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Never too old to learn : the effectiveness of the Coping with Depression course for elderly

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General discussion

General Discussion

In this thesis the effectiveness of the Coping with Depression (CWD) course for depressed older adults living in the community was investigated. The course was developed by Lewinsohn and Clarke (1984) in the United States of America as a curative outreach program for adults with unipolar depression. Adaptations followed for other populations with unipolar depression known to be hard to reach (Cuijpers 1998a). In the mid nineties of the previous century, the course was adapted for the Dutch community living senior and implemented in the prevention arm of the mental health care system. Most of the prevention departments offer the course regularly to seniors with mild depression.

Efficacy studies in which the course was carried out in controlled research settings showed medium effect sizes (Cuijpers, 1998b). The main objective of this research was to study whether the course was also effective in the usual care setting when carried out by the typical community staff to consumers of community mental health services. To ensure this end the study was embedded in the procedures used by the prevention departments of 13 community mental health centers (CMHCs) throughout the Netherlands. A total of 318 participants in 43 courses took part in the study.

In the first section of this chapter, the main results will be reviewed starting with the characteristics of the participants that were accepted for the course, followed by a summary of the four different studies. In the second section, the results will be discussed in the perspective of the existing literature, followed by a discussion on possible improvements of the course. The limitations and strengths of this study will be considered in section 4. In section 5, the clinical implications of these findings for the practice of the current community mental health care system in the Netherlands will be discussed. This chapter will conclude with suggestions for future research (section 6).

1. Results

1.1 Characteristics of the participants

The course participants were non-demented community-living individuals aged between 55 – 85. About half of the participants were so called ‘young elderly’, aged 55 – 64, the oldest old (75 – 85 years of age) formed a minority of 15%. Two third of the sample was female, which is in keeping with figures reported in other studies and reflects the fact that depression occurs twice as often in females than in males (Blazer et al., 1994; Weissman & Olfson, 1995), a pattern that persists in old age (Sonnenberg, Beekman, Deeg & van Tilburg, 2000). About half was living alone, 43% of whom was widowed. In this sample, a third had a low level of education: primary school only or lower vocational training. A medium high level of education was achieved by 40%, and 27% had taken tertiary education (college or university). Compared to the cohort this sample belongs to (Central Bureau of Statistics, 2007), the course attracted higher educated participants. Two thirds of the sample reported to suffer from at least one chronic medical condition. The features of this sample are characteristic for

individuals vulnerable for depression (Beekman, et al., 1997b; Cole & Dendukuri, 2003).

The course is considered to be an outreach program and it is prevention policy to set a low threshold for enrollment. Consequently, the course participants varied widely in their level of depression between only slight symptoms to being severely depressed. The level of depressive symptoms was high, the mean sum score on the CES-D was 25.9 (*SD* 9.7), and 85% had a CES-D score ≥ 16 which indicated the presence of a clinically relevant depression. At the time they were enrolled, 42% met the criteria for a DSM diagnosis of major depression (MDD), and 42% had an anxiety disorder. The double diagnosis MDD-Anxiety disorder was given in 20%, which reflects that anxiety and depression often occur together. Only 14% had never experienced a major depression. Late onset depression (first episode after the age of 55) was rare and reported by 17 (5%) participants, which is similar to the proportion found in the Amsterdam Study of the Elderly (AMSTEL) study (Schoevers et al., 2000). Fifty percent of the participants were treated for their depression with antidepressants or tranquilizers. These percentages demonstrated that the individuals selected by the course leaders did form part of the target group. It also indicates that the level of suffering in this group was high. The mental health status of this sample meant that the elders in this study resembled a sample of psychiatric outpatients more than a community sample. Interestingly, only 15% of the participants had never sought help for their depressive complaints before.

1.2 Study 1: Criterion validity of the CES-D

In most but not all community mental health centers (CMHCs), the level of depression of the applicants is assessed in an interview based on a questionnaire for current symptoms of depression like the CES-D (Radloff, 1977) or the Geriatric Depression Scale (GDS; Yesavage et al., 1983) and a checklist covering depression history and treatment - current and in the past. At the time this research project started, the CMHCs were advised by the Trimbos institute to use the CES-D (Radloff, 1977). It was therefore of practical interest to analyze the validity of the CES-D as a screening instrument. The Mini International Neuropsychiatric Interview (M.I.N.I.; (Overbeek, Schruers & Griez, 1999; Sheehan et al., 1998) was used to establish "gold standard" diagnoses including MDD and minor depressive disorders. Receiver operating curve (ROC) analysis showed that the scale's operating characteristics were satisfactory. The CES-D was moderately accurate in detecting MDD and minor depression in this group of self-referred elderly with (a history of) depression. For the detection of MDD, the cut off score of 25 showed the optimal balance between sensitivity (85%) and specificity (64%) and positive predictive value (63%) for the prediction of MDD. Participants with a CES-D ≥ 25 and the diagnosis MDD (true positives - TP) were likely to have higher anxiety levels and more comorbid anxiety disorders than the elders that did not meet the criteria for a major depression. These so called false positives (FP) were characterized by more previous depressive episodes than TPs.

1.3 Study 2: Results of the effectiveness study

The immediate effect was analyzed with a randomized controlled block design to ensure that participants with and without a MDD were divided equally over the course (intervention group) and the waitlist. For ethical reasons, the participants in the control condition ($n = 58$) were not kept waiting for treatment until the intervention group ($n = 52$) had completed the follow-up 14 months later. Therefore, to study the long-term effect a naturalistic design was used and it was limited to the first 14 months after the conclusion of the course. Complete datasets of 42 subjects in the intervention group were present for analyses of the long-term effect.

The two main findings were that (a) the course was effective for older adults with and without a current MDD and (b) the level of depressive symptoms reached at post-treatment was maintained during the following year. Compared to the individuals in the waitlist condition, the course participants improved significantly on the CES-D. The overall between effect size (ES) was 0.49; for the non-MDD ES was 0.30, and for the MDD ES was 0.92. No spontaneous improvement during the ten week waiting period on any of the outcome measures was found. The two groups did not differ in the use of antidepressants and all participants who followed concurrent psychotherapy had been excluded from the study. Therefore, the observed changes can be attributed to following the course.

A third important result was the level of depression that was reached at post-treatment. Originally 85% scored above 16 on the CES-D, at the conclusion of the course this percentage had dropped to 62%. Although a positive result, a high proportion of elderly remained with a clinical relevant amount of depressive symptoms.

Satisfaction with the course was high. Participants rated the course with a 7.4 ($SD = 1.2$) on a scale from 1 to 10 ("good"). On the question if they would recommend the course to someone else, 78% replied 'Yes' and 20% said 'Maybe'. Dropout in the sample studied here was a mere 15% and the mean number of sessions attended was 9 ($SD = 1.0$). These results indicate that the course is fulfilling its aim of being an acceptable, low-threshold intervention. At the conclusion of the course one third (33%) had the opinion that the course had helped a lot, 56% said it helped a bit and 11% did not find the course beneficial. The need of a continuation of the course, which was expressed by nearly 44% of the participants, was unrelated to the diagnosis at pre-treatment or to the decrease on the CES-D during treatment.

In sum, the study showed that it is a valuable intervention, well accepted by the target group. The course was beneficial for all, regardless of clinical diagnosis. However, the post-treatment level of functioning indicated that for 62% of the participants treatment should be continued.

1.4 Study 3: Predictors of outcome

The second major question of this field study concerned the prognostic characteristics of the participants of the course for immediate as well as long-term effects. A total of 232 participants returned the questionnaires of the last measurement (14 months FU) and were reached for the diagnostic interview. A wide variety of demographic, clinical, psychosocial and treatment factors that may have been relevant for indicated prevention and treatment of major depression were used to examine their contribution to the immediate and maintenance effect.

Random coefficient regression models were used to examine in one model the initial depression severity as well as the change over time. Group membership was also examined as a prognostic factor. First, the analyses showed that group membership was irrelevant for the variation in treatment outcome, i.e., there were no CWD groups that produced significantly higher or lower outcomes than other groups. The standardized format of the course seemed to ensure that the benefits of attending do not depend on individual differences between group leaders or differences in group interactions. Second, greater immediate improvement was predicted by four variables: (a) current MDD, (b) a high level of anxiety, (c) less previous episodes, and (d) a higher level of education. Third, the level of depression reached at post-treatment was maintained over the next 14 months and there was hardly any variation in this mean trajectory. No baseline variables predicted the change between post-treatment and 14 months FU.

To analyze the long-term effectiveness of the CWD course in preventing a new depressive episode, a subgroup of 180 non-MDD participants at risk for developing a new episode (indicated prevention) at pre-treatment was selected. At risk were those with a CES-D score ≥ 16 or at least one previous major depressive episode. At 14 months FU 129 complete datasets were available. The incidence of a MDD in this group was small ($n = 8$).

To summarize the results of this study: First, the course was beneficial for both non-MDD as well as MDD participants. Three clinical variables were found to be statistically significant predictors of immediate outcome. Second, the level of depression symptomatology reached at post-treatment was maintained over the next 14 months, indicating that the course was enough treatment for those with a post-treatment score below 16.

1.5 Study 4: Specificity of Autobiographical Memory in older adults

Autobiographical memory specificity is considered a possible marker for depression. It is often measured with the autobiographical memory task (AMT; Williams & Broadbent, 1986). The studies are predominantly carried out with middle aged samples, but hardly in older adults without brain damage or cognitive dysfunction (see for a review van Vreeswijk & de Wilde, 2002). Our study had two parts. In the first part, scores on the AMT of never depressed and remitted seniors were compared with

each other. A second question in this part of the study was the separate effect of mood itself on the AMT. This question was addressed with a mood induction (MI) experiment. Both the never depressed (ND) seniors and the remitted depressed (RD) were subjected to this experiment. The AMT was administered before and after the MI, which raised the question about the existence of practice effects.

The ND group consisted of 58 individuals and the RD group was formed by 63 participants who responded to the CWD course (i.e., at the conclusion of the course they did not feel depressed nor did they meet the criteria of MDD). To examine possible practice effects 26 of the participants of the ND control group were randomly assigned to a neutral mood condition, the other 32 ND individuals were exposed to a sad music condition. Comparison of the two groups showed that there were significant differences in mood ratings between the two groups, but the changes in the AMT scores did not differ significantly. Hence, there were no practice effects.

All 63 RD participants were subjected to the sad MI. Likewise the changes in the AMT scores and in mood of the RD group ($n = 63$) and the ND group ($n = 32$) were compared to examine differential effects of an induced sad mood between the remitted and never depressed individuals. The research question of the second part of the study concerned the qualities of the AMT as a prognostic variable for relapse. The course of depressive symptoms was assessed in 60 RD seniors over a 14 months follow up period.

As expected, all individuals retrieved fewer specific memories than the norm for middle aged individuals. However, contrary to our expectations, no differences in AMT were found between course participants and ND controls. The results of the MI experiment showed that a despondent mood was induced in both groups. However, AMT scores were not affected by the MI in either group. Changes in the level of depressive symptoms at the 14-month FU were not predicted by baseline AMT score, or the changes in AMT scores or mood ratings that followed the MI. Our findings suggest that in late life effects of normal aging on episodic memory, as measured by the AMT, cannot be differentiated from the possible detrimental effects of depression on AMT.

2. Discussion of the results in the perspective of the literature

The CWD course we studied was the version available for non-demented community living seniors. The individuals who enrolled were the younger old; 50% of the participants were between 55 and 64 years old, another 35% between 65 and 74. The older old of 75 and older formed a minority of 15 %. Furthermore, the participants were mostly white, born and bred in the Netherlands, and relatively highly educated. Also the majority had sought help in the past for their depression and had received some form of treatment. The recruitment strategies failed in attracting the therapy shy, non-white, less educated and the older-old depressed individuals. This is a problem Karel and Hinrichsen (2000) have identified in their article on the treatment of depression in late life. In most of the studies showing psychotherapies to be effective

in the treatment of depression in older people, the participants in were relatively healthy, white, well-educated community living adults in their 60s and 70s.

With regard to depressive symptomatology, we found a mean score on the CES-D of 25 (9.6), which is well over the recommended cutoff score of 16. In a non-clinical sample a score ≥ 16 is an indication of a clinically relevant depression. In our sample a score ≥ 16 not necessarily meant a clinical diagnosis of a minor or major depression. A cutoff score of 25 yielded a better balance between sensitivity and specificity. The older adults with a CES-D score ≥ 25 , but without a major depression (false positives) were characterized by more previous depressive episodes than the true positives. This suggested that the combination of a high score on the CES-D with a history of depressive episodes falsely points to a current depression. However, it can also be understood as an indication that either a new depression is developing or that the last depression is not fully in remission.

Although 25 was the optimal cutoff score for detecting the presence of a major depression, one should not ignore the observation that a CES-D score ≥ 16 is still a sign of serious distress. Or differently stated: when the CES-D decreases below 16 the participant is probably recovered. A score ≥ 16 could be a warning that either a new depression is developing or that the last depression is not fully in remission. A score ≥ 25 is an indication that a minor or major depression could be present.

Because the aim of the course was prevention as well as treatment, its effectiveness in preventing a major depression will be discussed separately from the effectiveness of the course as treatment of major depression.

2.1. *Prevention*

In the non-MDD subgroup lowering the level of depressive symptoms implies a better chance to stay in remission or to avoid a first depression developing. The effect size (*ES*) of 0.30 for the non-MDD group was comparable to the mean *ES* (0.24) of prevention programs for older subjects at risk for the development of depression (Jané-Llopis et al., 2003). A recent meta-analysis of psychological treatments of subthreshold depression by Cuijpers, Smit and van Straten (submitted), concluded that psychological interventions combined with care as usual can effectively reduce the incidence of a major depression 12 months later. In agreement with this conclusion, we found that 14-months after the conclusion of the course the symptom level reached was maintained during that time and only eight of the 129 persons who were at risk when they started the course, had a MDD 14 months after the conclusion of the course. Although our study lacked a control group to compare the long-term effects with, it seems justified to see these results as an indication of a successful prevention of recurrence or incidence for the year following the course. The long-term protective effect of cognitive therapy with younger adults with residual symptoms was shown in a series of studies (Fava, Grandi, Zielesny, Rafanelli & Canestrari, 1996; Fava et al., 1994; Fava, Rafanelli, Grandi, Canestrari & Morphy, 1998). They found a decrease in residual symptoms and a lower rate of relapse in the CBT intervention group. In the

first two years after the intervention, the difference was small but at four years follow up the effect was significant, after which it tapered off.

So in general, the results of our study fit in with other studies that found that group treatment for older adults can have a protective effect, just as it can have for younger adults. However, prevention should be an ongoing effort because its effect may wear off as Fava et al. (1998) showed in younger adults. Becoming older also means an increasing chance of bereavement, physical disability, and sleep disturbance. These are all significant risk factors for the incidence of depression (Cole & Dendukuri, 2003). Just like patients with chronic medical conditions, those with a past of major depressive episodes should receive regular check ups regarding their level of depression symptomatology.

2.2. Treatment

As in the non-MDD group, the level of depressive symptoms in the MDD group decreased significantly as well. The effect size in the MDD group was large (0.92), and comparable with effect sizes reported in studies with older subjects with clinically relevant levels of depression (Cuijpers, 1998c; Cuijpers, van Straten & Smit, 2006; Engels and Verwey, 1997; Scogin and McElreath, 1994). In this subgroup 94 (73%) of the 128 participants were interviewed at 14-months FU, of these 70 (74%) were in remission. A probably flattered result, because the 36 individuals not reached may still have been depressed and avoided being interviewed. Taking these individuals into account, remission ranged between 26% - 54%. Losing track of these participants certainly also pleads for continuing care for the participants with a MDD. One of the participants that met current criteria for MDD during the FU interview expressed that she was not aware that she could contact her CMHC again when she was still feeling depressed. She seemed to be under the impression that the CWD course was all the psychological treatment that could be offered

2.3. Characteristics that predicted outcome

In our prognostic study we found four variables that predicted greater immediate improvement: (a) current MDD, (b) a high level of anxiety, (c) less previous episodes, and (d) a higher level of education. The first two predictors reflect the finding that in general those individuals with the highest levels of symptom distress will show the greatest reduction (Garfield, 1994). Our finding that treatment response was negatively affected by the number of previous episodes is in line with the conclusion of Hamilton and Dobson (2002), who reported in their review that in patients suffering from acute MDD, treatment response is negatively affected by prior depressive episodes or chronicity. However, in our study the size of the effect of this variable on the outcome was clinically meaningless and doesn't warrant selection.

In the literature, findings on the relation of education level to treatment outcome are inconclusive (Garfield, 1994). Interestingly, Steinmetz et al. (1983), who looked for client characteristics that predicted the outcome of the CWD course in adults with

unipolar depression, found that reading ability predicted a significantly better treatment outcome. They hypothesized that reading ability is important because the program uses a lot of written material. In the same vein of thinking, we postulate that for those with more years of formal schooling the educational format of the course is a familiar way of learning. However, this explanation does not fit in with our finding that the dropouts were also higher educated in comparison to the participants who completed the course.

2.4 Is performance on the AMT a marker for depression in older adults?

Our findings suggest that in late life, normal aging effects on episodic memory as measured with the AMT cannot be differentiated from the possible detrimental effects of depression on AMT. There are several ways to explain these results. The first one with regard to the effect of age is that a floor-effect is reached. With only 10 observations the AMT may not be sensitive enough to differentiate between the decline in specificity which is part of normal aging of the episodic memory and possible larger decrease due to the cumulative effect of aging and depression. A suggestion for future work is to adapt the AMT for the use with elderly by increasing the number of cue words, or increasing the stress under which to perform by allowing less time to come up with a memory. The latter is based on the assumption that the performance on the AMT may be accounted for by executive functioning (Dalgleish et al., 2007). Moreover, alternative measures such as the Autobiographical Interview (Levine, Svoboda, Hay, Winocur, & Moscovitch, 2002) might prove to be a more valid instrument for the use with seniors. A second interpretation is that our results support Williams's theory (1996) that emotional factors may affect retrieval in the same way as structural changes caused by aging do. Hence, in late life, normal aging-effects on the episodic memory system cannot be differentiated from the detrimental effects of depression. These cognitive changes in functioning due to depression could happen as early as adolescence (Park, Goodyear & Teasdale, 2002) and remain stable over time. In schizophrenia research, a similar conclusion has been drawn. After the onset of schizophrenia, cognitive deficits were found to be stable over time (Rund, 1998). Whether the impairment caused at an earlier age is reversible or not, is not yet clear. Teasdale et al. (2000) reported an increase of specificity after a Mindfulness-based Cognitive Therapy for depressed patients in remission. In another study, older depressed patients became more specific after practice in autobiographical memorizing (Serrano, Latorre, Gatz & Montanes, 2004). The results of both studies indicate that at least better use of the remaining faculties is possible.

In our study, there were no effects of the MI on the AMT scores in either the ND or the RD group. This indicates that, contrary to the results of MI experiments in younger samples (Yeung, Dalgleish, Golden & Shartrau, 2006; Svaldi & Mackinger, 2003), memory specificity in older adults, regardless of their clinical history, is not affected by a change in mood state. In the light of our first result, this is not surprising.

The second part of our study was directed to investigate the power of the AMT in predicting changes in depression symptomatology in RD individuals. Not surprisingly (Judd et al., 1998), previous depressive episodes proved to be a strong predictor of change in depression severity. Whereas, AMT scores, changes in AMT scores and mood ratings after a negative MI were not prognostic.

We conclude that in adults aged 55 and older, AMT scores are not a marker for vulnerability for depression, nor can they predict changes in depression symptomatology. Finding no difference in AMT between the ND and the RD individuals, the latter result stands to reason. Besides, two other studies also concluded that AMT scores were not predictive of either the course of depression (Raes et al., 2006) or of relapse/recurrence of depression (Spinhoven et al., 2006).

To summarize the results:

Although not all had a MDD when enrolling into the course, the vast majority had a lifetime major depressive disorder and a high level of depressive symptomatology. The mean score on the CESD in both groups was ≥ 16 level. Thus, in both subgroups, a decrease in depressive symptomatology was the desired outcome, and we can conclude that the course succeeded in reaching this goal. However, the clinical relevance of the course turned out to be modest. The proportion of individuals with a CES-D score below cut point had increased with a mere 23%. Other large studies both American and European in which community living seniors with minor and major depression were targeted have found similar results (Ciechanowski et al., 2004; Unützer et al., 2002).

The clinical significance of the four characteristics that predicted immediate outcome was small. Also no specific characteristics were found that predicted outcome at the long-term. For current clinical practice this means that there is no reason to change the present way of selecting participants. However, the large proportions of participants ($\pm 60\%$) with a post-treatment score ≥ 16 at the end of the course, forms an indication that the course may not have been sufficient for a substantial part of the course participants.

3. Could the course be more effective for the participants reached in our study?

The course is a brief, broad multi ingredient intervention. The question arises if this format forms its strength or that the course would be more effective with fewer ingredients. In a recent meta-analysis of psychological treatment of late-life depression (Cuijpers, et al., 2006) no differences in effectiveness were found between the multi-ingredient CBT and other types of psychological treatment. Included in the meta-analysis were behaviour therapy, CBT, goal-focused group therapy, interpersonal therapy, life review, problem solving therapy, and reminiscence. Some of these treatments focus more on the acquisition of one skill or technique. So, in terms of effectiveness, the CWD course it is not likely to improve by reducing the number of ingredients or changing the contents.

A second important finding was that evaluation of the course by its participants is good. The course was designed as a low threshold intervention that would be attractive for people who are shy of psychological treatment. The value of non specific factors such as belonging to a group whose members have similar problems could play an important role in achieving this.

The conclusion is that for this group of relatively young, healthy and highly educated participants the course needs no major changes. The many different components make the course a low threshold and widely applicable intervention as there is something in it for everybody. The course could be a first experience of what psychological treatment has to offer and how individual problems could be targeted. The familiarity with different skills and techniques can help in selecting an intervention or treatment either the next time a person shows signs of becoming more depressed or when further treatment is advisable. The above sketches the use of the CWD course in a stepped care model. It would be interesting to study the role of education to gain a better understanding how it is related to dropout as well as better outcome. At the present, a recommendation to adapt the course for the less educated participant cannot be made on the basis of our contradicting results.

4. Limitations and Strengths

4.1 Limitations

We did not administer the M.I.N.I. at either post-treatment or at the two months FU measurement. Neither did we use a structured retrospective interview to establish relapse or recurrence during 14 months since the course finished. This was a drawback in all studies except the one on the criterion validity of the CES-D (chapter 2). We could not predict the effect of the course in preventing a MDD for those at risk at post-treatment or during the follow up period. Hence, our results pertain mainly to the level of depressive symptoms experienced by the participants. In order to classify the clinical level of depression, we used the cutoff score of the CES-D to describe the individual course of depression over time, a method also described in other studies (Beekman et al., 1995).

In the controlled study, a large proportion of elders were not willing to be randomized and insisted to participate in the course of their choice. This could have resulted in selection bias threatening the external validity of the results of the effectiveness study (chapter 3). However, comparison of the elders that were randomized with those who refused randomization showed that there were no significant differences between these two groups in socio-demographic characteristics or mental health.

Another limitation is the lack of a control condition for the follow-up part of the study. This naturalistic follow-up does not allow a definitive conclusion that the course of depression during the follow-up period may be related to the intervention. Also, follow-up was only conducted in the first year following the course. Longer FU periods of the treated elders are needed to know how long the protection holds.

The study on autobiographical memory also had some limitations. First, the control group was recruited among acquaintances of university staff and students, and was therefore much higher educated than the experimental group. However, this selection should have maximized the difference between the two groups. On the other hand the control group was slightly older which could have minimized the difference. Second, no other memory tasks were administered; hence the two groups could not be compared on other correlates known to be related to aging and depression. Executive control and some memory functions such as episodic memory deteriorate with age (e.g. Levine et al., 2002; Siedlecki, Salthouse, & Berish, 2005; Winthorpe & Rabbitt, 1988), but are also consistently found to be impaired in depressed and RD individuals (e.g. Burt, Zembar, & Niederehe, 1995; Ilsey, Moffoot, & O'Carroll, 1995; Fossati, Coyette, Ergis, & Allilaire, 2002; Raes, et al., 2006; Spinhoven et al., 2006). In a recent study Dalgleish et al. (2007) concluded that the AMT can be seen as a measure of executive functioning.

Because of the lack of data on the incidence of MDD between the mood induction and the 14 months FU and the lack of assessments of depressive symptomatology during the FU period, we could not be certain that not more individuals had suffered a relapse than the three individuals at 14 months FU. And our results pertained only to the level of depressive symptoms experienced by the participants at the MI and 14 months FU.

4.2 Strengths

The strength of the study in general is that this empirically supported depression intervention program which is provided by the mental health care system on a national scale was studied in its natural setting. The effectiveness was studied with a randomized block design. By doing so the desirable features of both efficacy and effectiveness research were incorporated, since it was prospective, randomized, and focused on a replicable intervention. Besides, enough participants were included to detect a medium to large between-group difference in effectiveness.

To our knowledge, this is the first study that examines prognostic factors of outcome of this type of group intervention in the way it is utilized by the mental health care system. The sample studied was heterogeneous. Participants differed in level of depression symptomatology, unipolar depression diagnoses, history of depression, and in comorbid anxiety disorders. Most of the participants of the course who fulfilled the inclusion criteria participated in the study and stayed in the study until the last measurement was administered. The size of the sample studied was large and a wide range of variables was examined for their prognostic value. The long follow up period allowed us examination of the clinical status (presence of MDD) a good year after enrolment into the course. Also, our sample of 46 intervention groups was large enough for the use of random coefficient regression modeling (RCRM) (Kreft & Leeuw de; 1998), and justified our conclusion that the variance due to group differences can be ignored. Furthermore, the use of RCRM as method of analyses had

the advantage that in one model, the influence of predictors on the initial depression severity as well as the change over time could have been analyzed. This allowed for a more comprehensive understanding of the effects that the different predicting factors have on the initial level of depression symptoms, response to the CWD course and the maintenance of the achieved improvement.

The study on autobiographical memory in older adults had the following merits. First, the AMT is much less studied in older than in younger adults. Second, performance on the AMT was compared between clinical and healthy older adults. Third, none of the individuals was currently depressed, which allowed us to examine if performance on the AMT could be a function of induced mood state irrespective of depression symptomatology. Fourth, administration of the AMT twice within a single test session enabled us to examine test-retest effects. And finally, the second part of our study had a longitudinal design allowing us to conclude that performance on the AMT is not a predictor of changes in the level of depressive complaints in older adults who responded to the CWD course. In fact results of our study indicate that it is unwarranted to conceptualize performance on the AMT as a marker for vulnerability for clinical depression in older adults.

5. Implications for the community mental health services in the Netherlands that provide the CWD course

The high proportion of elders with an acute MDD or anxiety disorder was a surprise for the prevention workers. Firstly, this meant that by accepting elderly who meet the criteria for a psychiatric disorder, the prevention departments crossed the line between treatment and prevention. In itself this is not a problem: after all, the course was developed as a group treatment for unipolar depression. However, when offering the course embedded in the official mental health care system and knowing that such a high proportion of the participants will have a psychiatric disorder, proper clinical diagnostics should be part of the intake. To investigate whether the course provided sufficient treatment, the mental status of the participants should be known exactly beforehand as well as at the conclusion of the course. At the present performing clinical diagnostics are reserved for the treatment departments. There are good reasons to make these distinctions, but bearing the results of this study in mind, this policy should be reconsidered.

Secondly, the high number of participants with a DSM-IV disorder implied that many participants did not seek treatment unless they were greatly distressed. Although information about the availability of the course is regularly sent to primary care centers and 86% had sought treatment currently or in the past, only 15% of the participants reported that their GP had suggested that the course might be helpful. Because the GP is the first health professional depressed elders will turn to, efforts to increase information about the course should be a priority for mental health care, since the course is indeed low threshold and has been accepted well by the participants.

A related issue is that many seniors with mild depressive symptoms, for whom this course seem so well suited, have not been reached. At the Trimbos institute, where the Dutch adaptation of the course was developed, it was estimated that a mere 700 elders enroll per year (oral/ unpublished information). Considering the great numbers of seniors at risk for a major depression (see Chapter 1), more effort is needed to reach them and to do so repeatedly.

For people seeking help for their depression, the CWD course in this form could also be fitted in a stepped care framework as an intervention of mild intensity. Stepped care models have been propagated recently as a way to maximize efficiency of treatment by stepping up the intensity of the intervention according to individual need. Interventions of mild intensity are tried first and depending on the effect, treatment is continued or stopped (Davison, 2000; Haaga, 2000; Sobell & Sobell, 2000). In such a framework, the CWD course could have been preceded by a minimal contact intervention (Willemse, Smit, Cuijpers & Tiemens, 2005) to alleviate the depressive symptoms. After further diagnostics in persons for whom the course may not have been sufficient, further treatment can be started. A model such as this would involve a less rigid separation between prevention and treatment departments. At the present, a trial is conducted testing the feasibility of a generic stepped care program for elderly living in the community who are at risk for developing anxiety or depression (van 't Veer-Tazelaar et al., 2006). Stepped care programs with problem solving treatment have successfully been carried out with elders with major depression or dysthymia (Unützer et al., 2001).

The results of this study and possible changes in the current protocol were discussed with the professionals involved. The feed-back consisted of the following points:

1. This study provided scientific evidence that the course was beneficial for non-MDD and MDD participants.
2. There is no need for further selection beyond what is done now.
3. The endpoint reached depends on the severity at the beginning.
4. Clinical diagnosis showed that 60% met the criteria of one of the following DSM-IV disorders: a major depressive episode, an anxiety disorder or both.
5. The mean sum score on the CES-D, which measures the level of depressive symptoms in the past week, resembled the mean found in samples of psychiatric outpatients.
6. A standardized measure such as the CES-D should always be administered before and at the conclusion of the course.
7. A cut off score of 16 is an indication of a high level of depressive symptomatology and indicates that the participant is at risk for a (new) episode. Further diagnostics are strongly recommended.
8. A participant with a CES-D score ≥ 25 definitely needs further diagnostics as the possibility that he/she suffers from a major depression is 63%.

9. Furthermore, for the group suffering a MDD at pre-treatment, the magnitude of the change can also be an indication whether the course was the right intervention. Changes smaller than 4 points are not reliable, but can be due to fluctuations in the CES-D.
10. What can be expected from the course should be clearly communicated both to the potential participant as well as to referring health professionals (GP's, social workers and other primary care professionals). Especially the expectations for those with a major depression should be realistic.
11. The broad inclusion criteria and low threshold set by the prevention department result in a very heterogeneous group of elders. Although nearly all had a lifetime diagnosis of major depression at the time of enrollment, the level of depression symptoms varied widely. A consequence of this policy is that the prevention departments engage in prevention as well as in treatment. This has consequences for responsibilities of the course leaders.

6. Future directions

What about the older adults that do not fit the profile of our sample?

It has taken a long time to shake off Freud's legacy, i.e., the thought that older people lack the mental plasticity to change or benefit from psychotherapy, or that depression is a natural consequence of the increasing number of losses experienced as we age. In the last twenty years it has been shown many times that treatments effective for younger adults with depression were also effective for seniors (see Cuijpers et al., 2006), at least for the younger, white, well educated senior. But what about the very old, or not so well educated or non-white depressed seniors? In the next section I will reflect on these issues.

6.1 Age

Karel and Hinrichsen (2000) have emphasized that studies of effective treatment for the frail elderly have been few, and stressed that these are much needed: the mean age of the Dutch population is increasing and the group of very old will grow accordingly (Central Bureau for Statistics, 2007). It is conceivable that some components of the course are more essential for the oldest old than for the younger old; DeBerry 1989 (in Wetherall, 1998), for instance, concluded that in the treatment for anxiety relaxation techniques were more beneficial than cognitive skills. They may also be gender-specific. In men, for instance, chronicity was associated more with lack of social support, instrumental support, functional disability and cognitive decline than in women (Schoevers et al., 2003). Jané-Llopis et al. (2003) have found in their meta-analysis that programs including competence enhancement had the highest effect sizes regardless of age group; however, for older adults social support proved to be an important component, while programs with behavioral techniques were detrimental for this age group. They have concluded that research is needed to establish which

components of existing interventions are suitable for the oldest old. In a meta-analysis of the effects of outreach programs for late-life depression, one of the predictors for dropout was participation in a cognitive behavioural program (Cuijpers, 1998c). Other predictors for dropout were the percentage of female participants and the number of sessions. The question whether these predictors were age-related was not answered in this meta-analysis.

Currently, internet versions of the CWD course are available. These may well do for the younger old, but may not suit the older old for whom the weekly get-together may be an important factor in decreasing the depressive feelings. Besides, the older old are likely to have to cope with loss of functional ability. Enhancing competence in solving immediate problems is important in enabling people to cope with feelings of loss of control and independence.

Age-related conditions associated with depression are dementia, myocardial infarction and stroke. The Leiden 85-Plus study has shown that dementia precedes depression, but does not accelerate it (Vinkers, Gussekloo, Stek, Westendorp & van der Mast, 2004). The overlap between depression and apathy, possibly an early sign of dementia, is large, and more research is needed to understand the underlying mechanisms. Dementia is an exclusion criterion for the CWD course. Steps have been taken to design or adjust treatment appropriate for this group of older persons and their caregivers. For instance, Teri, Logsdon, Uomoto and McCurry (1997) carried out a controlled clinical trial including behavioral therapy for older patients with dementia and their caregivers, and Miller and Reynolds III (2006) are currently exploring ways in which Interpersonal Psychotherapy, which is also known as an effective therapy for late-life depression, could be modified to better serve the older person suffering from cognitive decline and their caregivers.

The chance to get a myocardial infarction, a heart disease related to depression, is more likely in later life. On the one hand, depression is an independent predictor of cardiovascular diseases such as myocardial infarction, on the other hand major depression often follows myocardial infarction (Frasure-Smith & Lesperance, 2005). Post-myocardial infarction (post-MI) depression increases the risk by 2-2.5 (Melle et al., 2004). Recent studies designed to examine the effects of the treatment of post-MI depression have shown that neither treatment with CBT (Beekman et al., 2003) nor medication with antidepressants (SSRI's) (Melle et al., 2007) improved long-term depression status or cardiac prognosis. Although both major depression and post-MI depression are characterised by sadness and apathy, post-MI depression shows mostly somatic symptoms of tiredness and poor sleep but no feelings of guilt, shame or being worthless. This form of depression is called somatic depression. A similarly disappointing result was found regarding the treatment of depression after a stroke. In about 25% of cases mood disorders occur in the first year after the stroke. These can be treated with either antidepressant medication or psychotherapy. In a Cochrane review of 2004, the authors found insufficient evidence for the advantages or

disadvantages of treatment with antidepressants or psychotherapy (Hackett, Anderson & House, 2004).

6.2 Education and lower social economic status

In our sample, a relatively high proportion of participants, taking into account the age cohort they belong to, were highly educated. This may indicate that the less educated are not reached by the recruitment strategies to the same extent. A reason might be that the idea of taking a course is not appealing because it is too intellectual. A possible alternative in the management of depression could be physical exercise programs. In their meta-analysis, Lawlor and Hopker (2001) concluded that although the studies analysed had important methodological weaknesses, physical exercise did have a positive effect on depression equal to the effect of CBT. For the less educated and individuals with lower social economic status (SES), exercise programs may be more acceptable and attractive. Currently the mental health care institutions in The Hague and Maastricht are offering exercise programs to women with mild depression (indicated depression) from lower-SES. How effective such programs are for this target group has not yet been studied (Meyer, Smit, Schoemaker & Cuijpers, 2006). There is no reason why older depressed people should not be engaged in exercise with the aim of reducing their depression.

Another aspect to consider is the venue of the CWD course. Taking the intervention program to the communities of the target groups may be important in order to avoid the stigma that may be connected with mental health care. Examples are the interventions described below, which were developed for Turkish and Moroccan labour immigrants.

6.3 Ethnicity

The large wave of Turkish and Moroccan labor immigrants in the '60s and '70s of the past century are now becoming part of the senior population. Depression as measured with the CES-D was much higher amongst these groups than in the Dutch seniors (van der Wurff et al., 2004). Economic status of these first generation migrants is poor; their income is low, housing is poor, and they do not speak Dutch. Many suffer health and psychological problems (de Vries & Smits, 2005). They are known to visit their GP, but hardly use the mental health care system. In our sample none enrolled.

As a form of universal prevention the Trimbos institute has developed 'living room' meetings for older women of Turkish or Moroccan background to prepare for old age (de Vries & Smits, 2005). The target groups were reached through Turkish and Moroccan women organizations. The hostess - of the same background- played a key role in the success. The strength of this approach is its low threshold. It can also pave the way to the mental health care system. For younger Turkish or Moroccan women the CWD course was adapted. In a pilot study the course was found to reduce depressive symptoms (Meyer et al., 2006). Maybe the course could be further adapted for older Turkish or Moroccan women.

A program based on reminiscence or life review was developed for both Turkish and Moroccan elderly with mild depression (indicated prevention). This program was not conducted at a private home but at a local community centre. There were separate groups for men and women. Both the 'living room' program and the reminiscence program are new and their effectiveness has not been studied yet. A characteristic of both programs is that they are carried out in the immediate environment of the participants instead of in one of the mental health care centers. This might be a good approach to reach low-SES groups from Dutch or other ethnic origin (for instance the Hindu-Dutch also form a large ethnic group) as well. This approach of bringing the intervention to the target group, avoids the stigma attached to mental health care centers.

And maybe a more physical approach works here better too. In Amsterdam a fitness program for women of different ethnic background was recently hailed. How effective these are in reaching these populations that are usually difficult to recruit for interventions and how effective they are in reducing depressive symptoms is a matter for future research.

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