Patient and clinician assessments on symptomatology and recovery changes on older adults following a psycho-educational program for depression and anxiety

Angela Potes

Department of Psychiatry

McGill University, Montreal

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Abstract

Geriatric psychiatry populations present high prevalence and re-admission rates of depression and anxiety disorders, report subjective cognitive complaints that often precedes the onset of cognitive decline and are in gross need of service assessment. Evaluation of Mental Health services places important attention to the assessment of patient's perspectives, especially as treatment outcome studies typically assess clinician ratings rather than patient ratings. Pre-post measures of changes in depression (GDS), anxiety (BAI), well-being (GWBS) and self-assessments of recovery (RAS) were collected in a sample of 34 older adults (age = 71.32±6.46 years) participating on an ongoing psycho-educational program. Post -testing data included perceived improvement (PIQ) rated by patients and clinicians, and clinician assessment on depressive symptoms (CS-GDS). The first study examined the association between patient's perceived improvement and patient and clinician ratings on symptomatology. First, relationships between patient's perceived improvement and symptomatic change were studied. Second, patient's perceived improvement and post-measures of depression measured by patients and clinicians were also examined. Results indicate that while pre-post patient assessments on depressive symptomatology are associated to patient's perception of improvement, assessments on changes of anxiety and well-being are not. Moreover, patient and clinician ratings on depression symptoms post-treatment were associated to perceived improvement. In this context, patients report stronger associations. Interestingly, components of perceived improvement that assess aspects of social relations are associated to patient assessments of depression symptoms but not to clinician assessments. It appears that differences between patient and clinician ratings emerge as they place attention to different aspects of treatment outcome. In light with this, the second study explored associations between patient changes in recovery and patient and clinician assessments on perceived improvement, as aspects other than symptomatology change are considered relevant to the assessment of treatment outcome. Despite recovery improvements are observed, patient assessments are not associated while examining recovery change and perceived improvement. Clinician assessments implied that patient improvement declines as recovery changes increase. Results from both studies imply patient and clinician differences on what they consider important within the assessment of treatment outcome. First, patient results on symptomatology change may be subject to their representation of illness, whereas longitudinal effects of treatment duration and service settings may have hindered recovery changes. Second, clinician assessments on symptomatology change may have been influenced by their tendency to focus on the assessment of depression symptomatology, whereas in the context of recovery, clinicians may differ in their perceptions of patient's improvement due to their own expectations. Future studies may integrate simultaneous assessments of instruments exploring symptoms and aspects other than depression (i.e. recovery), especially those examining representations of illness in older adults. In the same line, as the PIQ identifies patients who benefit more (or less) from treatment, assessments of non-completers and differences between patients diagnosed with mixed depression and anxiety versus those diagnosed with depression or anxiety alone may also be considered. In regards to examining influences on treatment retention, aspects including duration of treatment and type of setting may also be studied. Finally, in order to avoid rating biases, the use of double-clinician assessment may be influential in future directions of research.

Abrégé

Les personnes traitées en psychiatrie gériatrique présentent une forte prévalence t de dépression et des troubles anxieux et un taux de réadmission élevé. Il importe alors d‘évaluer les services de santé qu‘elles requièrent. Une attention particulière mérite d‘être portée à la perspective des patients, spécialement en ce qui se rapporte aux résultats des traitements puisqu‘ils sont généralement évalués par les cliniciens plutôt que les patient eux-mêmes. L‘étude a été effectuée auprès d'un échantillon de 34 adultes âgés (en moyenne de 71.32±6.46 ans) participant à un programme psychoéducatif. Parmi les données recueillies au terme du programme figure aussi deux échelles complétées parleurs cliniciens ; une échelle d‘amélioration perçue (PIQ) et une autre sur l‘évaluation de leurs symptômes dépressifs (CS-GDS). La première étude a examiné la relation entre l‘amélioration perçue par les patients et leur évaluation ainsi que celle de leur clinicien de leurs symptômes. Les résultats impliquent que les évaluations des symptômes de dépression sont associées à l‘amélioration perçue par les patients. Par contre, aucune corrélation significative n'a été trouvée entre les changements de symptomatologie pour l‘évaluation de l‘anxiété et du bien-être. En outre, les évaluations des patients et des cliniciens en rapport avec les symptômes de dépression à la fin du traitement sont associées à l‘amélioration perçue des patients. Toutefois, la dimension de l‘amélioration perçue (relations sociales) est associées avec des symptômes de dépression par les patients seulement. Compte tenu ces différences, les aspects autres que le changement symptomatologique ont été jugés pertinents d‘être étudiés. Dans ce contexte, la seconde étude a porté sur l‘association entre le rétablissement des patients et l‘amélioration perçue jugée par les patients et cliniciens. Les résultats indiquent que même si le rétablissement des patients s‘est amélioré après l‘intervention, leur évaluation n‘indique pas d‘association avec l‘amélioration perçue. Les évaluations des cliniciens, quant à elles, suggèrent une diminution dans l‘amélioration des patients lorsque le rétablissement s‘accroit. Les résultats des deux études indiquent des différences entre les patients et les cliniciens sur ce qu'ils considèrent important quant à l'évaluation des résultats du traitement. À cet égard, les résultats des patients quant au changement symptomatologique en relation à leur amélioration perçue peuvent être conditionnés par leur perception de la maladie. Cependant, la durée du traitement et les caractéristiques des services peuvent avoir influencé leur perception de rétablissement. Deuxièmement, les évaluations de leurs cliniciens à propos du changement symptomatologique peuvent résulter de préconceptions quand ils tentent de se concentrer sur les évaluations de la symptomatologie de la dépression. De plus, dans le contexte du rétablissement, les perceptions des cliniciens sur l‘amélioration des patients peuvent être modifiées par leurs propres attentes. Des études futures pourraient intégrer des évaluations simultanées d‘instruments mesurant des symptômes et d‘autres aspects en dehors de la dépression, spécialement ceux qui examinent les représentations de la maladie chez les personnes âgées. Dans cette perspective, comme l‘échelle du PIQ, servant à identifier les patients qui bénéficient plus (ou moins) d'un traitement, l'évaluation des abandons ainsi que les différences entre les diagnostics des patients incluant la dépression et l‘anxiété mixte versus les diagnostics de dépression ou d‘anxiété uniquement, pourraient aussi être examinées. En ce qui concerne l'examen des influences sur la rétention de traitement, les aspects de la durée du traitement et le lieu de service peuvent être considéré. Enfin, afin d‘éviter les biais des évaluateurs, l‘utilisation des évaluations doubles par des cliniciens peut avoir une influence sur les directions futures.

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Contribution of Authors

This thesis is composed by two manuscripts following general guidelines of manuscript submission where an introduction is followed by methods and results sections, ending with a discussion, a brief conclusion and future directions of research. The first manuscript entitled: "Comparison of patient and clinician assessments on changes of depression symptomatology and patient-reported perceived improvement", was co-authored by myself, Dr. Michel Perreault, Dr. Geneviève Gagnon and Dr. El-Hadj Touré. The second manuscript entitled: "Relationships between perceived improvement and self-assessments of recovery" was co-authored exactly as the first one.

My supervisor, Dr. Michel Perreault, impressively contributed to the confinement of the study in place, conception of research questions, writing of REB approval and revision and editing of manuscripts and this thesis.

As first author, I was responsible for writing of REB approval, collecting and entering data, as well as its processing, analysis and interpretation. I have drafted the two manuscripts and all of the thesis sections, revising and editing accordingly. I took responsibility on integrating feedback from all co-authors.

Dr. Geneviève Gagnon contributed to the conception of the study and supervised on all aspects related to the data collection and entry of this project, including all the planning regarding waves of data collection and entry, and supported clinician meetings with the Geriatric Psychiatry Division at the DMHUI. She was also involved in critical revision of REB approval and manuscripts. She is also co-PI of this project.

Dr. El-Hadj Touré oversaw the analysis of results and fully revised both manuscripts.

Abbreviations

AD Alzheimer’s disease

CR Cognitive Retraining

DMHUI Douglas Mental Health University Institute

DSM Diagnostic and Statistical Manual of Mental Disorders

HMO Health Maintenance Organization

MCI Mild Cognitive Impairment

SMI Severe Mental Illness

STARc Specialized Therapeutic Aging Recovery Centre

WHO World Health Organization

Chapter 1: Introduction

The evaluation of mental health services has given special attention to service assessments in older adults, especially as the development of viable strategies that allow for treatment improvements in this fragile population are warranted (Fiske, Wetherell, & Gatz, 2009; Prins, Verhaak, Bensing, & van der Meer, 2008). Moreover, evidence of anxiety and depression studies not only report that they represent the highest prevalence re-admission rates in admission units and outpatient services in geriatric psychiatry (Beekman, Copeland, & Prince, 1999; Djernes, 2006; Fombonne, 1994), but that these patients present decline in wellbeing and general functioning (Beekman, Deeg, Braam, Smit, & Van Tilburg, 1997). In addition, patients report subjective cognitive complaints that often precedes the onset of cognitive decline (Barnes, Alexopoulos, Lopez, Williamson, & Yaffe, 2006; Diniz, Butters, Albert, Dew, & Reynolds, 2013; Ganguli, Du, Dodge, Ratcliff, & Chang, 2006; Steffens et al., 2006; Zahodne, Stern, & Manly, 2014), have strong difficulties to develop coping strategies related to age-related declines (Gili et al., 2011) and report high loss of personal control over their lives due to repeated hospitalization (Harrow, Hansford, & Astrachan-Fletcher, 2009).

The study of treatment outcome has been primarily assessed by symptomatic change and has rarely examined patient's perspectives (Perreault et al., 2010; Sechrest, McKnight, & McKnight, 1996). In this context, research has targeted assessments on populations other than older adults (Crayton, Sidovar, Wulf, & Guo, 2014; Nilsen, Handegård, Eisemann, & Kvernmo, 2015; Palesy, Pratt, Mrad, Marcells, & Harvey, 2015; Paterson & Britten, 2003), and on diagnoses other than depression and anxiety (Eisen, Ranganathan, Seal, & Spiro III, 2007; Kupper & Tschacher, 2008; Montgomery et al., 2015; Thompson, Bekelman, Allen, & Peterson, 2015). Interestingly, despite existing reports on differences between patient and clinician perspectives on treatment outcome, studies on patients and clinician perspectives have also been scarce (Andrade et al., 2012; Beretta et al., 2005; Crosby, Kolotkin, & Williams, 2003; Demyttenaere, Desaiah, Petit, Croenlein, & Brecht, 2009; Lunnen, Ogles, & Pappas, 2008; Werner, Stenner, & Schüz, 2012). Previous reports describe that focusing on clinician evaluations on symptomatic change undermine the understanding on the meaning that individuals give to their experience and use to make sense of their symptoms and illness, especially as relationships between perceived improvement and symptomatic change seem to depend on who evaluated the symptoms (Kupper & Tschacher, 2008; Ries, Jaffe, Comtois, & Kitchell, 1999; Rohland, 2001). Andrade et al. (2012) are the only authors to have examined symptomatic change using simultaneous assessments from patient and external raters. Supporting previous findings, their results suggest that aspects considered by raters on measures of treatment outcome are different, so that comparing both perspectives is important as what raters judge as important in the assessment of treatment outcome seems to be different. In the same line, the authors have also highlighted that assessments on aspects of interpersonal and dimensional factors (i.e. recovery) among depression and anxiety disorders seem to play an important role in patient's assessment of perceived improvement (Hasler, Moergeli, & Schnyder, 2004).

Most importantly, studies examining patient perspectives on barriers to treatment access have identified symptomatology of depression and anxiety disorders as one important barrier and a possible predictor of treatment adherence and retention to therapy treatments (Lenze et al., 2005; Nelson, Clary, Leon, & Schneider, 2005). Therefore, as the study of patient's perspectives on treatment outcome is pertinent to the understanding of what patients consider important in their evaluation of treatment, an ongoing psycho-educational program was assessed from the perspective of the patient and clinician. Following Andrade et al. (2012) results, this study primarily aimed investigating the relationship between perceived improvement and symptomatic change of older adults suffering from depression and anxiety who participated in the program. Second, relationships between patient assessments of recovery and perceived improvement were also addressed. Patient and clinician comparisons included relationships between post-ratings of depression symptomatology and perceptions of improvement.

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Chapter 2: Literature Review

Overview

Older adults suffering from depression and anxiety disorders do not only present the highest rates of prevalence and re-admission, but are in exceptional need of service assessment due to increasing pressures in the mental care system. In this context, the study of patient perspectives on treatment outcome allows for improvements in patient populations, particularly among fragile older adults. Since barriers to treatment are associated to treatment outcome and symptomatology display has been identified as an important predictor of treatment retention, relationships between perceived improvement and symptomatology changes evaluated in a psycho-educational program for older adults suffering from depression and anxiety have been defined as central to this thesis. In addition, since aspects other than symptomatology change may also seem to influence patient's perspectives on treatment outcome, assessments of recovery has been chosen as a secondary examination in this thesis. In order to deepen the understanding of mental health services from the perspective of the patient participating in, this literature review provides pertinent background information on older adults suffering from depression and anxiety disorders. Characteristics on this population's fragility and existing barriers to seeking and adherence to treatment, including aspects of recovery will be discussed. This review will continue addressing aspects of perceived improvement on treatment outcome including research on depression and anxiety disorders, older adults and comparison of patient and clinician ratings. To finalize, attention will be placed to studies of perceived improvement on symptomatic change and influences of aspects of recovery, so that important limitations and knowledge gaps will be mentioned, as a prelude of the manuscripts to follow.

Depression and anxiety disorders in older adults

Whereas depression is recognized as an illness of sadness, loneliness, despair, low self-esteem and self-reproach characteristics (Müller-Spahn & Hock, 1994), anxiety is described as a real or perceived fear-alarmed response that prepares an individual for a present or imminent danger oriented by a mood state (Barlow, 2004). In older adults, depression and anxiety disorders can be easily misconceived and masked by age-related changes (Cahoon, 2012; Wolitzky-Taylor, Castriotta, Lenze, Stanley, & Craske, 2010), especially as illness presentation is entangled with medical comorbidity, cognitive decline and stressors of life (De Beurs et al., 1999; Fiske et al., 2009; Rodda, Walker, & Carter, 2011).Yet, depression and anxiety disorders represent the highest prevalence and incidence rates among all mental health disorders (Baca Baldomero et al., 1999; Fava et al., 2004; Kessler et al., 2005; Vazquez-Barquero et al., 1997) and experts consider that depression and anxiety disorders are not only under-diagnosed and under-treated (Satcher, 2000; Szczerbińska, Hirdes, & Życzkowska, 2012), but that they represent high costs (Katon, Lin, Russo, & Unützer, 2003; Simon, Ormel, VonKorff, & Barlow, 1995; Vasiliadis et al., 2013), are associated with increased family burden (Martire et al., 2010), require more clinical staff (Wolitzky-Taylor et al., 2010), and are associated with increases on suicidality (Control & Prevention, 2010). Most importantly, in 2012, reports by the World Health Organization (WHO) have predicted that by 2030 depression will be the illness to report most disability in world-wide disease burden and that by 2021, 30% of the population in Canada will be older adults.

I. Epidemiology. In older adult populations, reports on a three- year longitudinal study examining a sample of 8012 adults aged 60 and over reported that the highest incidence rates were represented by major depressive disorder (3.3%) and generalized anxiety disorder (1.6%), compared to alcohol or drug abuse of dependence which seem to occur in lower extents (0.4%) (Chou, Mackenzie, Liang, & Sareen, 2011). Strikingly, recent findings report that older adults suffering from SMI present higher rates than previously observed (Achterberg, Pot, Kerkstra, & Ribbe, 2006; Kvaal, Macijauskiene, Engedal, & Laake, 2001; Smalbrugge et al., 2005). For instance, reports from Fava et al. (2004) and Jeste, Hays, and Steffens (2006) have studied a sample of 352 older adults. Results from these studies indicated that the prevalence of unipolar depression was 42 to 46% and that a large proportion of these patients were diagnosed with anxious depression (69%). In addition, Kvaal et al. (2001) reported that the prevalence of depression in outpatient clinics receiving psychiatric services is 25-45% and that anxiety symptoms are present up to 40%. Estimates on nursing homes suggested that the prevalence for depression and anxiety represent 34% to 29% of their patients (Achterberg et al., 2006; Smalbrugge et al., 2005).

II. Rates of re-admission. Strong predictors of re-admission in mental health include poor treatment adherence (D'Ercole, Struening, Curtis, Millman, & Morris, 1997; Haywood et al., 1995; Suzuki, Yasumura, Fukao, & Otani, 2003; Weiden, Kozma, Grogg, & Locklear, 2004), low level of education (Suzuki et al., 2003; Thompson et al., 2003), poor follow-up after hospital discharge (Thompson et al., 2003), involuntary admission (Feigon & Hays, 2003; Munk-Jørgensen, Bo Mortensen, & Machón, 1991), lack of social or family support (Hendryx et al., 2003; Suzuki et al., 2003), and diagnoses of schizophrenia (Cuffel, Held, & Goldman, 2002) and substance use disorders (Haywood et al., 1995; Miller, Beck, & Fraps, 1984). Especially in younger age groups, most re-admissions are observed on patients suffering from affective psychosis (49%) (Hodgson, Lewis, & Boardman, 2001) and other diagnoses of schizophrenia (Cuffel et al., 2002). Yet, older adults with depression and anxiety disorders report the highest re-admission rates, including diagnoses of major depression, bipolar disorder and dysthymia (Heeren, Dixon, Gavirneni, & Regenold, 2002; Woo et al., 2006). A study in the United States using data for all elderly Medicare beneficiaries (N=41, 839) hospitalized for psychiatric reasons (MedPAR Limited Data Set, 2007) validated that re-admission rates were much higher for patients diagnosed with a primary diagnosis of mood disorders, and that comorbid conditions seemed to increase the hazard rate for this population, including anxiety disorders (Prince et al., 2008). Results from this study also identified comorbid conditions which seemed to increase the hazard rate for this population, including anxiety disorders (i.e. obsessive compulsive disorder), followed by alcohol dependence, drug dependence and personality disorders.

III. Mortality. The relationship between depression and anxiety disorders and mortality is very strong (Bruce & Leaf, 1989; Henderson et al., 1997; Penninx et al., 1999; Schulz et al., 2000; Schulz, Drayer, & Rollman, 2002; Takeida, Nishi, & Miyake, 1999). In this context, inpatient older adults (Cole & Bellavance, 1998; Koenig, Shelp, Goli, Cohen, & Blazer, 1989), patients with a history of previous depression (Cavanaugh, Furlanetto, Creech, & Powell, 2001), and severity and duration of symptoms have been identified as predictors of mortality in older adults (Henderson et al., 1997). Furthermore, suicide frequency and ideation appeared to be the highest predictors of mortality in this patient population (Cahoon, 2012). In the United States alone, reports on suicide frequency stated that older adults aged 65 and above were 16.9 over 100,000 per year in 1998 and that greatest increases were observed on white men compared to non- white men who, conversely, reported higher suicide frequency during young adulthood (Control, 2001; Conwell, Duberstein, & Caine, 2002). Using the health maintenance organization (HMO) database, another study from the Midwest region of the United States, compared treatment between younger and older adults with a diagnosis of depression in primary health care (ages ranging from 19 to 93). Interestingly, results indicated that older adults are at higher risk of mortality because of social circumstance and medical conditions, but that clinicians rarely inquired about suicide risk within this population (Fischer, Wei, Solberg, Rush, & Heinrich, 2003). Moreover, a variety of factors have also been related to suicide in older adults including marital status, living alone, perception of poor health status, poor sleep quality and experiencing stressful events (Conwell et al., 2000; Turvey et al., 2002; Waern et al., 2002).

IV. Areas of decline. Older adults with depression and anxiety disorders present decline in areas of wellbeing and general functioning (Beekman et al., 1997), have strong difficulties to develop coping strategies related to age-related declines (Gili et al., 2011) and report high loss of personal control over their lives due to repeated hospitalization (Harrow et al., 2009). Specifically to older adults, the impact of medical comorbidity is very strong, which in turn complicated illness progression as a result of biological impairments of the body (Gum & Cheavens, 2008; Han, 2002; Lyles, 2001; Morley & Kraenzle, 1994; Ziegelstein, 2001). Functional impairments related to disability and mobility issues (Poulsen & Pachana, 2012; Zeiss, Lewinsohn, Rohde, & Seeley, 1996), including physical disability (Da Silva, Scazufca, & Menezes, 2013) are recognized as important precursors to neglect valued social or leisure activities, isolation and reduced social support (Findlay, 2003), which incapacitates their activities of daily living (Sinclair, Lyness, King, Cox, & Caine, 2001). Moreover, substantial reports have described that subjective cognitive complaints that often precedes the onset of cognitive decline are observed in this patient population (Barnes et al., 2006; Diniz et al., 2013; Ganguli et al., 2006; Mohlman, 2005; Steffens et al., 2006; Zahodne et al., 2014). For instance, studies have reported progression into Alzheimer’s disease (AD) or vascular dementia may be representative of a preclinical sign associated to early symptoms of depression in combination to mild cognitive impairment (MCI) (Defrancesco, Marksteiner, Deisenhammer, Hinterhuber, & Weiss, 2008; Li, Meyer, & Thornby, 2001). Most importantly, presence of depression and anxiety have also been reported to complicate progression of AD which in turn, increases caregiver depression and burden (Clyburn, Stones, Hadjistavropoulos, & Tuokko, 2000; Pinquart & Sörensen, 2003).

V. Recovery and protective factors. In the context of older adults suffering from depression and anxiety disorders, studies examining protective factors and recovery have studied clinical samples of highly depressed older adults, in which aspects of social support seemed to have protected against the loss of basic maintenance abilities (Hays, Steffens, Flint, Bosworth, & George, 2014; Kempen, Ballemans, Ranchor, van Rens, & Zijlstra, 2012). Moreover, another study suggested that higher disabilities were determined by poor self-reports on role functioning compared to physical functioning (Sinclair et al., 2001), despite large accounts on physical disability and severity of symptoms (Trivedi, Kleiber, & Greer, 2005). In this scenario, instrumental support such as helping with tasks was generally found protective to aspects that may worsen performance and constructs of recovery. Recovery has been defined as a process of transition to a more fulfilling, satisfying and contributable life despite the presence of symptoms (Anthony, 1993; Deegan, 1988; 1996). Among its dimensions, it involves aspects of hope, engagement, self-determination and social interconnectedness (Ahern & Fischer, 2001; Frese & Davis, 1997; Ridgway, 2001). Congruently, the recovery paradigm recognizes that in patients suffering from depression and anxiety, working on aspects related to psycho-social improvements including the management of stressors and social support is imperative (Dennis, Markey, Johnston, Vander Wal, & Artinian, 2008). In addition, Hasler, Moergeli, & Schnyder

(2004) have also identified that in this patient population aspects of well-being, attitudes towards self and meaning of life all seem to influence patient perceptions of improvement. Therefore, it seems that constructs of recovery also posit a strong influence on how older adults suffering from depression and anxiety disorders portray illness experience and allowing for or hindering improvement.

VI. Barriers to treatment: seeking and adherence. Current reports describe increased use of hospital and outpatient services of older adults suffering from depression and anxiety disorders (Vasiliadis et al., 2013). As treatment use has been associated to depressed older adults conceptualizations of stigma and perceived discrimination factors (Satcher, 2000), presentation of avoidance behaviors seem to hinder treatement seeking in anxiety disorders (Chartier-Otis, Perreault, & Bélanger, 2010). Moreover, multiple factors including substance use, cognitive status, polypharmacy and medical co-morbidity, social support and the cost of treatment have been related to inflict on use of mental health services by older adults with depression (Zivin & Kales, 2008). Studies have reported that patients with cognitive impairments lack the ability to take prescribed medication appropriately (Sirey, Greenfield, Weinberger, & Bruce, 2013), where patients tend to forget to take them or if they already took them (Holt, Rung, Leon, Firestein, & Krousel-Wood, 2014; Mackin & Areán, 2007). Other studies report that cognitive limitations may be influenced by caregivers, decreasing adherence to treatment due to factors such as disagreement on treatment recommendations (Bogardus et al., 2004) and their perceptions on causes of illness presentation (Sher, McGinn, Sirey, & Meyers, 2014), especially when referring to beliefs on medication comply. Another important issue is polypharmacy. On average, American older adults take three to four over-the-counter medications daily (Patterson, Hughes, Kerse, Cardwell, & Bradley, 2012) and problems related to polypharmacy involve inability to follow a medication routine, duplication, hoarding, confusion over generic and trade names, multiple prescribers and discontinued medication (MacLaughlin et al., 2005; Sorensen, Stokes, Purdie, Woodward, & Roberts, 2005). In the spectrum of medical morbidity, patient primarily worry about adverse reactions and effects due to use of multiple drugs, which may in turn, increase anxiety and somatization (DiMatteo, Lepper, & Croghan, 2000). In regards to social support, a meta-analysis by DiMatteo (2004) posits that factors associated to death of beloved ones (i.e. death of spouse) have been highlighted to hinder coping with stress and that older adults living within family cohesiveness (i.e. not alone nor in conflict) are most likely to adhere to treatment. Cost of treatment has also been identified as an important barrier to treatment seeking in the United States. Medicare co-payments for psychotherapy are much higher than other medical services and Medicare beneficiaries had only been granted access to prescription drug benefits since 2006 (Alexopoulos, 2005). Moreover, the story in regards to anxiety disorders is not so different in Canada. Despite having a universal health care system, concerns about the cost of services were the most frequent reported barrier to treatment in a study conducted by Chartier-Otis, Perreault, & Bélanger (2010). Moreover, the authors also highlighted that as the second most prominent barrier to treatment was identified as ‘not knowing where to go’, lack of treatment availability and services may be possibly influencing where patients seek help.

Importance of barriers to treatment and assessments of recovery in older adults suffering from anxiety and depression

As under-utilization of mental health care services by older adults have been noted (Wang et al., 2005), possible explanations have been linked to how patient’s identify with illness and how they perceive treatment need (Gum, McDougal, McIlvane, & Mingo, 2010). In this vein, studies have identified symptom display as an important predictor of treatment seeking and adherence (Chartier-Otis, Perreault, & Bélanger, 2010; Lenze et al., 2005; Nelson et al., 2005) so that examination of symptomatology changes is crucial to the understanding of what patient's consider important in the assessment of treatment outcome. Additionally, aspects of the interpersonal domains and recovery such aspect of well-being, attitude towards self and meaning of life, all seem to influence patient perceptions of improvement, especially in populations suffering from depression and anxiety disorders (Hasler, Moergeli, & Schnyder, 2004). Therefore, in this patient population, assessments of recovery are considered important as plausible determinants to further understand treatment outcome from the perspective of the patient.

Perceived improvement on treatment outcome

The use of patient's perspectives on health care services has been recommended for the assessment of service quality (WHO, 2000). Especially in the field of mental health, the uniqueness of patient's opinions has conducted administrators and institutions to consider patient perspectives as essential in service accreditation (Hansson, 2001). Mental health evaluation has made ample progress in the assessment of service quality, including the assessment of patient perspectives in relation to health problems (Dicker & Armstrong, 1995), drug therapy (Britten, 1994), and severe mental illness (Rogers, Pilgrim, & Lacey, 1993), just to mention a few. Moreover, many studies have focused their interest on the assessment of patient satisfaction (Hasler, Moergeli, Bachmann, et al., 2004; Holikatti et al., 2012; Kalman, 1983; Längle et al., 2003), as it has been identified as a key variable for the assessment of patient's perspectives regarding services, as an important predictor of treatment retention (Stancliff, Myers, Steiner, & Drucker, 2002) and to be associated with treatment outcome (Zhang, Gerstein, & Friedmann, 2008). In this context, a study by Perreault et al., 2010 examined the relationship between perceived improvement and patient satisfaction on an adult population participating in a methadone-maintenance program. Results from this study assembled an association between perceived improvement and patient satisfaction, as satisfaction has not only been related to quality of service but to aspects of physical health, emotional health and social relations. In this sense, despite satisfaction has been studied as the main outcome measure on the evaluation of mental health services, assessments of perceived improvement may bring new insight to this area, especially as it helps to identify patients who benefit more (or less) from treatment (Perreault et al., 2010). In overall, studies on perceived improvement on treatment outcome elucidate the richness that may be acquired from the perspective of the patient, and may allow deepening current understanding on what patients consider important as the result of treatment.

I. Perceived improvement on depression and anxiety disorders. Despite the significance of depression and anxiety disorders, a moderate number of studies have focused their efforts to understand patient's perspectives following treatment. Some studies focused on facilitating factors of therapy engagement (Haugan, Innstrand, & Moksnes, 2013; Knowles et al., 2014; Ma, Huang, Chang, Yen, & Lee, 2010), whereas other studies portrayed examinations on use of psychotherapy (Dakin & Arean, 2013), antidepressants (Dwight-Johnson, Sherbourne, Liao, & Wells, 2000), use of self-management techniques (Chou, Lin, Hsu, Wang & Hu, 2004; Löwe et al, 2006) alternative treatment approaches (Bedi et al., 2000; Jorm et al., 2000) and perceptions of emotional problems (Brody, Khaliq, & Thompson, 1997; Cast & Welch, 2015; Da

Costa & Mash, 2008; Löwe et al., 2006). Moreover, other studies have looked into barriers to treatment (Chartier-Otis et al., 2010; Coles & Coleman, 2010; Johnson & Dwyer, 2008; Marques et al., 2010; Kadam, Croft, McLeod, & Hutchinson, 2001). Although quite compelling, results from these studies elucidate that further research is needed as many aspects on depression and anxiety disorders remain under-explained. In light with this, Ballenger et al., (2001) has described that information on how to understand patterns to treatment seeking and adherence to treatment remain limited.

II. Perceived improvement on older adults suffering from psychiatric illness. Although only a small number of studies on perspectives of aging populations have been published, recent studies focusing in older adults are on the rise. Since 2012, studies have explored perceptions of older adults on audiological rehabilitation (Grenness, Hickson, Laplante-Lévesque, & Davidson, 2014), post-hospital transition (Bontje, Asaba, Tamura, & Josephsson, 2012; Kangovi et al., 2014), self-protective behaviors (SteelFisher, Blendon, Hero, & Ben-Porath, 2013), physical activity program (Chong et al., 2014), co-management of low back pain (Lyons et al., 2013) and recovery after hip fracture (Schiller et al., 2015). Still, studies focusing on older adult populations in the area of mental health are very scarce. Studies have examined oral-health in adults with SMI (McKibbin, Kitchen–Andren, Lee, Wykes, & Bourassa, 2015), unmet need in regards to education and information (van der Roest et al., 2009), as well as education programs for late-life depression (Bird & Parslow, 2002). In this context, a study by Norrie et al. (2011) assessed patient satisfaction and efficacy of a psycho-education and cognitive retraining (CR) treatment in an Australian clinical population of older adults diagnosed with life-time history of depression. This study assessed patient satisfaction by using a four-response option questionnaire developed by the authors with the objective to evaluate participant's enjoyment to the course as well as program satisfaction and service offered. A high proportion of participants who completed the satisfaction questionnaire rated the quality of service as “excellent” (85.7%), and also, a large proportion of participants mentioned they would “definitely recommend the program to a friend” (88.1%). Although findings from this study were quite promising, the lack of validity on their developed satisfaction scale identifies an important caveat in regards to generalizability of results.

III. Comparisons between patient and clinician perceptions of improvement. The literature examining patient and clinician perceptions is somewhat limited, especially as treatment outcome has been traditionally evaluated by health care professionals (Thompson et al., 2015). Reports from the perspective of clinicians are ample. Some have focused on the appropriateness of care settings (Bartels, Miles, Dums, & Levine, 2003), program evaluation on cognitive behavioral programs (Richardson & Reid, 2006), hospital transition care (Arbaje et al., 2014) and commentaries on hoarding and mental illness (Koenig, Leiste, Spano, & Chapin, 2013). Moreover, on studies reporting patient and clinician perceptions, the acceptability of guidebooks for the management of osteoarthritis (Morden, Jinks, Ong, Porcheret, & Dziedzic, 2014), preferences for generic testing in the identification of colorectal cancer (Walsh et al., 2012), insight and psychosis (Tranulis, Corin, & Kirmayer, 2008), improvement of methadone-maintained patients (Trujols et al., 2011) and agreements on distress of cancer (Werner et al., 2012) have been reported. In this sense, there are no doubts on the impeccability on using patient and clinician assessments in the understanding of provision of better health care services.

Research gaps: perceived improvement, symptomatic change and recovery

Traditional examination of patient improvement rely on the detection of symptomatic change (Mercier et al,2004), where pre-post assessments of clinicians on objective outcome measures prevail (Sechrest et al., 1996). However, if assessments evaluating mental health care services are uniquely completed by clinicians, the voice of the patient is left unheard, contrary to recommendations stated to use patient's perspectives on the assessment of service quality by the WHO (2000) and the patient-centered approach of recovery (Oates, Weston, & Jordan, 2000). Nowadays, increasing attention has been given to comparisons between patient and clinician perceptions of improvement and symptomatic change (Andrade et al., 2012; Mercier et al., 2004). In this context, Perreault et al. (2010) developed an evaluation tool to examine treatment from the perspective of the patient as an indicator of treatment outcome. This measure provides the possibility of examining perceived improvement in order to identify the characteristics of patients who appear to benefit more (or less) of treatment and study the links between their perceived improvement and symptomatic changes as evaluated by standardized clinical measures (Andrade et al., 2012).

Since 2000, a small number of studies have addressed the relationship between perceived improvement on treatment outcome as measured by symptomatic change. In this context, lack of research prevails in regards to populations of older adults (Crayton et al., 2014; Nilsen et al., 2015; Palesy et al., 2015; Paterson & Britten, 2003), on comparison of simultaneous assessment of patient and clinician perspectives (Andrade et al., 2012; Beretta et al., 2005; Crosby et al., 2003; Demyttenaere et al., 2009; Lunnen et al., 2008; Werner et al., 2012) and on studies based on depression and anxiety disorders (Eisen et al., 2007; Kupper & Tschacher, 2008; Montgomery et al., 2015; Thompson et al., 2015). Moreover, Andrade et al. (2012) have examined perceived improvement on symptomatic change in a Brazilian population of adults diagnosed with psychotic disorders. Current knowledge highlights that this study is the only study to have simultaneously examined symptomatic change using both patient's and external observer's ratings. The study of simultaneous assessment of symptoms is relevant, as correlation strength helps revealing which rating presents a closer association to patient's perceived improvement. In this scenario, results from this study not only indicated that an improvement in symptom severity correspond to perceptions made by patients on beginning and end of treatment comparisons, but that stronger correlations on patient's ratings compared to clinician ratings were observed, supporting previous reports in the literature (McCabe, Saidi, & Priebe, 2007; Mercier et al., 2004; Russo et al., 1997). Andrade et al. (2012) suggested that there are probably different aspects considered by raters while measuring treatment outcome, elucidating the importance of comparing both perspectives, especially as some of patient symptoms are only accessible to themselves (McCabe et al., 2007; Mercier et al., 2004). Interestingly, results from Andrade's et al. (2012) study also posit possible influences of aspects other than symptomatology to account for differences on raters, including aspects of recovery. In this sense, Hasler, Moergeli, & Schnyder (2004) have concluded that populations suffering from depression and anxiety disorders attribute aspects of their interpersonal domains such as well-being, attitude towards self and meaning of life, to their perceptions of improvement.

Summary of Literature review

Due to pressures observed on the Canadian mental health system (Gfroerer, Penne, Pemberton, & Folsom, 2002; Mental Health Comission of Canada, 2012) and the fragility of older adults suffering from depression and anxiety disorders (Barnes et al., 2006; Beekman et al., 1999; Beekman et al., 1997; Diniz et al., 2013; Djernes, 2006; Fombonne, 1994; Ganguli et al., 2006; Gili et al., 2011; Harrow et al., 2009; Steffens et al., 2006; Zahodne et al., 2014), major development are justified to focus on treatment improvements in this patient population (Fiske et al., 2009; Prins et al., 2008). This literature review has covered issues currently faced by this patient population, including an overall understanding of barriers to treatment and aspects of recovery. A compilation of studies which focused on the study of patient's perspectives on treatment outcome was also discussed, comprising headings describing current understanding and limitations on the literature. To address research gaps in this field, a small number of studies addressing perceived improvement and symptomatic change, including possible influences of aspects of recovery have been emphasized. Using data collected on older adults participating in an on-going psycho-educational program and their clinicians, this thesis intended to deepen current understanding on what patients and clinicians perceive as important aspects of patient improvement following treatment. This will not only allow to further understand patient predisposition to follow and return to treatment as recommended by health care providers, but to induce developments of efficient treatments, including new values, service goals and refining of practices.

Results from this thesis were compiled into two manuscripts. The first focused on patient's perspectives on treatment outcome and symptomatic change in an older adult population of patients suffering from depression and anxiety disorders, with the primary objective to compare and support findings reported by Andrade et al. (2012). Following results from the first manuscript, the second manuscript investigated the relationship between patient assessments of recovery and perceived improvement as evaluated by patients and clinicians. Using assessments of recovery, this manuscript aimed to further understand patient and clinician differences on what they judge important on the assessment of treatment outcome, especially as clinicians are prone to focus on depression symptomatology.

This thesis concludes with a new understanding on perceptions of improvement for older adults with depression and anxiety disorders and their clinicians. In addition, recommendations to clinicians in regards to what they consider relevant to the assessment of treatment outcome are mandated, and propositions on future research are also described.

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Preface

The origin of this thesis grew for the need of assessment on ongoing clinical services in psychogeriatrics, as briefly outlined in Chapter 1 and thoroughly explored in Chapter 2. Chapter 2 also comprises the topic of focus in this thesis. A transitional text between Chapter's 3 and 4 will follow, so that the included manuscripts integrate research results in a coherent fashion.

Given the lack of understanding in studies measuring perceived improvement on symptomatic change, the focus of this thesis concerns the need to examine and contextualize results from a previous study (Andrade et al., 2012) in an older adult population suffering from depression and anxiety disorders. Challenging results in regards to the examination of treatment outcome from the perspective of clinicians have also increased the necessity to compare both perspectives as discussed in the literature review (Chapter 2). In line with this, this thesis enquired whether both patient and clinician ratings on symptomatic change differed and how this may have influenced their interpretations of perceived improvement. Results from these efforts are described in manuscript 1. Following results from the primary aim of this thesis, manuscript 2 examined the importance of including recovery assessments in the evaluation of patient's perceived improvement on treatment outcome, as aspects other than symptomatology seems to also influence patient and clinician perceptions on treatment outcome.

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Chapter 3: Patient and clinician assessments on symptomatology changes on older adults following a psycho-educational program for depression and anxiety

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Abstract

Important attention has been given to the assessment of patient's perspectives on treatment, especially as outcome has been typically evaluated by clinicians. This study examined the association between patient and clinician ratings on perceived improvement and symptomatology change of an older adult population participating on an ongoing psycho-educational program. Pre-post measures including depression (GDS), anxiety (BAI) and general well-being (GWBS) were collected in a sample of 34 older adults (age = 71.32±6.46 years). Post -testing data included perceived improvement rated by patients, and clinician assessment on depressive symptoms (CS-GDS). Results indicate significant correlations between pre-post changes of the GDS and patients PIQ (r =-0.37, n=31, p=0.04), but not on symptomatic changes of the BAI (r =0.012, n=32, p=0.95) nor the GWBS (r =0.12, n=31, p=0.51). Relationships between patient's PIQ and post-ratings on GDS (r = -0.74, n=33, p=0.000) and CS-GDS (r =-0.48, n=32, p=0.006) are also significant. Results imply that pre-post improvement in depressive symptoms is associated to patient's perceived improvement and that clinician and patient ratings on depression symptoms post-treatment were both inversely correlated to patient's perceived improvement. Findings suggest that the PIQ is a good indicator to assess symptomatic change by patients and clinicians although they are possibly placing attention to different aspects of treatment outcome, as indicated by differences on sub-scales of the PIQ. Clinicians possibly posit a strong focus on assessments of depression symptomatology. Future studies may integrate simultaneous assessments of instruments exploring aspects other than depression, especially those examining representations of illness in older adults.

Keywords

Older adults, depression, anxiety, treatment outcome, perceived improvement

Patient and clinician assessments on symptomatology changes on older adults following a psycho-educational program for depression and anxiety

Introduction

The inevitable pressures placed by the growing aging population on the Canadian health care system has raised the attention of policy makers to finance better services addressing their needs [1, 2]. Reports on older adults indicate that depression and anxiety disorders present decline in wellbeing and general functioning [3], report subjective cognitive complaints that often precedes the onset of cognitive decline [4-8], have strong difficulties to develop copying strategies related to age-related declines [9] and report high loss of personal control over their lives due to repeated hospitalization [10]. Most importantly, geriatric psychiatry populations present high prevalence and re-admission rates of depression and anxiety disorders [11-13], which are in turn, in gross need of service assessment for the development of viable strategies that allow for treatment improvements [14, 15].

The evaluation of mental health services has given special attention to the study of patient views [16, 17]. In this context, mental health evaluation has made ample progress in the assessment of service quality, including the assessment of patient perspectives in relation to health problems [18], drug therapy [19], severe mental illness [20], patient satisfaction [21] and perceived improvement following treatment [16, 22]. Interestingly, studies examining patient views on barriers to treatment access have stated the relationship between treatment outcome and treatment retention [23]. In the context of depression and anxiety disorders, symptomatology display has been described as one important barrier to treatment and a possible predictor of treatment adherence and retention to therapy treatments [24-26]. In this sense, understanding what patients consider important on their perceptions of improvement on symptomatology changes may serve to improve current knowledge on assessment of treatment outcome.

So far, some studies have included the examination of perceived improvement on treatment outcome using patient populations diagnosed with psychotic disorders [27-30] and adult populations [31-34], but research remains scarce. Most notably, despite differences between patient and clinician perspectives have been reported across the literature [35-38], perceived improvement has been traditionally rated by health care professionals and evaluated using pre-post assessments of standardized tools that measure symptoms[16, 39]. To circumvent this issue, the Perceived Improvement Questionnaire (PIQ) has been used to evaluate treatment from the patient's perspective as an indicator of treatment outcome [16]. One of the advantages of this tool is that it allows studying the links between their perceived improvement and symptomatic changes evaluated by standardized clinical measures. In this context, the existing lack of research on perceived improvement and treatment outcome are important components to be further explored. This study aimed to compare the relationship between patient`s perceived improvement and patient and clinician ratings on symptomatic change of an older adult population participating in a 10-week psycho-educational program offered for the treatment of depression and anxiety disorders. Given the aforementioned relationships between perceived improvement and symptomatic change, it is expected that significant correlations will be observed upon the relationship between patient's perceived improvement and symptomatology changes of depression, anxiety and well-being of patients, as well as post-evaluations of depression symptoms as assessed by clinicians.

Method

Selection of participants

Patients included older adults recruited from a psychiatric program in Montreal with 60 years of age or older. Selection criteria consisted on patient selection previously reported on psycho-educational programs for the treatment of depression and anxiety disorders [51]. Patients were diagnosed with affective (unipolar or bipolar depression) and anxiety disorders. Diagnosis was based on a semi-structured clinical interview and DSM-IV/5 criteria. Inclusion and exclusion factors included a neuropsychological evaluation using the Mini-mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA) to screen for cognitive deficits of patients and followed selection requirements previously mentioned in the literature [71], requiring a minimum score of 24 in the MMSE to participate in the program [72-76].

Over two years, four groups of patients joined the psycho-educational program, which was offered bi-annually. A total of 50 patients were recruited for this study and 5 patients were not included in the initial sample as these did not meet the inclusion criteria. Four patients were allowed to join the group after week 1 of the program. A total of 47 patients completed pre-assessments, 42 completed between pre and post-assessments, and 45 completed post-assessments. However, 16 patients did not complete the program because of reasons including feeling uncomfortable within the group, complaints about the staff, chronic and recurrent illness, self-reported emotional instability, low motivation and feelings of not being “ready” or “fit” to continue. Thirty-five participants completed the program (68.6% retention rate). Baseline differences were not observed between patients who completed the program and those who did not (refer to Table 1 for further details). The final sample included 45.7% males (*n*=16) and

51.4% females (*n*=18) with a mean age of 71.32 (SD = ±6.46). Sixty percent of patients (N=21) had less than 12 years of education compared to 37.1% of patients (*n*=13) who had 12 years or more. Half of the patients (*n*=17) were given a diagnosis of depression and comorbid anxiety, whereas smaller frequencies were noted for depression (*n*=8), bipolar (*n*=5), and anxiety disorders (*n*=4) alone. As referrals to this program included only patients seen at the Douglas Mental Health University Institute (DMHUI) Geriatric Psychiatry Program, all patients received intensive care including case manager support and use of pharmacological medication.

Program description

The Geriatric Psychiatry Division of the Douglas hospital in Montreal (Canada) has offered the Depression and Anxiety psycho-educational program as a clinical service since 2012. This program comprehends 10- week modules including psycho-education on goal-setting, depression and anxiety, challenging thoughts and behaviors, medication, nutrition, physical exercise, crisis prevention, network of support and summary [14, 40-53]. This program has been offered twice a year, during fall and winter terms. The main psycho-educational program's goals are (1) to maximize patient's abilities to function and thrive in a community environment (2) to understand their illness and improve their symptoms by learning relapse prevention strategies (3) to help patient's accomplish their desired goals, including sustained health and wellness (4) to help patient's develop meaningful networks of support by connecting with relevant community resources. The program includes psycho-education workshops, practice activities and relaxation.

Measures

Depression symptomatology was measured by the Geriatric Depression Scale (GDS) was rated by patients and the Collateral Source- Geriatric Depression Scale (CS-GDS) was implemented for clinician assessment. The GDS [54] is a self-report 30-item measure of depression that assesses affective and cognitive aspects of geriatric depression. It is answered in a simple ‘yes’ or ‘no’ format in reference to how patients felt over the past week [54] and is a valid screening tool that is sensitive to both major and minor depression [55]. The scale has 92% sensitivity and 89% specificity when evaluated against diagnostic criteria. The validity and reliability of the tool have been supported through both clinical practice and research [56]. Moreover, the CS-GDS [57] assesses the occurrence of recent depressive symptoms from an informed collateral source. This is a 30-item scale (long form) that includes the same items as the original GDS, but reworded to be able to be completed by a collateral source. As with the GDS, it is answered in a simple yes or no format in reference to how patients felt over the past week [58]. The CS-GDS had shown good reliability and validity in detecting depressive symptoms with a balanced sensitivity (61%) and specificity (58%) at a cut-off of 19 [59].

To measure anxiety symptomatology, the Beck Anxiety Inventory (BAI) [60] and the General Well-being Scale (GWBS) [61] were used. The BAI [60] assesses anxiety with a focus on somatic symptoms. It is a self-report 21-item scale measuring symptom presence over the last week. Responses are rated on a 4-point likert scale and range from 0 (not at all) to 3 (severely) [62]. Construct validity studies have shown good convergence of the BAI with other measures of anxiety [63] and high internal consistency represented by a Cronbach’s alphas ranging from 0.90 to 0.94 [64, 65]. Test–retest coefficients are of reasonable range oscillating between 0.62 (7-week interval) to 0.93 (1-week interval).

Measures of well-being were assessed by the General Well-being Scale (GWBS) [61] which measures sense of well-being and quality-of-life. It is a self-administered, 18-item survey tool that measures six subscales: self-control, anxiety, vitality, depression, positive wellbeing and general health. Responses are based on a six-point scale on the first 14 questions and a 10-point scale on the last four questions [66]. Alpha coefficients have ranged from 0.88 to 0.95 in different studies. Test-retest reliability is adequate for assessing groups [67-69].

Perceived improvement was assessed by patients and clinicians using the Perceived Improvement Questionnaire (PIQ) [70]. The PIQ is a standardized questionnaire evaluating changes perceived by patients while receiving outpatient psychiatric services. The PIQ comprises 20 items, one refers to the patient's general situation at the end of treatment and remaining items are distributed among three sub-scales, including the areas of social relations (SR), emotional health (EH) and physical health (PH) [70]. Answers were selected from "worse than before= -1", "no change=0", "better than before=1" and "much better than before=2".

Procedure

The research project has been approved by the DMHUI research ethics board. The administration of tests took approximately one hour. Upon signing an informed consent form, all patients completed self- administered symptomatology measures two weeks before study inclusion (pre) and within 2 week after (post), with a 10 week interval between test-retest. Post-testing also included patient's perceived improvement and clinicians completed a depression symptomatology.

Data analysis

The Statistical Package for Social Sciences (SPSS) for Windows (version 17.0) was used to analyse data. The Kolmogorov-Smirnov test verified normal distribution of data and therefore allowed for the use of parametric analysis. Bivariate correlations were used to examine the relationship between (a) patient's perceived improvement and symptomatic change, and (b) patient's perceived improvement and post-measures on depression symptomatology as evaluated by patients and their clinicians. Significant differences between pre-treatment and post-treatment changes in symptomatology were computed using two-sided T-test for paired samples. Measures of effect size include Cohen's *d* statistic. A coefficient of 0.2 to 0.3 indicate a "small" effect, whereas 0.5 is of "medium" effect and 0.8 and higher is indicative of "large" effect [77]. Previous groups included patients participating from fall 2012 to fall 2013. Compared to such groups, retention rates were consistent though slightly higher on previous samples (80% vs. 68.6%). Missing data was excluded from the analysis.

Results

Patient's assessments on symptomatic change

Global raw scores of symptoms of depression (GDS), anxiety (BAI), and well-being (GWBS) were calculated and computed into post-treatment minus pre-treatment (refer to Table 2 for details). Paired-samples t-test comparing pre-post scores within a 10-week interval of the four scales report significant differences among the depression and well-being scales. Pre-post changes in anxiety symptoms are not significant (t (32) =0.98, p=0.33). The depression scale note a reduction of 18% (pre to post testing) with an overall score mean decrease from 16.5±7.5 to 13.5±7.949 (t (31) =2.43, p=0.021). General well-being also report improvements pre to post-testing; a mean increase from 53.3±22.6 to 63.6±19.08 is observed (t (31) =-3.60, p=0.001) implying an increase of 16%. Despite a small sample size (N=34), moderate effect sizes are observed across significant results of depression symptoms (d=0.39) and well-being (d=-0.49). Decreases on the mean of depression symptoms represent changes from a sample with "severe and chronically depressed" patients at pre-test to a sample considered "clinically depressed" at post-test [54]. For well-being, improvements reflect changes of a pre-test sample considered as experiencing "distress" to a post-sample displaying a "stress problem" [61].

Patient's assessments on perceived improvement and symptomatic change

Mean differences of global and subscale scores of perceived improvement (PIQ) are correlated to pre and post-treatment global scores of symptoms of depression, anxiety and well-being. As outlined in Table 3, pre and post-measures of all symptomatology scales present significant correlations once compared with global and sub-scale scores of the perceived improvement scale, with the exception the Social Relations sub-scale, though pre-measures presented weaker correlations. In this sense, the correlation coefficient (Pearson *r*) is higher within relationships of perceived improvement and post-treatment measures compared to pre-treatment measures. Furthermore, across all comparisons, the correlation coefficient of the Social Relations sub-scale of the perceived improvement scale appears to be weaker than others.

A significant negative correlation between the global score of the perceived improvement scale and changes in depression symptoms (r =-0.37, N=31, p=0.04), as well as a significant negative correlation between the emotional health subscale score of perceived improvement and changes in depression symptoms (r =-0.41, N=31, p=0.02) are observed. Results suggest that decreases in symptom severity correspond to increases in pre and post-treatment measured of patient's perceived improvement, including the emotional health subscale of the perceived improvement scale. However, non- significant results are observed between changes in depression symptomatology in the remaining two sub-scales of perceived improvement, including components of Social Relations (r =-0.28, N=31, p=0.12) and Physical Health (r =-0.29, N=31, p=0.11). Moreover, contrary to the authors' expectations, non-significant results are observed among the remaining symptom-based measure changes pre to post-treatment; correlations are not significant between perceived improvement and pre-post changes in measures of anxiety (r =0.012, N=32, p=0.95) nor general well-being (r =0.12, N=31, p=0.51).

Perceived improvement and patient and clinician's assessment of post-treatment symptoms

Table 3 displays that patient's post-assessments on depression symptomatology (GDS) are significant and negatively correlated will all comparisons of patient's perceived improvement, including its total score (r =-0.74, *N*=33, *p*=0.000) and sub-scales, ($r_{\text{PIQ-EH}}$ =-0.74, *N*=33, *p*=0.000; $r_{\text{PIQ-SR}}$ =-0.51, *N*=33, *p*=0.003; $r_{\text{PIQ-PH}}$ =-0.63, *N*=33, *p*=0.000). Clinician's post-assessments on depression symptomatology (CS-GDS) are significant and negatively correlated with the perceived improvement global score (r =-0.48, *N*=32, *p*=0.006) and subscale measures of Emotional Health (*r* =-0.44, *N*=32, *p*=0.012) and Physical Health (r =-0.49, *N*=32, *p*=0.005), with the interesting exception of the PIQs Social Relations sub-scale (*r* =-0.28, *N*=31, *p*=13). As expected, patient correlation coefficients are always higher than clinician correlation coefficients. In this scenario, clinicians rate that end of treatment symptoms of depression decrease as patient's perceptions of improvement increase.

Discussion

Based on a sample of 50 older adults participating in a 10-week psycho-educational program offered for the treatment of depression and anxiety, this study aimed to investigate the relationship between patient`s perceived improvement and patient and clinician ratings on symptomatic change. Results support the author`s hypothesis, as significant relationships between depression symptomatology in relation to patient's perceived improvement are observed across patient and clinician assessments. In light with this, the convergent validity of the PIQ is highlighted as improvements in depression symptomatology assessed by patients correspond to patient perceptions of improvement. In addition, differences between patients and clinicians on post-measures of depression symptomatology in relation to patient's perceived improvement, underline the potential of this scale to explore clinician assessments on treatment outcome. Therefore, the PIQ not only serves to the evaluation of patient's and clinicians perspectives on treatment outcome, but elucidates its significance to clinical intervention. As treatment outcome is related to treatment retention [23], the assessment of treatment outcome by clinicians may be in turn, influencing treatment retention of their own patients. This parallels to Andrade, Bandeira [35]'s findings and supports the notion that patients and clinicians appear to focus on different aspects while assessing treatment outcome.

Despite patient-clinician interactions that influence patient perceptions on treatment outcome [78, 79], patients may be placing attention to aspects of outcome that may not be judged as important to clinicians. Moreover, compared to younger populations, older adults suffering from depression and anxiety disorders seem to have difficulties recognizing depression as an illness [80]. In this sense, the representation of psychiatric symptomatology may be intrinsically covered by aspects considered part of "normal aging", such as patients perception of mood changes [81] and dominant and comorbid physical chronic conditions which also have their own symptom display [14, 82]. This is problematic to the understanding of treatment effects, as the examination of patient improvements on treatment outcome results difficult and hinders patients to seek treatment when necessary [80, 83]. Still, clinicians are also most likely influencing their patient's representations of depression symptomatology, especially in older adult populations that are not prone to recognize depression as an illness. Clinician's rely on western views which represent depression as an illness of behavioral and symptom change that mainly focuses on depression symptomatology [36, 84], and use treatment strategies that involve amplifying knowledge, changing attitudes about depression and teaching coping strategies to the management of symptoms [85]. This may be influencing how illness is understood and represented by older adult patients receiving treatment of some kind. Thus, because of patient-clinician interactions, patients are also prone to detect depression symptomatology as part of treatment improvement [78, 79], but aspects other than symptomatic improvement endure 'naked' to clinician eyes [86]. Added to reports describing clinician limitations to improve involvement with patients, such as lack of resources and time constraints [38], clinicians seem to undermine social factors related to their patients life, supporting the notion that their professional training mainly relies on detection of symptom improvement [87, 88]. Therefore, it is not surprising to observe that clinicians whose patients are older adults suffering from depression and anxiety disorders have placed increased importance to detection of depression symptomatology other than improvement in measures of anxiety and well-being [84]. It is also not striking to observe that, compared to the Social Relations subscale of the PIQ; both the Physical Health and Emotional Health subscales were associated with patient's perceived improvement. This may be not only indicative of how patients are most likely preoccupied by aspects related to social relations compared to clinicians, but that clinician assessments largely emphasizes on patient descriptions of mood changes and chronic painful physical symptoms [89].

Due to their high vulnerability and progression to cognitive decline [3-13, 90, 91], studies on older adults suffering from depression and anxiety disorders are important. If satisfied with mental health services, patients are known to return to mental health services and increase adherence to treatment [92]. This is also observed on patients suffering from depression and anxiety disorders [92, 93]. Therefore, the evaluation of patient and clinician perspectives on treatment outcome is beneficial to better understand treatment effects and allow for the development of beneficial treatments. Given that this patient population seems to identify depressive symptomatology as their main focus of illness improvement, future studies may explore what patients consider features of “illness” compared to “normal aging” so that barriers to treatment seeking and adherence to health care recommendations is better under understood [86]. In this scenario, clinician’s perceptions solely focusing on symptomatic change as a measure of improvement following treatment may also hinder or delay patient’s empowerment and recovery. In the context of depression and anxiety disorders, future directions that focus in the understanding of what patients consider important on their assessments of satisfaction and perceptions of improvement on treatment outcome may serve to improve current knowledge of treatment care and better comprehend patient predisposition to follow and return to treatment as recommended by health care providers [92]. Besides, since this study lacked simultaneous assessments on changes of symptom based and non-symptom based measures other than depression (i.e. anxiety, well-being, recovery), future recommendations of research may study these measures, as well as assessments of the PIQ which also provides the possibility of identifying the characteristics of patients who appear to benefit more (or less) of treatment. These assessments will serve to deepen clinician’s understanding on how they may influence their patient’s progress and are most likely to guide clinicians on how to choose specific treatments.

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Table 1 Baseline differences between patients completing the program and non-completers

	Completers	Non-completers	
	N=34	*N*=16	
Characteristics	Mean (SD)	Mean (SD)	*P*
Age	71.32 (6.46)	71.87 (5.28)	0.11
MMSE	28.19 (1.86)	27.79 (2.23)	0.88
MoCA	22.50 (4.39)	20.29 (4.46)	0.91

	Completers		Non-completers		
	N=34		*N*=16		
Characteristics	N	%	N	%	
Gender					0.85
Male	16	47.1	8	50	

Female	18	52.9	8	50	
Education					0.58
<12yrs.	21	61.8	8	53.3	
>12 yrs.	13	38.2	8	46.7	
Handedness					0.38
Right	30	88.2	15	100	
Left	3	8.8	0	0	
Diagnosis					0.64
Depression and anxiety	17	50	5	33.3	
Depression	8	23.5	5	33.3	
Anxiety	4	11.7	4	20	
Bipolar	5	14.7	2	13.3	

Note. MMSE= Mini-mental State Examination. MoCA=Montreal Cognitive Assessment.

*$p<0.05$. ***$p<0.001$.

Table 2 Pre and post-treatment differences across global scores of depression, anxiety, general well-being and recovery

Measure	Mean (SD) pre-test	Mean (SD) post-test	Mean of pre-post difference (SD)	*T*	*P*	*d*
GDS	16.5 (7.5)	13.5 (7.9)	3.0	2.43	0.021*	0.39
BAI	15.9 (10.7)	13.9 (10.1)	1.9	0.98	0.33	---
GWBS	53.3 (22.6)	63.6 (19.1)	-10.3	-3.60	0.001***	-0.49

Note. GDS= Geriatric Depression Scale. BAI=Beck Anxiety Inventory. GWBS= General Well-Being Scale.

*$p<0.05$. ***$p<0.001$.

Table 3 Pearson correlations (r values) of perceived improvement global and sub-scale scores with pre to post-treatment change of patient assessments *and* post-treatment assessment of clinicians on measures of symptomatology

PIQ global score and sub-scales (patient ratings)	GDS pre	GDS post	GDS pre-post difference	BAI pre	BAI post	BAI pre-post difference	GWBS pre	GWBS post	GWBS pre-post difference	CS-GDS post
Global	-0.44*	-0.74**	-0.37*	-0.36*	-0.41*	0.012	0.50**	0.70**	0.12	-0.48**
Social Relations	-0.32	-0.51**	-0.28	-0.38*	-0.27	0.14	0.37*	0.51**	0.15	-0.28
Emotional Health	-0.42*	-0.74**	-0.41*	-0.31	-0.35*	0.028	0.54**	0.67**	0.012	-0.44*
Physical Health	-0.36*	-0.63**	-0.29	-0.34	0.39*	0.011	0.42*	0.62**	0.10	-0.49**

Note. GDS= Geriatric Depression Scale. BAI=Beck Anxiety Inventory. GWBS= General Well-Being Scale. CS-GDS= Collateral Source Geriatric Depression Scale.

*$p<0.05$. ***$p<0.001$.

Transitional Text

The majority of studies regarding patient's perceptions on symptomatic change have greatly excluded the study of patient populations of older adults (Crayton et al., 2014; Nilsen et al., 2015; Palesy et al., 2015; Paterson & Britten, 2003) and diagnoses other than depression and anxiety disorders (Eisen et al., 2007; Kupper & Tschacher, 2008; Montgomery et al., 2015; Thompson et al., 2015). Studies also lack patient and clinician comparisons (Beretta et al., 2005; Crosby et al., 2003; Demyttenaere et al., 2009; Lunnen et al., 2008; Werner et al., 2012), especially those including patient and clinician simultaneous assessments on treatment outcome (Andrade et al., 2012). The first manuscript investigated the relationship between patient's perceived improvement and symptomatic change as rated by patients and clinicians of an older adult population participating in a 10-week psycho-educational program offered for the treatment of depression and anxiety disorders. Results from this study (a) support the use of the PIQ as a good indicator to assess symptomatic change from the perspective of the patient and the clinician and (b) indicate that differences between patient and clinician ratings on components of social relations of perceived improvement are observed, despite analogous reports found across their assessments on post-treatment depression symptomatology. This suggests that patient and clinician judgement on what they consider important within the assessment of treatment outcome is dissimilar. In this sense, compared to patients, clinicians are most likely influenced by their tendency to focus on changes of depression symptoms. Given that these findings parallel reports from Andrade's et al. (2012), a study assessing the relationship perceived improvement and aspects other than symptomatic change (i.e. recovery) was of particular interest. Particularly, Hasler, Moergeli, & Schnyder (2004) have described that populations suffering from depression and anxiety disorders are prone to attribute perceptions of improvement to factors imbedded in aspects of their interpersonal domain, such as well-being, attitude towards self and meaning of life. With the objective to broaden current understanding of patient and clinician assessments on perceived improvement on treatment outcome, the second manuscript intended to evaluate the relationship between patient's self-assessments of recovery and perceived improvement as rated by patients and clinicians.

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Chapter 4: Recovery in older adults following a psycho-educational program for depression and anxiety

Reference:

Potes, A., Perreault, M., Touré, E.H. & Gagnon, G. (2015) Relationship between perceived improvement and self-reports of recovery. Manuscript in revision to be submitted for publication.

Abstract

Objective: To evaluate perceptions of improvement and recovery in older adults and their clinician's following a 10-week psychoeducational program for depression and anxiety. **Methods:** A sample of 34 older adults (age = 71.32±6.46 years) were assessed with pre-post measures of the Recovery Assessment Scale (RAS). Post-testing data included patient's perceived improvement assessed by patients and clinicians using the Perceived Improvement Questionnaire (PIQ). Correlations were used to evaluate the relationship between patient and clinician ratings of perceived improvement and patient assessments of recovery. **Results**: Results indicate that posterior to treatment patients improved in recovery, that changes on patient's recovery are not correlated to patient's perceived improvement (r=-0.090, n=31, p=0.63), and that clinicians assessment on recovery are inversely correlated with patients perceived improvement (r =-0.58, n=29, p=0.001). **Conclusions and implications for practice:** Patients results imply that improvements between pre and post assessments of recovery were observed. However, changes in recovery are not correlated to perceived improvement as timing on recovery assessments is a lengthy personal process. Conversely, clinicians indicate that patient's perceived improvement decrease as their recovery increase, suggesting possible influences of clinician expectations. Due to differences observed on ratings, patients and clinicians are possibly placing attention to different aspects of treatment outcome. Future studies may include assessment of patients who did not complete the program, treatment duration and type of setting in order to further understand patients who benefit more from the intervention. The use of blind assessments of clinicians may also help to avoid biases.

Keywords: *recovery, perceived improvement, older adults, depression, anxiety*

Recovery in older adults following a psycho-educational program for depression and anxiety

Introduction

Nowadays, health care policies have been aiming at implementing better services addressing the needs of the growing population of older adults (Gfroerer, Penne, Pemberton, & Folsom, 2002; Mary & Howard, 2014), particularly those who suffer from severe mental illness (SMI) (Sterling, Silke, Tucker, Fricks, & Druss, 2010). Older adults suffering from depression and anxiety disorders represent the highest prevalence and re-admission rates (Fiske, Wetherell, & Gatz, 2009; Prins, Verhaak, Bensing, & van der Meer, 2008). This patient population not only lack efficient alternatives to manage and sustain therapeutics, as they have intense difficulties to develop copying strategies related to age-related declines resulting from physical health (Gili et al., 2011), but often report loss of personal control over their lives due to repeated hospitalization (Harrow, Hansford, & Astrachan-Fletcher, 2009).

Over the last decade, increased interest for developing strategies for the treatment of older adults suffering from psychiatric conditions has been witnessed (Cooper-Patrick et al., 1997; Nordfjaern, Rundmo, & Hole, 2010). In this context, the recovery paradigm underlined the importance of studying patient perspectives in relation to treatment outcomes (Daley, Newton, Slade, Murray, & Banerjee, 2013; Mercier, Landry, Corbiere, & Perreault, 2004; Perreault et al., 2010). So far, major focus has been placed on the clinician's perspectives of treatment outcome, mostly via assessment using symptomatology changes as a measure of improvement (Association, 2013; Demyttenaere, Desaiah, Petit, Croenlein, & Brecht, 2009; Sechrest, McKnight, & McKnight, 1996). Studies evaluating patient's perspectives following treatment have not only allowed to expand assessments to patients and third-parties, but has illustrated important differences between raters on treatment outcome (Andrade, Bandeira, Perreault, Angélico, & de Oliveira, 2012; Demyttenaere et al., 2009; Lunnen, Ogles, & Pappas, 2008; Werner, Stenner, & Schüz, 2012), suggesting that different aspects on treatment outcome may be considered by patient and clinicians (Andrade et al., 2012). This is critical, as studies examining patient views on barriers to treatment access have identified symptomatology display of depression and anxiety disorders as one important barrier and a possible predictor of treatment adherence and retention to therapy treatments (Chartier-Otis, Perreault, & Bélanger, 2010; Lenze et al., 2005; Nelson, Clary, Leon, & Schneider, 2005). In this sense, the study of patient's perspectives is pertinent to the understanding of what patients consider important in their assessment of treatment outcome, including aspects of illness experience, expectations, outcomes and explanations of mental illness (Andrade et al., 2012; Wyder & Bland, 2014).

Biomedical and psycho-social factors have been associated with recovery in patients suffering from mental illness (Rudnick, 2012). The former include severity of symptoms (Trivedi, Kleiber, & Greer, 2005), functional disability (Da Silva, Scazufca, & Menezes, 2013), and medical and psychiatric comorbidity (Gum & Cheavens, 2008). The latter is associated with the occurrence of stressors and social support (Dennis, Markey, Johnston, Vander Wal, & Artinian, 2008). In this vein, Tepper et al. (2013) stated that patients who had their first psychiatric hospitalization prior to the birth of the recovery movement (1990) are predisposed to associate recovery with symptom reduction, so that programs focusing on illness management using recovery-oriented rather than action-oriented approaches may be of importance to this patient population. In other words, it seems that symptom representation plays an important role in the understanding and recovery of illness. Yet, Hasler, Moergeli, and Schnyder (2004) have described that in patient populations diagnosed with depression and anxiety disorders, psychosocial factors including changes in well-being, meaning of life and attitude toward self, are of parallel significance and remain to be examined. Research also suggests that aside from personal experience and medical or biological factors, historical accounts in older adults may influence their recovery (Drake, Green, Mueser, & Goldman, 2003).

The current study

Research in the field of recovery mainly focus in the study of young adults, minorities, older adults, homeless or otherwise impoverished, patients suffering from physical or severe psychiatric disability and those who suffer from substance abuse problems (Farkas & Anthony, 2010). Still, in the context of studies examining patient perspectives on treatment outcome, lack of research prevails in the understanding of differences between patient and clinicians in the assessment of improvement following treatment (Andrade et al., 2012), especially in older adult populations (Fitzsimmons & Buettner, 2003; Norrie et al., 2011; Prins et al., 2008; Russo et al., 1997) and patients suffering from depression and anxiety disorders (Kadam, Croft, McLeod, & Hutchinson, 2001). This population include a large proportion of patients who report subjective cognitive complaints that often precedes the onset of cognitive decline (Barnes, Alexopoulos, Lopez, Williamson, & Yaffe, 2006; Diniz, Butters, Albert, Dew, & Reynolds, 2013; Ganguli, Du, Dodge, Ratcliff, & Chang, 2006; Steffens et al., 2006; Zahodne, Stern, & Manly, 2014) and represent the highest prevalence and re-admission rates in geriatric psychiatry services (Fiske et al., 2009; Prins et al., 2008). Since the development of viable strategies that allow for improvements in this fragile population are warranted (Fiske et al., 2009; Prins et al., 2008), the importance of examining the relationship between recovery and perceived improvement on a patient population of older adults participating in a psycho-educational program for depression and anxiety disorders remains relevant to be explored. With the objective to deepen current understanding on what patients and clinicians judge important in their assessment of recovery, this study compares patient and clinician perceptions of patient improvement and their self-reports of recovery. Based on previous studies elucidating relationships between patient and clinician perspectives on treatment outcome, it is expected that significant correlations will be observed upon the relationship between changes in patient's recovery and post-treatment perceived improvement as evaluated by patients and clinicians.

Method

Participants

From 2012 to 2014, four groups joined a psycho-educational program. A total of 50 patients were recruited for this study and 5 patients were not included in the initial sample as these did not meet the inclusion criteria. Four patients were allowed to join the group after week 1 of the program and were updated by the clinical coordinator about missed courses. A total of 47 patients completed pre-assessments, 42 completed between pre and post-assessments, and 45 completed post-assessments. However, 16 patients did not complete the program because of reasons including feeling uncomfortable within the group, complaints about the staff, chronic and recurrent illness, self-reported emotional instability, low motivation and feelings of not being "ready" or "fit" to continue. Thirty-five participants completed the program (a 68.6% retention rate). Baseline differences were not observed between patients who completed the program and those who did not complete the program (refer to Table 1 for further details). The final sample included 45.7% males (*n*=16) and 51.4% females (*n*=18) with a mean age of 71.32 (SD = ±6.46). Sixty percent of patients (*n*=21) had less than 12 years of education compared to 37.1% of patients (*n*=13) who had 12 years or more. Half of the patients (*n*=17) were given a diagnosis of depression and comorbid anxiety, whereas smaller frequencies were noted for depression (*n*=8), bipolar (*n*=5), and anxiety disorders (*n*=4) alone.

Program Description

The Depression and Anxiety psycho-educational program is offered by the Geriatric Psychiatry Division of the Douglas Mental Health University Institute (DMHUI) in Montreal (Canada). It comprehends 10- week modules including psycho-education on goal-setting, depression and anxiety, challenging thoughts and behaviors, medication, nutrition, physical exercise, crisis prevention, network of support and summary (Bandura & McClelland, 1977; Barclay, 2004; Beck, 1995; Bovend'Eerdt, Botell, & Wade, 2009; Cuijpers, Muñoz, Clarke, & Lewinsohn, 2009; Fiske et al., 2009; Health, 2010; Katamay et al., 2007; Lewinsohn, Hoberman, Teri, & Hautzinger, 1985; Penedo & Dahn, 2005; Perreault, 2014; Phillips, 2012; Pinquart, Duberstein, & Lyness, 2006; Stanley, Beck, & Glassco, 1996; Wetherell et al., 2011). The psycho-educational program goals are (1) to maximize patient's abilities to function and thrive in a community environment (2) to understand their illness and improve their symptoms by learning relapse prevention strategies (3) to help patient's accomplish their desired goals, including sustained health and wellness (4) to help patients develop meaningful networks of support by connecting with relevant community resources. The program includes psycho-education workshops, practice activities and relaxation.

Measures

Recovery

Recovery Assessment Scale (RAS-41) (Giffort, Schmook, Woody, Vollendorf, & Gervain, 1995). This tool measures recovery or healing and was derived from narrative analysis of stories from individuals suffering from serious mental illness (Giffort et al., 1995). The RAS is a 41-item scale on which respondents describe themselves using a five-point agreement scale (5 = strongly agree; 1 = strongly disagree). Previous studies have indicated an overall satisfactory score of the tool`s reliability and validity (Cronbach's Alpha of 0.93 and a satisfactory test–retest reliability of r =5.88) (Corrigan, Giffort, Rashid, Leary, & Okeke, 1999). Concurrent validity has been examined with self-esteem, quality of life, symptoms, positive relationships and social support (Corrigan & Phelan, 2004), and leisure motivation (Lloyd, King, McCarthy, & Scanlan, 2007).

Perceived improvement

Perceived improvement was assessed by patients and clinicians using the Perceived Improvement Questionnaire (PIQ) adapted versions for patients and clinicians (Perreault & Katerelos, 2003). The PIQ is a standardized questionnaire evaluating changes perceived by patients while receiving outpatient psychiatric services. The PIQ comprises 20 items, one refers to the patient's general situation at the end of treatment and remaining items are distributed among three sub-scales, including the areas of social relations (SR), emotional health (EH) and physical health (PH) (Perreault & Katerelos, 2003). Answers included "worse than before= -1", "no change=0", "better than before=1" and "much better than before=2". The original tool was modified for clinician's assessment on their patient's improvements after attending a psycho-educational program for the treatment of depression and anxiety.

Procedures

Inclusion and exclusion criteria followed previous reports in the literature including cognitive capacities of participants and age of entry (Cuijpers et al., 2009). Patients accepted in the study were recruited from a psychiatric program in Montreal with 60 years of age or older, and hold a diagnosis of affective (unipolar or bipolar depression) and anxiety disorders.

Diagnosis was done by staff psychiatrist, based on a semi-structured clinical interview and DSM-IV/5 criteria. Inclusion and exclusion factors included a neuropsychological evaluation using the Mini-mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA) to screen for cognitive deficits of patients and followed selection requirements previously mentioned in the literature (Naismith et al., 2011), requiring a minimum score of 24 in the MMSE to participate in the program (Butters et al., 2004; Kirby, Denihan, Bruce, Coakley, & Lawlor, 2001; Lincoln & Flannaghan, 2003; Rajji et al., 2009; Rokke, Tomhave, & Jocic, 2000).

The research coordinator approached the patients and started data collection upon obtaining their consent form approved by the DMHUI ethics board which conforms to the Tri-Council Policy Statement “Ethical Conduct for Research Involving Humans”. The administration of tests took approximately one hour. All patients completed recovery and control cognitive measures two weeks before study inclusion (pre) and within 2 week after (post), with a 10 week interval between test-retest. Post-testing also included measures of patient’s perceived improvement. Clinicians completed perceptions of improvement on their patients at post-test.

Data analysis

The Statistical Package for Social Sciences (SPSS) for Windows (version 17.0) was used to analyse data. The Kolmogorov-Smirnov test verified normal distribution of data and therefore allowed for the use of parametric analysis. Bivariate correlations were used to examine the relationship between patient self-assessments of recovery and perceived improvement, as evaluated by patients and their clinicians. Two-sided T-test for paired samples was used to examine pre-treatment and post-treatment changes in recovery, which were in turn analyzed for correlations with patient and clinician measures of perceived improvement. Effect size used a measure of Cohen’s *d* statistic. A coefficient of 0.2 to 0.3 indicate a "small" effect, whereas 0.5 is of "medium" effect and 0.8 and higher is indicative of "large" effect (Cohen, 2013). Previous groups included patients participating from fall 2012 to fall 2013. Compared to such groups, retention rates were consistent though slightly higher on previous samples (80% vs. 68.6%). Missing data was excluded from the analysis.

Results

Pre-post changes on patient's recovery

Paired sample T-test Global raw scores of recovery (RAS-41) were calculated (refer to Table 2 for details). Paired-samples t-test compared pre-post scores. Pre-post differences on recovery ranged from 156.2±26.7 to 166.2±24.49 (t (31) =-2.97, p=0.006), representing a 6% increase. Despite a small sample size (n=32) a close to medium effect size is observed (d=-0.39). Comparisons on pre to post global scores on recovery reflect improvements (Corrigan, Salzer, Ralph, Sangster, & Keck, 2004).

Relationship between patients' perceived improvement and recovery

Relationships between mean pre-post differences on global scores of recovery and perceived improvement (global scores and sub-scales) are not observed (see Table 3). Correlations are not significant among comparisons on global scores of recovery and mean differences of the PIQ global (r=-0.090, n=31, p=0.63), and its sub-scales of Social relations (r=-0.14, n=31, p=0.46), Emotional Health (r=0.038, n=31, p=0.84) and Physical Health (r=-0.15, n=31, p=0.40).

Clinician assessments on perceived improvement and patient's recovery

Table 3 displays positive and negative correlations between relationships of changes in recovery (global score) and perceived improvement (global and sub-scales), as assessed by clinicians. Opposite to expected results, significant and negative (i.e. inverted) correlations are observed between relationships on mean-differences of recovery's global score with global scores of clinician's perceived improvement (r =-0.58, n=29, p=0.001), including its two sub-scales of Social Relations (r =-0.66, n=29, p=0.000) and Physical Health (r =-0.42, n=29, p=0.025). Only one sub-scale of perceived improvement (Emotional Health) is not significant in relation to global scores of recovery (r =-0.31, N=29, p=0.11).

Discussion

Based on a sample of 50 older adults participating in a 10-week psycho-educational program offered for the treatment of depression and anxiety, this study assessed changes in recovery assessments and patient's and clinician's perceptions of improvement. Results partially support the author`s hypothesis due to important differences observed across raters. Recovery changes are not associated to patient perceptions of perceived improvement, despite improvements in patient recovery are still observed. Conversely, clinician assessments of perceived improvement in relation to recovery change report significant results, supporting relationships between the aforementioned variables (Milte, Luszcz, Ratcliffe, Masters, & Crotty, 2015).

Improvement in recovery as assessed by patients themselves implies that psycho-social aspects of recovery in older adults including motivation, self-esteem, self-confidence and perceptions of improvement seem to become strengthened as a result of the intervention (Benbow, 2009). Additionally, the literature reports that group participation such as psycho-education withholds magnificent strategies that fortifies recovery areas of functional decline in older adults (Norrie et al., 2011). In line with literature of older adults, patients participating in psycho-educational interventions report receiving emotional support from others who provide comfort, express concern, and provide guidance and knowledge by instructions on action-oriented activities (Kiefer, 2011). Nonetheless, changes in recovery are not correlated to patient perceptions of improvement. This highlights how changes in recovery can take longer than 10 weeks before palpable changes on aspects of recovery are internalized by patients, especially in patient populations that may relate recovery to illness and perceive their illness as permanent (Piat et al., 2009). In this scenario, patients who use hospital services may be more prone to take longer to recover, as hospitals are related to illness and have been identified not appropriate settings for recovery (Piat, Sabetti, & Bloom, 2010). Therefore, future studies examining patient's perceived improvement and recovery may further also explore longer-term changes of recovery and use different sites as markers of comparison.

Another finding from this study implicated differences between patient and clinician ratings. Despite authors have explored differences between patient and third-party raters (i.e. clinicians) and have found weaker correlations compared to patient ratings (Andrade et al., 2012; Garfield, Prager, & Bergin, 1971; Mercier et al., 2004), this is the first study to explore and report that clinician perceived their patient's improvement to decline as their recovery increased. In this sense, it is possible that clinician's expectations of their own patients to improve may have played a role on their assessments of recovery change (Galer, Schwartz, & Turner, 1997). As the psycho-educational program was specifically tailored to the DMHUI aging population, patients were possibly expected to show stronger improvements on areas that clinicians may judge important to the assessment of treatment outcome. Importantly, results from this study parallel Andrade et al. (2012) study as it conveys the idea that different aspects are being considered as patient and clinician assess treatment outcome (i.e. symptomatology change) and suggests that some aspects of recovery are of difficult objective perception to clinicians. In this sense, as western-based case management systems primarily focus on detection of symptom improvement (Association, 2013; Demyttenaere et al., 2009; Gilbody, House, & Sheldon, 2003), clinician's perception of their patient's recovery may be influenced by clinician's stance and professional training (Slade, 1995). Therefore, it is possible that clinicians may be subject to biases to identify aspects of recovery on their patient's progress, if unable to observe a tangible reduction of symptoms. This is of significant relevance for clinician's insight, as their perceptions on symptomatic improvement seem to influence their perceptions on patient's recovery and may hinder and delay patient's progress. In order to avoid direct biases, future studies may also use doubled-clinician ratings, including clinicians who are directly implicated to the patient's treatment plan and others who are not.

Due to their high vulnerability, progression to cognitive decline (Barnes et al., 2006; Beekman, Copeland, & Prince, 1999; Beekman, Deeg, Braam, Smit, & Van Tilburg, 1997; Butters et al., 2000; Butters et al., 2008; Diniz et al., 2013; Djernes, 2006; Fombonne, 1994; Ganguli et al., 2006; Gili et al., 2011; Harrow et al., 2009; Steffens et al., 2006; Zahodne et al., 2014) and significant obstacles to seeking or receiving treatment (Olfson, Kessler, Berglund, & Lin, 1998), studies on older adults suffering from depression and anxiety disorders are important. If satisfied, patients are known to return to mental health services and increase adherence to treatment (Perreault, Pawliuk, Veilleux, & Rousseau, 2006). Most importantly, this is also the case for patients suffering from depression and anxiety disorders (Hasler, Moergeli, Bachmann, et al., 2004; Perreault et al., 2006). In this vein, studies on perceived improvement on treatment outcome may serve to better understand predictors of treatment retention and patient predisposition to follow and return to treatment as recommended by health care providers (Perreault et al., 2006). Specifically to results of this study, evaluating patient's perceptions on treatment outcome on patient who did not complete the program (*N*=16) may have served of important information. This outlines that the evaluation of patient and clinician perspectives on treatment outcome is beneficial to better understand what patients and clinician consider important in the assessment of treatment outcome so that future developments on treatment effects may be further explored.

Study limitations. The use of a larger sample size would have strengthened the validity of the results. Moreover, as the use of the PIQ also allows identifying patients who benefited more (or less) from treatment, assessments including patients who did not complete the program would have brought insight about participant characteristics. For patients diagnosed with depression and anxiety versus those who are only diagnosed with depression or anxiety, assessments of this sort may further aid in the understanding on who benefits from treatment. In addition, doubling assessments from clinicians and evaluations of longitudinal aspects may have been helpful to better understand what patients and clinicians focus on in their assessments of treatment outcome and recovery. Still, the use of standardized validated measures helped to increase the internal validity of the results.

Conclusions

Findings suggest that patient's recovery improved at the end of the intervention, despite links between recovery changes and perceived improvement from the perspective of patients were not observed. Conversely, inverse relationships were observed on clinicians assessments of recovery changes and their perceptions of patient improvement, so that as patients increases in recovery change were observed, clinician perceptions of patient's improvement decrease. Differences in ratings suggest that patients and clinicians are probably assessing different aspects of treatment outcome. Future directions may investigate whether patient results may have been influenced by duration of treatment and timing of assessments (short-term versus long-term) as well as site of service (hospital versus community services). Developments in this research field may serve to deepen understanding on what patients consider important in the assessment of treatment outcome so that clinicians may be in better positions to assess treatment effects.

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Table 1 Baseline differences between patients completing the program and non-completers

	Completers *N*=34	Non-completers *N*=16	
Characteristics	Mean (SD)	Mean (SD)	*P*
Age	71.32 (6.46)	71.87 (5.28)	0.11
MMSE	28.19 (1.86)	27.79 (2.23)	0.88
MoCA	22.50 (4.39)	20.29 (4.46)	0.91

	Completers *N*=34		Non-completers *N*=16		
Characteristics	N	%	N	%	
Gender					0.85
Male	16	47.1	8	50	

Female	18	52.9	8	50	
Education					0.58
<12yrs.	21	61.8	8	53.3	
>12 yrs.	13	38.2	8	46.7	
Handedness					0.38
Right	30	88.2	15	100	
Left	3	8.8	0	0	
Diagnosis					0.64
Depression and anxiety	17	50	5	33.3	
Depression	8	23.5	5	33.3	
Anxiety	4	11.7	4	20	
Bipolar	5	14.7	2	13.3	

Note. MMSE= Mini-mental State Examination. MoCA=Montreal Cognitive Assessment.

*$p<0.05$. ***$p<0.001$.

Table 2

Pre and post-treatment differences across global scores in recovery

Measure	Mean (SD) pre-test	Mean (SD) post-test	Mean of pre-post difference (SD)	*T*	*P*	*d*
RAS-41	156.2 (26.7)	166.2 (24.5)	-9.97 (19.0)	-2.97	0.006***	-0.39

Note. RAS-41= Recovery Assessment Scale.

**p<0.05. ***p<0.001.*

Table 3

Bivariate correlations (r values) of patient ratings of PIQ global and sub-scale scores with pre to post-treatment change in recovery

PIQ global score and sub-scales (patient ratings)	RAS-41 pre	RAS-41 post	RAS-41 pre-post difference
Global	0.63**	0.62**	-0.090
Social Relations	0.46**	0.41*	-0.139
Emotional Health	0.60**	0.66**	0.038
Physical Health	0.48**	0.41*	-0.156

Note. RAS-41= Recovery Assessment Scale.

**p<0.05. ***p<0.001.*

Table 4

Bivariate correlations (r values) of clinician ratings of PIQ global and sub-scale scores with pre to post-treatment change in recovery

PIQ global score and sub-scales (clinician ratings)	RAS-41 pre	RAS-41 post	RAS-41 pre-post difference
Global	0.49**	0.073	-0.58*
Social Relations	0.38**	-0.062	-0.66**
Emotional Health	0.47**	0.24	-0.31
Physical Health	0.29	-0.040	-0.42*

Note. RAS-41= Recovery Assessment Scale.

$*p<0.05$. $***p<0.001$.

Chapter 5: General Conclusions and Future Directions

Based on a sample of 50 older adults participating in a 10-week psycho-educational program offered for the treatment of depression and anxiety, this study aimed to investigate the relationship between patient's perceived improvement and patient and clinician ratings on symptomatic change. Paralleling Andrade's et al. (2012) study, improvements in symptomatology change assessed by patients correspond to patient perceptions of improvement and differences between patient and clinician ratings are also observed. Specifically to manuscript 1, despite results on patient perceptions of improvement and symptomatic change are only associated to measures of depression but neither to anxiety nor well-being, the PIQ is also identified as a good indicator to assess symptomatic change of depression in older adults from the perspective of the patient and the clinician. Interestingly, patient and clinician differences are also observed in rater's measures of depression symptoms in relation to aspects of social relations on patient's perceived improvement. In regards to manuscript 2, despite changes in recovery are not associated to patient's perceived improvement, patient's recovery increases. Remarkably, clinicians' assessments on recovery changes were associated to improvement decline on patients. Most importantly, supporting Andrade et al. (2012), results from the aforementioned manuscripts suggest that differences between patients and clinicians emerge as aspects on what raters judge important in the assessment of treatment outcome are not the same.

Differences between patients and clinicians on what they consider important in the assessment of treatment outcome may be subject to clinician's training conceptualized by western approaches. In other words, as depression is presented as an illness of behavioral and symptom change that mainly focuses on depression symptomatology (DSM-5, 2013; Demyttenaere et al., 2009), clinician's assessments on treatment outcome may place increased attention to aspects related to changes in depression symptomatology. In this vein, due to patient-clinician interactions, clinicians may also be somewhat responsible on what is accounted on perceptions of improvement for their own patients (Hasler, Moergeli, & Schnyder, 2004; Valenstein, 2004), especially in older adults where the presentation of symptomatology on psychiatric and comorbid physical conditions may be intrinsically covered by aspects considered part of "normal aging" (Gallo, Anthony & Muthén, 1994; Gfroerer, 2002; Wolitzky-Taylor et al., 2010). Therefore, as aspects other than symptomatic improvement endure 'naked' to clinician eyes (Daley, Newton, Slade, Murray, & Banerjee, 2013), it is not surprising to note that clinicians whose patients are older adults suffering from depression and anxiety disorders have placed increased importance to the detection of changes in depression symptomatology compared to improvements in measures of anxiety and well-being (DSM-5, 2013).

In regards to assessments of recovery change and perceived improvement, differences between patient and clinician ratings seem to indicate that clinician's judgment on aspects of recovery is of difficult assessment, as reported by negative perceptions of improvement in the area of social relations despite increases on recovery change. These results also support the notion that clinicians tend to focus on depression symptomatology rather than other non-symptom based aspects, such as recovery constructs. Therefore, it is possible that clinicians may be subject to biases of their own expectations for patients to recover (Galer, Schwartz & Turner, 1997) and to biases to identify aspects of recovery on their patient's progress, if unable to observe a tangible reduction of symptoms. Conversely, patient results are indicative of recovery improvements, but are possibly not significant because of longitudinal effects. In other words, as reports from the literature convey that fragile patients who use hospital services take longer to recover and are more prone to relate recovery to illness and perceive their illness as permanent, it is possible that aspects of treatment duration and setting of service may have played a role in their own perceptions of improvement (Piat et al., 2009; Piat, Sabetti & Bloom, 2010).

Due to their fragility, studies on older adults suffering from depression and anxiety disorders are important (Barnes et al., 2006; Beekman et al., 1999; Beekman et al., 1997; Diniz et al., 2013; Djernes, 2006; Fombonne, 1994; Ganguli et al., 2006; Gili et al., 2011; Harrow et al., 2009; Steffens et al., 2006; Zahodne et al., 2014). Additionaly, satisfied patients are known to return to mental health services as they increase their adherence to treatment if satisfied (Perreault et al., 2006), including patients suffering from depression and anxiety disorders (Hasler, Moergeli, & Schnyder, 2004; Perreault et al. ,2006). Among this patient population, barriers to treatment rely on aspects of symptom display (Chartier-Otis, Perreault, & Bélanger, 2010; Lenze et al., 2005; Nelson et al., 2005) and notably, aspects of recovery are also associated to patient's perceptions of improvement (Hasler, Moergeli, & Schnyder, 2004). In this fashion, the study of patient's perspectives on treatment outcome is not only central to deepen current understanding on treatment effects, but to understand patient predisposition to follow and return to treatment as recommended by health care providers (Perreault, Pawliuk, Veilleux, & Rousseau, 2006), and to explore aspects of recovery change which are inductive of developments of new values, service goals and refining of practices (Piat & Lal, 2012).

Moreover, the use of patient's perspectives on health care services has been recommended for the assessment of service quality (Marsden, Ogborne, Farrell, Rush, & Organization, 2000). Especially in the field of mental health, the uniqueness of patient's opinions has conducted administrators and institutions to consider patient's perspectives as a requirement in service accreditation (Hansson, 2001). The relevance of scales such as the PIQ relies on its ability to identify patients who benefit more (or less) from treatment (Perreault et al., 2010). In this vein, as perceived improvement is associated to patient satisfaction, it is arguable to convey that patients who perceive stronger improvement compared to those who perceive weaker improvements, are most likely to return and use mental health services (Perreault et al., 2006). Therefore, the use of the PIQ in further assessments is crucial to understanding the interactions between perceived improvement, service use and treatment retention.

As clinicians enrich their perceptions of patient improvement, this helps to deepen their understanding on how they may influence their patient's progress and may serve of guidance to choose specific treatments over others in a recovery approach based on patients preferences and demands. Since the understanding of assessments on treatment outcome between patients and clinicians remain under-studied, future directions of research may further explore relationships between perceived improvement and symptomatology change, especially those examining simultaneous assessment of other symptomatology measures such as anxiety and well-being. This type of assessment may be an important way to explore how adults represent and identify with depression and anxiety disorders, as symptoms related to anxiety, well-being and other constructs are as important as considering depression symptomatology, especially when investigating alternatives to treatment approaches (Daley, Newton, Slade, Murray, & Banerjee, 2013). Additionally, to avoid clinician biases on expectations on their patient's improvement, future studies may look into using doubled-clinician ratings; one of the clinicians completing ratings shall not be directly implicated in the patient's treatment plan or progress (i.e. acts as a case manager). Inclusion of data on patients who do not complete the program is also recommended, as it been described as extremely significant, especially while assessing recovery (Nordfjaern, Rundmo, & Hole, 2010). In this context, to study differences between short and long-term changes of recovery and using different sites as markers of comparison may also be of importance while assessing treatment outcome on this fragile clientele. Finally, comparisons across diagnosis may be additionally considered. In this thesis, results reflect a sample population included 34 older adults from which half of the sample (*n*=17) had mixed diagnosis of depression and anxiety, whereas single (non-comorbid) diagnoses were represented by depression (*n*=8), anxiety (*n*=4) or bipolar disorder (*n*=5). It remains intriguing to further explore whether differences upon the diagnoses may have influenced these results.

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