Zurich Open Repository and Archive
University of Zurich
Main Library
Strickhofstrasse 39
CH-8057 Zurich
www.zora.uzh.ch

Year: 2014

Mental health and multimorbidity: psychosocial adjustment as an important process for quality of life

Schulze, Thekla ; Maercker, Andreas ; Horn, Andrea B

Abstract: BACKGROUND: Multimorbidity (the co-occurrence of two or more chronic diseases) can be seen as a prototypical situation in which psychosocial adjustment is required. Even though most patients adapt successfully, a significant number of individuals show adaptation problems and develop additional mental health problems. OBJECTIVE: For this reason, this article focuses on the importance of psychosocial adaptation as a core process in the context of quality of life. RESULTS: Important findings pointing at the association between multimorbidity and mental health are summarized, and the stress-response perspective on psychosocial adjustment is introduced. Furthermore, cognitive-affective processing of the disease (in the context of illness perceptions) and interpersonal emotion regulation are presented as relevant examples for processes involved in psychological adaptation to multimorbidity. As an intervention possibility, expressive writing is given as a feasible example. CONCLUSION: Viewing adjustment problems to multimorbidity from a stress-response perspective offers a framework for a deeper understanding of core processes regarding multimorbidity and quality of life that is not only important for research but also for clinical practice. This article ends with a general summary and an outlook on clinical implications of the introduced stress-response concept of adjustment to multimorbidity.

DOI: https://doi.org/10.1159/000358559

Posted at the Zurich Open Repository and Archive, University of Zurich
ZORA URL: https://doi.org/10.5167/uzh-96334
Journal Article
Published Version

Originally published at:
Schulze, Thekla; Maercker, Andreas; Horn, Andrea B (2014). Mental health and multimorbidity: psychosocial adjustment as an important process for quality of life. Gerontology, 60(3):249-254.
DOI: https://doi.org/10.1159/000358559

Bridging the Gap between Clinical and Behavioural Gerontology
Part II: Quality of Life in Multimorbidity

Gerontology

Gerontology 2014;60:249–254
DOI: 10.1159/000358559

Received: October 15, 2013
Accepted: January 13, 2014
Published online: February 28, 2014

Mental Health and Multimorbidity: Psychosocial Adjustment as an Important Process for Quality of Life

Thekla Schulze Andreas Maercker Andrea B. Horn

Department of Psychopathology and Clinical Intervention, University of Zurich, Zurich, Switzerland

Key Words
Multimorbidity · Mental health · Chronic illness · Psychosocial adjustment · Stress-response syndrome · Quality of life

Abstract
Background: Multimorbidity (the co-occurrence of two or more chronic diseases) can be seen as a prototypical situation in which psychosocial adjustment is required. Even though most patients adapt successfully, a significant number of individuals show adaptation problems and develop additional mental health problems. ***Objective:*** For this reason, this article focuses on the importance of psychosocial adaptation as a core process in the context of quality of life. ***Results:*** Important findings pointing at the association between multimorbidity and mental health are summarized, and the stress-response perspective on psychosocial adjustment is introduced. Furthermore, cognitive-affective processing of the disease (in the context of illness perceptions) and interpersonal emotion regulation are presented as relevant examples for processes involved in psychological adaptation to multimorbidity. As an intervention possibility, expressive writing is given as a feasible example. ***Conclusion:*** Viewing adjustment problems to multimorbidity from a stress-response perspective offers a framework for a deeper understanding of core processes regarding multimorbidity and quality of life that is not only important for research but also for clinical practice. This article ends with a general summary and an outlook on clinical implications of the introduced stress-response concept of adjustment to multimorbidity.
© 2014 S. Karger AG, Basel

Multimorbidity and Its Relationship to Mental Health

'My health problems like my cardiac infarction, my thyroid dysfunction and my virus infection, are the reasons why I'm not able to pursue my work anymore.' The patient starts to cry: 'I'm in that mood for a long time. I'm often really upset, because nothing is like it used to be.'

This statement by a patient with multimorbidity is an example of an individual challenge to adapt to a complex health situation. The presence of more than one long-term disorder is associated with many negative health consequences including disability, mental illness, a greater use of healthcare resources and a poorer quality of life [1]. Multimorbidity has pronounced mental health consequences that are crucial for the quality of life of the patient.

KARGER

E-Mail karger@karger.com
www.karger.com/ger

© 2014 S. Karger AG, Basel
0304–324X/14/0603–0249$39.50/0

Dr. Andrea B. Horn
Department of Psychopathology and Clinical Intervention, University of Zurich
Binzmühlestrasse 14
CH–8050 Zurich (Switzerland)
E-Mail a.horn@psychologie.uzh.ch

Downloaded by:
Universität Zürich, Zentralbibliothek Zürich
130.60.47.22 - 5/27/2016 3:57:13 PM

Multimorbidity requires psychosocial adjustment to a stressful situation that sometimes fails. Most individuals adapt well to the demanding situation; however, high levels of quality of life in spite of the challenging multimorbid situation will not occur without successful psychosocial adaptation. Mental health consequences may not be recognized at first sight in the somatic medical setting, but besides its impact on quality of life it furthermore shows relevant associations with the course of disease and even mortality [2]. Thus, the search of indicators of successful or failed adaptation to multimorbidity and its integration in the view on quality of life is highly relevant.

The aim of this paper is to give a short overview of the relevance of psychological adaptation and the elevated risk for mental health problems in multimorbidity. Recent suggestions for a stress-response perspective on psychological adjustment [3] are promising in order to get a better understanding of the processes involved and how they might be intervened. Furthermore, the importance of cognitive-affective processing of the multimorbid situation is highlighted. As examples that seem particularly interesting in this context, illness perceptions and the possibility of fostering adaptive coping processes through expressive writing are briefly introduced.

When Psychological Adjustment Fails

Adjustment disorder is defined as a state of subjective distress and emotional disturbance characterized as a maladaptive reaction to identifiable stressors or changes in life circumstances. In contrast to depression there is a clear etiological assumption implied in the concept of adjustment disorder: adjustment disorder is defined as a maladaptive reaction to a stressor. In the ICD-10 [4] it is proposed that there should be strong, though possibly presumptive, evidence that the disorder would not have occurred without the stressor (in this case the physical disease). In the DSM-5 [5] any other mental disorder diagnosis is an exclusion criterion for the disorder. Psychological adjustment problems are characterized by emotional impairment, subjective stress and social dysfunction [6]. Depression, anxiety, a feeling of loss of control and a loss of coping ability may be manifestations of the disorder [7]. Adjustment disorders are often found in patients with chronic physical illnesses. Compared to the general population, patients with a chronic disease have a 1.5- to 2-fold increased risk for a mental disorder [2]. In physical diseases, the prevalence of adjustment disorders is 6–20% [8]. In the study of Maercker et al. [3], 17% of patients of a heart center reported an adjustment disorder and in studies with inpatients, 26.6% of cases were diagnosed with it. Interestingly, the acceptance of the diagnosis 'adjustment disorder' is comparatively high, since it meets the need of causal explanation [8]. Furthermore, it is important to note that adjustment disorders form a risk factor for increased morbidity and mortality of these physical illnesses [2]. Elevated levels of depressive symptoms – that can be seen as one aspect of adjustment problems – are the most common mental health problem that goes along with physical disorders [9, 10]. The prevalence of clinically significant levels of depression linked to breast cancer lies at 10–25%, to cardiac infarction at 16–23% and to chronic heart failure at 22% [11], and there is a predominant comorbidity of depressive disorders with diabetes, heart disease, apoplexy and neurodegenerative disease [12]. However, in many of these studies the primary focus has been on the prevalence of depression within a single chronic physical condition, neglecting probable multimorbid constellations [13].

Moreover, many studies on multimorbidity exclude psychiatric conditions, although Thiem et al. [14] have found that mental health problems are even mentioned before patients have expressed their somatic problems. On that account, it is important to note that in an Australian cross-sectional study, Gunn et al. [15] reported that the prevalence of depression increases with the number of chronic physical diseases (1 condition: 23%; 2 conditions: 27%; 3 conditions: 30%; 4 conditions: 31%; 5 or more conditions: 41%). According to that, mental health problems seem to be a central feature of multimorbidity. Similarly, in studies with depressed patients a higher number of chronic disorders as well as a lower level of physical health and a lower health-related quality of life are commonly reported [16]. Furthermore, it is important to keep in mind that the directions of the relationship between affective symptoms and physical diseases are not fully understood: inflammatory processes are involved in both pathogenic processes [17]. Therefore, there might be a bidirectional relationship between mental and physical health, particularly in those cases in which the chronic diseases accumulating to multimorbidity involve inflammatory processes.

Adjustment Disorder as Stress-Response Syndromes

Maercker et al. [3] introduced a prevailing model of adjustment disorder in which the symptoms are characterized as a particular form of a stress-response syndrome

Downloaded by:
Universität Zürich, Zentralbibliothek Zürich
130.60.47.22 - 5/27/2016 3:57:13 PM

Table 1. Proposed diagnostic criteria for adjustment disorders

(1) Reaction to an identifiable stressor occurring within 1 month of the stressful event
(2) Intrusive/preoccupation symptoms
Recurrent, distressing and involuntary recollections of the event
Repetitive thoughts or constant rumination about the event, occurring most days for at least 1 month
Stress if reminded
(3) Failure to adapt
Loss of interest in work, social life, care for others, leisure activities
Difficulty concentrating, trouble sleeping
Lack of self-confidence when engaging in familiar activities
(4) Avoidance
Avoidance of stimuli associated with the event
Efforts to avoid thoughts associated with the event, usually in vain
Efforts to avoid feelings associated with the distressing event
Efforts to avoid talking about the event
Withdrawal from others
Additional characteristics determining the subtype
With depressed mood: the predominant manifestation involves symptoms of depressed mood
With anxiety: the predominant manifestation involves symptoms of anxiety
With disorders of impulse control: the rights of others are violated, e.g. by aggressive behavior

that has been somewhat revised and included as a beta-version proposal for ICD-11 [18]. They describe adjustment disorder as maladaptive reactions to identifiable psychosocial stressors or changes in life circumstances. Stressor events are, for example, divorce, illness, financial problems and many more. Nevertheless, it is important to mention that those stressors are defined as emotionally demanding but not as traumatic events, which marks a difference to posttraumatic stress disorder. The central processes and symptoms are as follows: (1) preoccupation, (2) failure to adapt and (3) avoidance – concepts that will be introduced later. The subtypes of adjustment disorder also play an important role. The main reaction types are depressed mood, anxiety, disturbance of conduct and mixed states. Table 1 introduces the disorder criteria.

Preoccupation

Preoccupation or intrusive symptoms involves involuntary, recurrent and worrying memories, which either occur spontaneously or are triggered by a cue from the environment. One example could be a patient who always thinks about the experiences or characteristics of the illness and cannot stop ruminating about the same topic over and over again, e.g. daily activities that the illness impedes him from doing.

Failure to Adapt

Failure to adapt reflects behavioral and personality changes in the aftermath of the stressor. It includes the difficulty of concentrating and coping with everyday life or work – more than the somatic situation would suggest – as well as intrapersonal changes [8]. 'I still have not found a way to deal with the limitations of the diseases. It's hard to accept this change' said a patient telling about her illness. It is important to be aware of emotional reactions like depression, anxiety and impulsivity when the patients talk about their situations.

Avoidance

Avoidance means that the affected individuals try to avoid and forget the thoughts and feelings of the stressful event, as well as cues and activities that go along with the stressor [3]. One example would be a person after a heart attack who acts like nothing happened. The third symptom seems a little bit contradictory to the first one, which includes repetitive thinking about the very same topic, but in the psychological literature there is a known phenomenon called the ironic effects of thought suppression. The difficulty of thought suppression occurs because the mere intention to suppress a thought activates a monitoring process that ironically increases the cognitive accessibility of the unwanted thought [19]. 'Do not think about a white bear – NOW!' is a paradox instruction illustrating this effect. Therefore, all three symptoms of the stress response go along with one another and include a wide variety of impairments in social or/and occupational functioning, as well as possible symptoms of depression, anxiety and impulse control problems. In addition, patients

Downloaded by:
Universität Zürich, Zentralbibliothek Zürich
130.60.47.22 - 5/27/2016 3:57:13 PM

with an adjustment disorder also have a much higher suicide rate than persons from the general population [8]. Nevertheless, in the clinical setting of somatic medicine, patients often do not speak openly about their adjustment to the problems. For this reason, it is important to keep the above-mentioned symptoms in mind to have the opportunity to respond individually to a patient's needs.

Once it is discovered that the patient suffers from an adjustment disorder, several factors play an important role in intervening in this process. As an example, two relevant concepts will be shortly introduced that are important in the context of multimorbidity and psychological adjustment problems: illness perception and interpersonal emotion regulation, with social support as a coping strategy. Furthermore, expressive writing might be a promising minimal intervention fostering successful coping that could be applied in this field.

Illness perception is a construct that represents the cognitive representations of the patient's own illness. It includes different dimensions such as the perceived controllability (by the medical system as well as by the individual him- or herself), the severity and the time dimensions of the disease [20]. A multitude of studies have shown the impact of illness perception on the adjustment process in physical disease. For example, in a study of cardiac patients, the perceived control over the disease by the patient had an impact on somatic and psychological indicators of the further progress of the disease after surgery and above the initial objective parameters of disease severity [21]. First studies investigating illness perception in multimorbidity underline the importance of person-specific factors in the formation of illness perceptions above and beyond the characteristics of the diseases [22]. Illness perceptions are formed as a result of cognitive-emotional processing by the patient, which is not only influenced by characteristics of the disease and intrapersonal factors but also by communication with representatives of the health system and related parties, as well as with the social network. This is one of many reasons why the socio-interpersonal context plays an important role in the adaptation to a stressful life event [23]. The romantic partner, as commonly the closest significant other in adulthood, can be seen as a resource when coping with the disease, a phenomenon referred to as dyadic coping [24] in general, and when it comes to the emotional processing of the event in the dyad as interpersonal emotion regulation [25]. A key strategy of interpersonal emotion regulation is disclosure – the verbal sharing of thoughts and feelings [26]. Especially when dealing with serious illnesses, it is important to talk about feelings and thoughts within a partnership [27] as it replaces avoidant reactions, reducing the paradox effects of thought suppression, and allows a more adaptive cognitive-affective processing of the stressor. Furthermore, if disclosure is followed by a responsive reaction of the listening partner it triggers the establishment of psychological closeness or intimacy, and improves relationship quality. Relationship quality in turn has raised more and more attention in the scientific community as an important predictor of a more adaptive adjustment to stressful situations: studies have shown that psychological intimacy and social embedment are associated with positive effect [25], well-being and health [28]. Discussed pathways of this effect are known associations between the social context and neuroendocrine parameters (e.g. like oxytocin) as well as gains in adaptive behavior [28]. Across 148 studies a recent meta-analysis has indicated a 50% increased likelihood of survival for participants with stronger social relationships in all ages [29]. In our studies, a patient said in an interview while smiling at his wife when asked how the couple was coping with the situation: 'My wife was always there for me. She has supported me. She has so often visited me in the hospital and she fulfilled my every wish.' As a result, it seems important to involve the partner in the treatment to improve the healing process of the disease. Even if the partner might not be able to provide instrumental support, the mere quality of the relationship is fostering not only a better coping ability with multimorbidity psychologically but might also be associated with improved somatic indicators of the disease [29].

However, sometimes it is difficult to openly share thoughts and feelings about the disease. For example, widowhood and social isolation are frequent in the elderly with high prevalences of multimorbidity. Expressive writing offers a method of solitary disclosure that does not require more than a pen, paper and some private space, and has proved to foster favorable ways of emotion regulation [30]. Expressive writing includes the instruction to put deepest thoughts and feelings about the difficult experiences into words while being as open and honest as possible without monitoring orthography or nice prose. The writing usually ends after 15 or 20 min and should be totally confidential. A multitude of studies show favorable effects of expressive writing on physical and mental health and psychosocial adjustment [31]. It has been demonstrated that expressive writing has positive effects on psychological and physical well-being, improves positive effect, reduces psychological stress and is associated with fewer symptoms [32]. In a recent meta-analysis [33], which includes 146 studies with different

Downloaded by:
Universität Zürich, Zentralbibliothek Zürich
130.60.47.22 - 5/27/2016 3:57:13 PM

populations, small but stable effects of this minimal intervention could be confirmed. As an important finding for elderly populations who might be impaired in terms of seeing or writing capacities, the meta-analysis includes studies that show positive effects also when talking into a recorder instead of writing.

General Summary and Future Directions

To summarize, multimorbidity can be seen as a psychological challenge that requires psychosocial adjustment. The stress-response processes are crucial for a better understanding of the patients' quality of life. They also seem to have an impact on morbidity and mortality. Therefore, further research on multimorbidity should include an interdisciplinary perspective including the psychosocial perspective on psychological adaptation and quality of life. Otherwise, the complexity of multimorbidity and its effects on the individual and the health system will not be captured. As in other areas of stress-response research, it might furthermore be fruitful to investigate not only failures of adaptation but also successful adaptation to multiple diseases; so far resilience has been mainly studied in the context of childhood but it might also be an important concept later on in the life span [34]. A stress-response perspective on adjustment processes [3] in response to multimorbidity might offer a promising framework for the integration of already known processes relevant for coping with somatic diseases with regard to multimorbidity and its associations with quality of life. Maercker et al. [3] characterized adjustment disorder as a particular form of a stress-response syndrome which includes preoccupation, avoidance and failure to adapt. It is important not to pathologize normal psychological reactions to the challenging situation of coping with multiple diseases. However, individuals who suffer from adjustment disorder in response to their multimorbidity need help in coping with the stressful situation. In order to detect early signs of possibly problematic coping trajectories that benefit from primary and secondary preventive measures, a deeper understanding of the involved stress response processes is crucial. Important for psychosocial adjustment are the patient's illness perception of his/her subjective and objective health, dyadic functioning and ways of cognitive-affective processing through interpersonal or written disclosure. The possibility to talk to others about concerns and fears in order to obtain emotional support can be fundamental. Particularly in close relationships, improved relationship quality can be seen as protective against stress and negative health consequences and is associated with improved instrumental and emotional social support. Also, solitary disclosure by writing (or talking into a recorder) about deepest thoughts and feelings has been proved to be favorable, particularly in cases in which opening up to a close one for whatever reason seems a difficult task or there is no significant other at reach (as in widowhood). Further research should address these aspects and their interactions over time and include at least a dyadic perspective in order to capture the dynamics of the intra- and interpersonal processes involved.

To sum up, chronic physical diseases demand emotional, cognitive and behavioral reactions of the individual, forming individual adaptation to a chronic illness [34]. These coping efforts are mostly successful but sometimes they are not. The multimorbid patient deserves to be treated as best as possible. Screening procedures should be used to ensure early detection of possibly problematic adaptation, which endangers the maintenance of quality of life and helpful health behaviors. It also elevates the risk for a worse prognosis in terms of physical health markers. For that, it is important to explore the physical as well as the mental condition of the patient. As multimorbidity represents a prototypical situation of severe stress, the awareness for the elevated risk of adjustment disorder and other mental health problems should be included in daily clinical practice. Further research is needed; it seems about time for multimorbidity research to include integrated frameworks of psychological adjustment.

Acknowledgments

This paper was developed in association with the GUGKS project, which is part of the Center of Competence Multimorbidity at the University of Zurich. We wish to thank Lukas Zimmerli, Barbara Holzer, Klarissa Siebenhühner and Eva Eggenberger for their exchange within this project.

Disclosure Statement

The authors declare that they have no conflicts of interest.

Downloaded by:
Universität Zürich, Zentralbibliothek Zürich
130.60.47.22 - 5/27/2016 3:57:13 PM

References

1 Boyd CM, Fortin M: Future of multimorbidity research: how should understanding of multimorbidity inform health system design? Public Health Rev 2010;32:451–474.
2 Bengel J, Hubert S: Anpassungsstörung und akute Belastungsreaktion. Fortschritte der Psychotherapie. Göttingen, Hogrefe, 2010, pp 3–17.
3 Maercker A, Einsle F, Köllner V: Adjustment disorders as stress response syndromes: a new diagnostic concept and its exploration in a medical sample. Psychopathology 2007;40: 135–146.
4 World Health Organization: The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria Research. Geneva, WHO, 1993.
5 American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders (DSM-5), ed 5. Washington, American Psychiatric Press, 2013.
6 Razavi D, Stiefel F: Common psychiatric disorders in cancer patients. 1. Adjustment disorders and depressive disorders. Support Care Cancer 1994;2:223–232.
7 American Psychiatric Association: Adjustment disorders; in Diagnostic and Statistical Manual of Mental Disorders: DSM-IV. Washington, American Psychiatric Association 1994, pp. 623–626.
8 Simmen-Janevska K, Maercker A: Anpassungsstörungen: Konzept, Diagnostik und Interventionsansätze. Psychother Psych Med 2011;61:183–192.
9 Paykel ES, Brigja T, Fryers T: Size and burden of depressive disorders in Europe. Eur Neuropsychopharmacol 2005;15:411–423.
10 Wittchen HU, Hoyer J: Klinische Psychologie und Psychotherapie, ed 2, rev, ext. Heidelberg, Springer, 2011.
11 Angermann CE, Gelbrich G, Störk S, Schowalter M, Deckert J, Ertl G, Faller H: Somatic correlates of comorbid major depression in patients with systolic heart failure. Int J Cardiol 2011;147:66–73.
12 Riedel O, Klotsche J, Spottke A, Deutschl G, Förstl H, Henn F: Frequency of dementia, depression, and other neuropsychiatric symptoms in 1,449 outpatients with Parkinson's disease. J Neurol 2010;257:1073–1082.
13 Spangenberg L, Forkmann T, Brähler E, Glaesmer H: The association of depression and multimorbidity in the elderly: implications for the assessment of depression. Psychogeriatrics 2011;11:227–234.
14 Thiem U, Hinrichs T, Müller CA, Holt-Noreiks S, Nagl A, Bucchi C, Trampisch U, Moschny A, Platen P, Penner E, Junius-Walker U, Hummers-Pradier E, Theile G, Schmiedl S, Thürmann PA, Scholz S, Greiner W, Klaassen-Mielke R, Pientka L, Trampisch HJ: Voraussetzungen für ein neues Versorgungsmodell für ältere Menschen mit Multimorbidität. Ergebnisse und Schlussfolgerungen aus 3-jähriger Forschung im PRISCUS-Verbund. Z Gerontol Geriatr 2011;44: 101–112.
15 Gunn JM, Ayton DR, Densley K, Pallant JF, Chondros P, Herrman HE, Dowrick CF: The association between chronic illness, multimorbidity and depressive symptoms in an Australian primary care cohort. Soc Psychiatry Psychiatr Epidemiol 2012;47:175–184.
16 Spangenberg L, Forkmann T, Brähler E, Glaesmer H: The association of depression and multimorbidity in the elderly: implications for the assessment of depression. Psychogeriatrics 2011;11:227–234.
17 Raison CL, Capuron L, Miller AH: Cytokines sing the blues: inflammation and the pathogenesis of depression. Trends Immunol 2006; 27:24–31.
18 Maercker A, Brewin CR, Bryant RA, Cloitre M, Ommeren M, Jones LM, Humayan A, Kagee A, Llosa AE, Rousseau C, Somasundaram DJ, Souza R, Suzuki Y, Weissbecker I, Wessely SC, First MB, Reed GM: Diagnosis and classification of disorders specifically associated with stress: proposals for ICD-11. World Psychiatry 2013;12:198–206.
19 Wegner DM, Zanakos S: Chronic thought suppression. J Pers 1994;62:615–640.
20 Petrie KJ, Weinman J: Why illness perceptions matter. Clin Med 2006;6:536–539.
21 Juergens MC, Seekatz B, Moosdorf RG, Petrie KJ, Rief W: Illness beliefs before cardiac surgery predict disability, quality of life, and depression 3 months later. J Psychosom Res 2010;68:553–560.
22 Schüz B, Wurm S, Warner LM, Ziegelmann JP: Self-efficacy and multiple illness representations in older adults: a multilevel approach. Psychol Health 2012;27:13–29.
23 Horn AB, Maercker A: A socio-interpersonal perspective on PTSD: the case for environments and interpersonal processes. Clin Psychol Psychother 2013;20:465–481.
24 Lyons RF, Mickelson KD, Sullivan MJL, Coyne JC: Coping as a communal process. J Soc Pers Relat 1998;15:579–605.
25 Debrot A, Schoebi D, Perrez M, Horn AB: Touch as an interpersonal emotion regulation process in couples' daily lives: the mediating role of psychological intimacy. Pers Soc Psychol Bull 2013;39:1373–1385.
26 Rime B: Interpersonal emotion regulation; in Gross JJ (ed): Handbook of Emotion Regulation. New York, Guilford Press, 2007, pp 466–485.
27 Manne S, Ostroff J, Rini C, Fox K, Goldstein L, Grana G: The interpersonal process model of intimacy: the role of self-disclosure, partner disclosure, and partner responsiveness in interactions between breast cancer patients and their partners. J Fam Psychol 2004;18:589.
28 Stadler G, Snyder KA, Horn AB, Shrout PE, Bolger NP: Close relationships and health in daily life: a review and empirical data on intimacy and somatic symptoms. Psychosom Med 2012;74:398–409.
29 Holt-Lunstad J, Smith TB, Layton JB: Social relationships and mortality risk: a meta-analytic review. PLoS Med 2010;7:1–20.
30 Horn AB, Pössel P, Hautzinger M: Promoting adaptive emotion regulation and coping in adolescence: a school-based programme. J Health Psychol 2011;16:258–273.
31 Pennebaker JW, Chung CK: Expressive Writing, Emotional Upheavals, and Health. New York, Oxford University Press, 2006, pp 263–284.
32 Smith JM: Written emotional expression: effect sizes, outcome types, and moderating variables. J Consult Clin Psychol 1998;66: 174–184.
33 Frattaroli J: Experimental disclosure and its moderators: a meta-analysis. Psychol Bull 2006;132:823–865.
34 Bonanno GA, Westphal M, Mancini AD: Resilience to loss and potential trauma. Annu Rev Clin Psychol 2011;7:511–535.

Downloaded by:
Universität Zürich, Zentralbibliothek Zürich
130.60.47.22 - 5/27/2016 3:57:13 PM