we teach different courses on (health) psychology and supervise individual students in their research for their Master’s thesis. We also contribute to the supervision of Master’s students from the department of Psychology of the University of Groningen, mostly Social Psychology and Clinical Psychology.

We contribute to the training of PhD students in two ways: first, by teaching activities within SHARE. A clear example of this is the Scientific Writing Course, in which several members of the HPR program participate as teachers and coaches. Second and most importantly, however, we contribute to the training of PhD students by acting as supervisors. PhD students are hosted both by the department of Health Sciences and by other departments within the UMCG or other health care institutions.

Tenured staff is responsible for the supervision of these PhD students, most often supported by a postdoc or senior researcher. A great deal of effort is put into supervision. The most important tool is critical discussion and interaction during several types of meetings:

- Biweekly research meetings with all members of the HPR program: PhD students and senior staff present their work and learn from the work of their fellow PhD students and senior staff as well.
- Weekly or biweekly lab meetings with all members of a specific lab, including MA students, PhD students, postdocs and senior staff: The aim is to deepen knowledge with respect to the specific theme of the lab, on the one hand, and to broaden knowledge with respect to related themes and methodological issues, on the other.
- Project meetings: discussion of all practical and scientific issues concerning the execution of the projects with all project members involved, including supporting staff. The frequency of these meetings varies over the course of the project, depending on the phase the project is in. When a study is being set up, the frequency is usually higher than when the study is actually being carried out.
- Individual meetings between PhD students and the daily supervisor: meetings upon demand, mostly concerning scientific issues in the stage of writing.
- During the course of the project, PhD students consult the methodological and statistical consultant affiliated to the program (Dr van Sonderen), a specialized research assistant with respect to logistics of the project (Ans Smink, MSc) and the documentalist of SHARE (Truus van Ittersum).

Future perspectives: research developments
Although we have a focused research program, research themes are continuously evolving with a shift in focus within existing research themes along with new research themes emerging. During the current peer-review period, new developments as described below have been set in motion, but the results are not yet visible.

- Development and evaluation of psychological interventions for chronically ill patients will be continued over the next few years. In fact, we have three issues we are focusing on within this line of research: (1) the effects of several short-term interventions for patients with cancer, diabetes and heart failure, (2) process evaluation of therapies, looking into treatment integrity and specific and non-specific factors within therapeutic sessions and, related to this, (3) research on screening for psychological problems in clinical practice with the aim of identifying patients in need of psychosocial care.
- For successful implementation in health care practice, economic evaluations are needed in addition to evaluations of the effectiveness of psychological interventions. Such analyses
are, however, most often ignored. Cost-utility of psychological interventions will be routinely conducted in collaboration with Prof Erik Buskens from the department of Clinical Epidemiology. Moreover, utility assessments for mental health states to be used in cost-utility analyses will be developed and evaluated.

- Within the HPR program, individual and social characteristics have most often been studied as predictors of adjustment to chronic illness. We will elaborate on our research by relating these factors to survival, along with the psychological outcomes of adjustment, including depression. Recently, two papers on the role of depression in surviving COPD have been accepted and published in major journals. The LifeLines study of the UMCG offers the unique opportunity to further examine these issues.

- Research with respect to the role of social factors has been extended over the last five years from cancer to diabetes and renal disease. These lines will be continued and developed further, using state-of-the-art techniques such as multi-level analyses to test Actor Partner Interdependence Models (i.e., dyadic data analyses to examine adaptation on a couple level) and different research approaches such as experimental designs and observation methods.

**Strategy**

To reflect on scientific developments, we will be planning a retreat along with a number of meetings with senior staff during which we will discuss future directions in the program both with respect to focus and research themes, and to strategic issues, including publication strategy and future collaborations.
Refereed articles in ISI journals

2003


** van Yperen N, Hagedoorn M. Do high job demands increase intrinsic motivation or fatigue or both? The role of job control and job social support. *Academy of Management Journal* 2003; 46:339-348.


** van Yperen N, Hagedoorn M. Do high job demands increase intrinsic motivation or fatigue or both? The role of job control and job social support. *Academy of Management Journal* 2003; 46:339-348.


2004


** top-10% article  * top-30% article


** van Coevorden AM, Kamphof WG, van Sonderen E, Bruynzeel DP, Coenraads PJ. Comparison of oral psoralen-UV-A with a portable tanning unit at home vs hospital-administered bath psoralen-UV-A in patients with chronic hand eczema: an open-label randomized controlled trial of efficacy. *Archives of Dermatology* 2004; 140:1463-1466.


2005


** top-10% article  * top-30% article


** 2006


Bernsen RAJA, de Jager AEJ, van der Meche FGA, Suurmeijer TPBM. The effects of Guillain-Barre syndrome on the close relatives of patients during the first year. *Journal of the Neurological Sciences* 2006; 244:69-75.


** top-10% article  * top-30% article


** Sanderman R, Coyne JC, Rancho AV. Age: Nuisance variable to be eliminated with statistical control or important concern? *Patient Education and Counseling* 2006; 61:315-316.


* Steverink N, Lindenberg S. Which social needs are important for subjective well-being? What happens to them with aging? *Psychology and Aging* 2006; 21:281-290.


2007


** top-10% article  * top-30% article


Kremers IP, Steverink N, Albersnagel FA, Slaets JPJ. Single older women who applied for the giving life more lustre course: Are they the target group that was aimed for? *Educational Gerontology* 2007; 33:45-61.


2008


** top-10% article  * top-30% article


** top-10% article  * top-30% article


Refereed articles in non-ISI journals

2003


2004


2005


2006


2007


2008


Steverink N, Lindenberg S. Do good self-managers have less physical and social resource deficits and more well-being in later life? European Journal of Ageing 2008; 5:181-190.
**Book chapters**

**2003**


**2004**


**2006**


2007


van Sonderen FLP, Sanderman R. Het maken en beoordelen van vragenlijsten. In: Plochg T, Juttmann RE, 
Klazinga NS, Mackenbach JP (eds). Handboek gezondheidszorgonderzoek. Houten, Bohn Stafleu van Loghum, 

2008


Sanderman R, Ranchor AV, Schaap C. Aanpassingsstoornissen. In: Vandereycken W, Hoogduin CAL, 

Books

2003


2004


PhD theses (co)supervised

2003

• Pool G. Surviving testicular cancer; sexuality and other existential issues. 
Supervisors: prof HBM van de Wiel, prof DTh Sleijfer, prof HJ Hoekstra 
Co-supervisor: dr MF van Driel

• Stiegelis HE. A life less ordinary; cognitive adaptation and psychological functioning among cancer patients 
treated with radiotherapy. 
Supervisors: prof R Sanderman, prof AP Buunk 
Co-supervisor: dr M Hagedoorn

2004

• Arnold R. Quality of life in chronic obstructive pulmonary disease and chronic heart failure: disease-specific and 
generic factors in adaptation to illness. 
Supervisors: prof R Sanderman, Prof. GH Koëter 
Co-supervisors: dr AV Ranchor, dr MJL de Jongste

• Keers JC. Diabetes rehabilitation; effects and utilisation of a Multiprofessional Intensive Education Programma. 
Supervisors: prof R Sanderman, prof ROB Gans 
Co-supervisors: dr J Bouma, dr TP Links

2006

• Dobre D. Treatment of heart failure and patient outcomes in real life. 
Supervisors: prof FM Haaiejer-Ruskamp, prof R Sanderman, prof DJ van Veldhuisen 
Co-supervisors: dr AV Ranchor, dr MJL de Jongste

Elzen HA. Self-management for chronically ill older people. 
Supervisors: prof JPJ Slaets, prof TAB Snijders 
Co-supervisor: dr N Steverink

• SHARE thesis (All theses: University Medical Center Groningen, University of Groningen, unless otherwise stated)