

Impact of Acceptance and Commitment Therapy (ACT) on Medication Adherence of People with Schizophrenia

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ABSTRACT

Ineffective health management and adherence are the problems of mentally ill patients. Thus, if left untreated, they could create significant disadvantages for clients, their families, the community, and even the government. This case study aimed to identify the effect of Acceptance and Commitment Therapy (ACT) on clients with Ineffective health management and to identify adherence, acceptance, and commitment to the regimen. The research approach used in this study was case study conducted on 5 respondents consisting of mentally ill patients with Ineffective health management. The ACT was given for 4 sessions through two to four meetings. The analyzed clients were measured using MARS (Medication Adherence Rating Scale). After the client was given ACT and nursing intervention, the adherence increased by 71% (14 points), and the acceptance ability and commitment increased to 70% on five clients. Medication adherence, acceptance, and commitment levels were lower in the younger clients, who get stigma and lack of family support. Mentally ill patients given ACT will survive more than others without ACT because they have agreed to stay healthy by taking medication regularly. So, this study recommended ACT to increase the health management of mentally ill patients as the approach to increase adherence and commitment to treatment.

Keywords: schizophrenia; acceptance and commitment therapy; medication adherence

INTRODUCTION

Mental health is very important to get attention because the number is increasing. Patients with serious mental disorders affect as many as 21 million people worldwide (WHO, 2017). The prevalence of serious mental disorders in Indonesia has increased from 1,7 permil to 7,0 permil population (Risikesdas, 2013; Risikesdas, 2018). It is the province of Bali and the lowest is in Riau islands, people with mental disorders in West Java Province also increased from 1.6 per population to 3.0 per population (Risikesdas, 2018). People with mental disorders have a high risk of experiencing a recurrence. Abdullah-Koolmees et al. (2018) stated that schizophrenia has a greater risk of experiencing a recurrence of 44,1% compared to patients with bipolar disorder, 22,7%.

The family with mentally ill patient feel the impact, one of the impact is the burden. The burden experienced by the family includes financial, physical, emotion, and stigma. As many as 66% of caregivers with mental disorders worry about the family's financial status (Hanssen & Sommereth, 2014). As 62.2% of people with mentally ill patient do destroy to the environment and violence to other people. The impact of society and the environment makes sufferers and families with mentally ill patient receive a stigma from society. As many as 503 families with mental disorders experience stigma (Hasson-ohayon et al, 2011).

As many as 33.3% of patients with schizophrenia will be re-treated after 6 months post-treatment (Gellad, Grenard & Marcum, 2011). Laan (2010) also mentioned that 34% of patients with schizophrenia experienced relapses within 6 months after being hospitalized for psychotic episodes. In line with previous research, Risikesdas (2018) also stated that 85% of patients with mental disorders had already been treated for mental disorders, but 51.1% did not take medication regularly. Bai et al (2017) mentioned that caregivers with mentally ill patient have high emotional expressions experience relapse and rehospitalization more often. So it can be concluded that people with mental disorders are very at risk of experiencing recurrence and repeated treatment. Families are concerned about financial status because people with

mental disorders require a long treatment. The long treatment and the symptoms that appear in people with mentally ill patient impact not only on sufferers and their families but also on the environment and the government.

Repeated treatment and failure to achieve daily treatment regimens are signs of ineffective health management. The factors that can cause recurrence and non-adherence to the treatment lead to mental disorders being hospitalized again with a diagnosis of ineffective health management. The ineffectiveness of health management is a pattern of regulation and integration of therapeutic regimens in everyday life from the treatment of unsatisfactory diseases and symptoms, to achieve certain health goals (Herdman & Kamitsuru, 2018). Patients with mental disorders experience recurrences and are treated again, one of which is due to the failure to include treatment regimens in their daily life. The ineffectiveness of health management in clients with mental disorders impacts individuals, families, communities, and the government if it is not handled properly. Jung and Boden (2011) stated that the recurrence experienced by people with mental disorders greatly impacts the patient's quality of life and can cause considerable economic costs. Overcoming the impact of ineffective health management on clients with mental disorders needs to improve the client's ability as a self-care agency to improve health management independently.

Various things cause repeated recurrence and non-compliance with treatment regimens in people with mental disorders. Boden (2011) and Vrijens (2012) stated that about half of patients with psychosis or with bipolar disorder did not comply with their antipsychotic medication, did not want to start treatment, missed doses, or stopped treatment. According to Riskesdas (2018), the reason for not taking medication in the past month was the highest, namely feeling healthy (36.1%), followed by the second because they did not routinely seek treatment (33.7%). Mitchell and Selmes (2007) stated that the most important problems after leaving hospital care were relapse and hospitalization, re-hospitalization due to non-compliance in carrying out outpatient care, non-compliance with the treatment given, and stopping treatment (Bowersox, Saunders, & Berger, 2013).

ACT therapy can manifest acceptance of the uncertainty experienced by clients with mental disorders and long-term adherence in treatment. Based on the results of a study by Johns et al (2016) after clients with mental disorders received ACT therapy, clients were more aware of and accepted the sad, painful experiences they experienced than rejecting and avoiding them. Therefore, the authors provide ACT therapy to overcome the problem of ineffective health management in clients with mental disorders to increase client acceptance and commitment to the regimen.

To Overcome the problem of ineffectiveness of health management in clients with mental disorders is with nursing action. The treatment provided is expected to reduce rehospitalization of patients and increase treatment adherence (Vigod et al., 2013). Generalist nurses and ACT (Acceptance and Commitment Therapy) actions give nursing actions to improve regimen adherence. Bach and Hayes (2004) stated that ACT therapy can help clients reduce and reduce portability and rehospitalization. The principle of ACT is to help clients increase psychological flexibility by understanding their lives and applying their values (Anstiss and Blonna, 2015). A case study that discusses the management of mental disorders with ineffective health management using the Orem theory approach.

METHOD

This case report uses a case study model on 5 clients with ineffective health management given by nurses and ACT Specialist case management according to the nursing process using the Orem model and the Stuart model used in the assessment process. At the same time, Orem completes the assessment starting from the client as a self-care agency. The intervention process is the nursing system. The compliance to clients is measured using the MARS (Medication Adherence Rating Scale).

The implementation begins with screening using the Medication Adherence Rating Scale, it was found that five (5) clients with Ineffective health management and identified adherence in Marzoeqi Mahdi Hospital. The instrument use Medication Adherence Rating Scale (MARS). The Medication Adherence Rating Scale (MARS) is a 10-item self-reporting multidimensional instrument that describes three dimensions about medication adherence behavior (items 1 until 4), attitude toward taking medication (items 5 until 8), and negative side effects and attitudes to psychotropic medication (items 9 until 10). Medication Adherence Report Scale (MARS) shows effective tool for assessing adherence, identifying patients reporting low adherence and the specific types of nonadherence behaviors. The MARS demonstrated acceptable reliability and validity; reliability (Cronbach's α) ranged from 0.67 to 0.89; test-retest reliability (Pearson's r) was 0.97. It shows MARS effective self-report tool for measuring patients' reports of their medication use across a range of health conditions (Chan et al., 2020).

The interventions were given generalist nurse action and ACT. The ACT were given for 4 sessions and evaluated for three weeks. All of the research process for two (2) month. Details of session is session one about contacting the Present Moment, session two about Cognitive Defusion, session three about Acceptance and Self as Context, and the last session four very important about Commitment action.

RESULT

Case Illustration

This case report uses a case study model on five clients with ineffective health management. Characteristics of all respondents are male, have an adult age with the youngest 24 years and the oldest 53 years. Client education varies from one elementary school student, three senior high school students, and one other person with a diploma. Marital status of clients who are married three people, who are not married and one widower. Three clients work. The highest duration of illness was 12 years and the lowest was 4 years. The history of repeated hospitalizations was 6 times, with the smallest being 3 times.

Predisposing factors and precipitation in clients based on the results of the study on the most biological aspects, namely the use of prohibited substances and alcohol and withdrawal of drugs. Psychological aspects, namely unpleasant experiences and three clients revealed that they have low self-esteem and in the socio-cultural aspects, namely not working, and stigma. Stigma from both the closest person and socially, three clients get stigma from someone meaningful.

Treatment Adherence Before and After ACT

The nursing agency implements nursing care to help improve the client's ability to overcome the problem of health management ineffectiveness with generalist nursing actions and specialized actions, namely ACT. Implementing nursing actions explains responses, signs, and symptoms before and after the action, and enhances the client's ability to contact the present moment, cognitive defusion, acceptance, self as context, values, and commitment action. In implementing the ACT, the action on the five clients was carried out in two sessions without changing the basic session of the ACT. On average, ACT gives 2 to 4 meetings.

Table 1. The Changes in Treatment Adherence in Clients Ineffective Health Management Before and After ACT

Client	Signs and Symptoms					
	Pre	(%)	Post	(%)	Difference	Percentage (%)
A	3	15	17	85	14	70
B	4	20	19	95	15	75
C	7	35	20	100	13	65
D	4	20	20	100	16	80
E	3	15	16	80	13	65
Average	4	21	18	92	14	71

Table.2 The Capability of Clients in Health Management Ineffectiveness (n=5)

No	Capability	A		B		C		D		E	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1.	Nursing actions										
	Capable to identify the causes of non-adherence to the regimen	√	√	√	√	√	√	√	√	√	√
	Capable to mention the signs and symptoms as well as the consequences of ineffective health management	√	√	√	√	√	√	√	√	-	√
	Capable to carry out maintenance independently	-	√	-	√	√	√	-	√	-	√
	Knowing the disease process and how to manage	√	√	-	√	-	√	-	√	-	√
	Taking medication regularly	-	√	-	√	-	√	-	√	-	√
2	ACT										
	Identifying unpleasant events	√	√	√	√	√	√	√	√	√	√
	Identify the impact of thoughts, feelings, and behaviour on the client's life	-	√	-	√	-	√	-	√	-	√
	Accept changes and events in yourself	-	√	-	√	-	√	-	√	-	-
	Identify the positive values that are owned	-	√	-	√	-	√	-	√	-	√
	Forming a commitment to prevent relapse	-	√	-	√	-	√	-	√	-	√

DISCUSSION

The categories that will be discussed are age, education, occupation, marital status, and duration of illness. Based on the case analysis, of the five facts, only one affects the basis, acceptance, and commitment to mental disorders clients with the health category, namely age. The age of the oldest client is 24 and the oldest is 53 years old, the client who has the oldest age has more. than younger clients both before therapy and after therapy. Adherence to treatment of clients with older age is because clients are more receptive to their condition and treatment for themselves (Marc Emos et al, 2018). So the ability of clients or self-care institutions is deep meet the demands of self-care regardless of age. Older people can still have independent self-care.

Education does not affect client's adherence, Green and Kreuter stated that health behavior in adults, their knowledge, and experiences. Clients with the ineffectiveness of health management who have higher education, for example vocational degree (D3) have an average level of almost the same as the client in complying with the rules of treatment. These results are in line with research by Jonsdottir et al (2013) which states that patients with schizophrenia who are not adherent to treatment have higher learning, memory, and function test results as well as higher IQs. Sufficient income and having a job that can improve Self care agency. Even though they are already working, the income is not sufficient. The burden as a man as well as the head of the family in fulfilling needs can affect the client's psychology, clients with a higher socioeconomic level have less financial pressure and minimal symptoms (Çiftçi et al, 2015) so that even though the client's income is working, the client's income is still not sufficient to meet the needs.

Based on the study's results, the five patients' education was three from high school, one from Diploma and one from elementary school. The results of treatment adherence in the five patients were not in accordance with several research results and theories which stated that the higher the education more than adherence. In the study, patients with Diploma had poorer adherence than elementary school patients. After being given ACT therapy, the results that have the most influence are how patients accept their health conditions and comitment treatment, so that education in this study has no effect on patient adherence to treatment.

Status is not closely related to compliance, some clients are married but have high non-compliance. Non-compliance is closely related to the relationship with the closest person, Çiftçi et al (2015) also revealed that the level of self-care agency for clients who get support from their closest people has a higher self-care agency. Attention and support from the closest person leads to an increase in the client's self-esteem. This shows that not only those who are married, but the closest family members who provide support or parents can influence compliance. based on research results Tn. A is unmarried and has the highest non-adherence, the level of self-care agency in clients who get support from their closest people has higher self-care agency because the attention and support from those closest to them can increase the patient's self-esteem.

The duration of illness in clients also did not have an effect on non-compliance, clients who had duration of illness for 12 years turned out to have the highest adherence compared to those with recent illness. Chien, et al, (2019) that the duration of illness of 1 to 10 years who did not comply with treatment was 66.7% compared to those who had been sick for more than 10 years, namely 57.1%. The duration of illness in the five patients was 4 years and the longest was 12 years. Patients with a long history of illness for 12 years had better adherence than others. In client C, even though he has the longest duration of illness, he does not often experience recurrence and is re-hospitalized, this can be because the client has been able to adapt to the conditions he is experiencing and accepts so that he is compliant with treatment.

ACT therapy stage is described in six components that are carried out in each therapy session. Each client session has capabilities that must be possessed. with mental disorders 43,6% experience self-stigma at moderate to high values, the stigma experienced also has a relationship with the client's self-esteem (Pico et al, 2016). From the unpleasant experiences that almost all clients disclose, namely, stigma has an influence on non-compliance. Kondrátová et al (2019) mentioned the relationship between stigma and treatment non-compliance or treatment discontinuation by clients.

Contact The Present Moment

An unpleasant experience or incident with the client will have an effect on the client's perception. The unpleasant experiences experienced by clients are various, but there are almost the same experiences, namely regarding the social response and family support to the client's illness as ODGJ. Clients with mental disorders 43,6% experience self-stigma at moderate to high values, the stigma experienced also has a relationship with the client's self-esteem (Pico et al, 2016). From the unpleasant experiences that almost all clients disclose, namely, stigma has an influence on non-compliance. Kondrátová et al (2019) mentioned the relationship between stigma and treatment non-compliance or treatment discontinuation by clients.

In line with this study, Holubova et al (2015) also stated that there is a significant relationship between self-stigma and severity and coping in clients with schizophrenia. Self-stigma affects coping which is used to become negative coping.

It is proven that clients who experience stigma, especially from those closest to them, have a low compliance value because they find it difficult to accept experiences that cause injury.

Cognitive Defusion

Cognitive Defusion is a negative thought that clients believe. This negative thought causes the client to avoid and reject the experience or events. Based on the data obtained from the five clients who experienced ineffective health management, they felt bored with their treatment. They also thought that the treatment they were taking did not make it heal. Several clients expressed experiencing side effects so that the client's behavior did not comply with treatment. In this session all clients are able to express thoughts, feelings, and behaviors from unpleasant experiences. The purpose of the Cognitive Defusion, nursing agency session is as an observer of experiences that occur in clients and helps individuals recognize thoughts and feelings from client experiences without acting and judging (Hayes, Strosahl, Wilson, 2013).

Acceptance and Self as Context

The implementation of the session at this stage the writer found obstacles, three out of five people find it difficult to accept events or experiences that could be more pleasant to him. The most important principles in ACT are the points of acceptance and commitment. ACT aims to help clients to accept things that cannot or need not be changed and change things that can be changed (Hayes et al., 2003). The unpleasant experience of the three clients according to the results of the stressor assessment turned out that the client experienced stigma from the closest person. This experience causes injury to the client so that when it is raised, it will cause anxiety. When there are concerns about self-expectations, then this anxiety will perceive that the ego is being threatened so that the client can maintain his ego. The client is in an ego defense with repression, that is, the client refuses unconsciously to something that is uncomfortable and something that causes the most pain (Semiun, 2006; Kaplan, Sadock, Grebb, 2010). The obstacle in conducting the acceptance session for clients A, E, and B is that the client is in a state of repression because unpleasant experiences make them sick if they are raised again in the client's consciousness.

Techniques in this session aim to help clients shift their focus from feelings of anxiety to desires and acknowledge that they can control and be able to change their desires (Hoare, Mcilveen, & Hamilton, 2012). The author overcomes obstacles with the ACT principle, namely by making unpleasant experiences a part of life and commonplace by practicing telling stories or writing about the incident.

Values

According to Hayes et al (2003) value is defined as a consequence of life desired globally. Value is basically a good and bad individual's belief in seeing something, values are built since childhood and built with influence in the family. A-Tjak et al (2015) stated that ACT increases psychological flexibility, which is the ability to realize and accept a situation or condition and change or persist in a behavior with existing values. In this session, all clients are able to determine their own value which will be used in increasing commitment.

Hayes (2003) mentions the value domain in value clarification, which is related to family and child relationships, marriage, spouses, and friendship. In social relations, namely career, work, and education, as well as in self-development consisting of recreation, spirituality, citizenship, and health and physical well-being. several clients who have high compliance have a value to make children and families happy.

Commitment action

In this session, all clients are able to commit to the treatment that will be undertaken, but one person who needs help accepting the experience of himself does not increase adherence to the client maximally. The commitment session in ACT emphasizes individuals' values and personal goals and seeks to minimize obstacles to achieving these goals in terms of behavior (Hayes, 2003). Value-based care by creating defined activities, making commitments to action, establishing criteria for action, monitoring progress, and providing feedback (Eifert & Forsyth, 2005). At the commitment stage, clients are invited to observe the consequences for themselves if their health management is not good. After ACT therapy, client management in compliance has increased by an average of 18 with an increase of 14 points or 71%, the results of changes in signs and symptoms after nursing actions can be seen in table 1. The Client's ability can be seen in table 2. The client's ability has also increased from an average of 3 abilities to 10 abilities.

There is one client, namely E, who has not maximal ability and lack of acceptance, the client is in ego defense with repression, that is, the client refuses unconsciously to something that is uncomfortable and something that causes the most pain (Semiun, 2006; Kaplan, Sadock, Grebb, 2010). The obstacle in conducting the acceptance session for clients A, E, and B is that the client is in a state of repression because unpleasant experiences make them sick if they are raised again in the client's consciousness. Clients who are young A, E, and B also get stigma from the closest person. The stigma

received by the client, especially from the closest person is more of a bad impact than people who are less significant or important, the client feels that someone who should be able to strengthen himself actually makes wound on him (Brain, 2014).

The stigma received by the client from the most important person in his life without family support will increase the ineffectiveness of health management for the client. Çiftçi et al (2015) and James (2010) state that clients with mental disorders who have support from family have higher self-care agency and increased independence than without family support. So that younger clients, get stigma from their closest people, and family support who have less compliance, acceptance, and commitment than other clients.

CONCLUSION

The results of the assessment of clients with the ineffectiveness of health management predisposing factors and biological precipitation that play the most role, namely drug withdrawal and use of illicit substances and alcohol. More predisposing factors are psychological factors on clients, namely unpleasant experiences, on the sociocultural aspect, namely stigma from oneself, family, and society. The acceptance commitment therapy can be used in treating clients with ineffective health management because ACT provides understanding, values according to the patient, acceptance, and commitment to the patient in long-term treatment. Basic Factor Conditions that affect client non-compliance, acceptance, and commitment with the ineffectiveness of health management, namely age, stigma, and family support. The support the theory of the Orem Self-Care approach can be the right approach in overcoming the diagnosis of ineffective health management. The conclusion is that ACT effectively increases compliance, acceptance, and commitment to medication adherence of mentally ill patients.

REFERENCES

- Abdullah-Koolmees, H., et al. (2018). Predicting rehospitalization in patients treated with antipsychotics: a prospective observational study. *Therapeutic Advances in Psychopharmacology*, 8(8), 213–229. DOI: 10.1177/2045125318762373
- Antiss, T. & Blonna, R. (2015). *Acceptance and Commitment Therapy*. Mastery of Coaching
- Bach, P., & Hayes, S. C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 70, 1129-1139.
- Bai, T., Xie, W., Wei, Q., Chen, Y., Mu, J., Tian, Y., & Wang, K. (2017). Electroconvulsive therapy regulates emotional memory bias of depressed patients. *Psychiatry Research*, 257, 296–302.
- Brain, Cecilia. (2014). Stigma, discrimination and medication adherence in schizophrenia. *Psychiatry research*, 220(3), 811.
- Chan AHY, Horne R, Hankins M, Chisari C. The Medication Adherence Report Scale: A measurement tool for eliciting patients' reports of nonadherence. *Br J Clin Pharmacol*, 86(7), 1281-1288. doi:10.1111/bcp.14193.
- Çiftçi, B et al. (2015). What Level of Self-Care Agency in Mental Illness? The Factors Affecting Self-Care Agency and Self-Care Agency in Patients with Mental Illness. *Archives of Psychiatric Nursing*, 29, 372–376. doi.org/10.1016/j.apnu.2015.06.007
- Eifert, G. & Forsyth, J.P. (2005). *Acceptance and commitment therapy for anxiety disorders: a practitioners treatment guide to using mindfulness, acceptance, and values based behaviour change strategies*. Oakland CA
- Gellad, W.F., Grenard, J.L & Marcum Z.A. (2011). A systematic review of barriers to medication adherence in the elderly: looking beyond cost and regimen complexity. *Am J Geriatr Pharmacother*, 9, 11–23.
- Hanssen, H., & Sommerseth, R. (2014). Den familiære relasjonens betydning for pårørendes behov i møte med helsetjenesten. (Norwegian). *Nordic Magazine for Health Research / Nordisk Tidsskrift for Helseforskning*, 10(2), 62–75.
- Hasson-Ohayon, I., Levy, I., Kravetz, S., Vollanski-Narkis, A., & Roe, D. (2011). Insight into mental illness, self-stigma, and the family burden of parents of persons with a severe mental illness. *Comprehensive Psychiatry*, 52(1), 75–80
- Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy*, 35, 639–665. doi:10.1016/S0005-7894(04) 80013-3.
- Herdman, & S. Kamitsuru (Eds.). (2014). *NANDA International nursing diagnoses: Definitions and classification, 2015-2017*. Wiley-Blackwell.
- Hoare, P. N., Mcilveen, P., & Hamilton, N. (2012). Acceptance and commitment therapy (ACT) as a career counselling strategy. *International Journal for Educational and Vocational Guidance*, 12(3), 171-187. doi:http://remote-lib.ui.ac.id:2090/10.1007/s10775-012-9224-9
- Holubova, Michaela et al. (2016). Coping strategies and self-stigma in patients with schizophrenia-spectrum disorders. *Journal: Patient preference and adherence*, 10, 1151-1158. DOI: 10.2147/PPA.S106437
- James, D.L., Jennifer, E.B. (2010). Correlates and consequences of internalized stigma for people living with mental illness: A systematic review and meta-analysis. *Social Science & Medicine*, 71(12), 2150-2161
- Jonsdottir H, Friis S, Horne R, Pettersen KI, Reikvam A, Andreassen OA. (2009). Beliefs about medications: measurement and relationship to adherence in patients with severe mental disorders. *Acta Psychiatr Scand*, 119, 78–84

- Jung, S.H., Kim, W.H., Choi, H.J., et al. (2011). Factors affecting treatment discontinuation and treatment outcome in patients with schizophrenia in Korea:10-year follow-up study. *Psychiatry Invest*, 8, 22–29
- Kaplan, H.I., Sadock, B.J., & Greb, J.A. (2010). *Sinopsis Psikiatri: Ilmu pengetahuan Perilaku Psikiatri Klinis*. Binarupa Aksara
- Kondrátová, L., König, D., Mladá, K. et al. (2019). Correlates of Negative Attitudes towards Medication in People with Schizophrenia *PsychiatrQ*,90, 159. 2067/10.1007/s11126-018-9618-z
- Laan,W., Does, Y., Sezgi, B., et al. (2010). Low treatment adherence with antipsychotics is associated with relapse in psychotic disorders within six months after discharge. *Pharmacopsychiatry*, 43, 221–224.
- Marc, Emos et al. (2001). Relationship Between Age, Health Beliefs and Adherence in Kidney Transplant Recipients (KTRs). *American journal of kidney diseases*, 71(4), 536. DOI: 10.1053/j.ajkd.2018.02.090
- RISKEDAS (2013) at: <http://www.depkes.go.id/article/view/201410270010/lighting-the-hope-for-schizophrenia-warnai-peringatan-hari-kesehatan-jawa-tahun-2014.html#sthash.ECMh3ETT.dpuf>
- RISKEDAS (2018) at: <http://www.depkes.go.id>
- Semiun, Y. (2006). *Teori Kepribadian dan Terapi Psikoanalitik Freud*. Yogyakarta
- Stansfeld, S., Smuk, M., Onwumere, J., Clark, C., Pike, C., McManus, S., Harris, J., & Bebbington, P. (2014). Stressors and common mental disorder in informal carers – An analysis of the English Adult Psychiatric Morbidity Survey 2007. *Social Science & Medicine*, 120, 190–198
- Vigod, S. N., Kurdyak, P. A., Dennis, C. L., Leszcz, T., Taylor, V. H., Blumberger, D. M., & Seitz, D. P. (2013). Transitional interventions to reduce early psychiatric readmissions in adults: Systematic review. *British Journal of Psychiatry*, 202(3), 187–194. doi:10.1192/bjp.bp.112.115030
- WHO. (2017). *Mental Disorders*. Retrieved from <http://www.who.int/mediacentre/factsheets/fs396/en/>