Applied Behaviour Analysis Training Resource for Nursing Staff on a Dual Diagnosis Unit

Hailey Rafuse

Erin McCormick

A thesis submitted to St. Lawrence College in partial fulfillment of the requirements for the Honours Bachelor of Behavioural Psychology.

St. Lawrence College, Kingston, ON, Canada

April 2016

The procedures in this staff training manual/workshop are meant to be used by agency staff, as part of the broader services they provide, or under supervision of agency staff.
Abstract

Mental health hospitals are expanding and helping many individuals live with their mental illness. Living with mental illness can mean dealing with negative symptoms and behaviours. Dudley, Ahlgrim-Delzell, & Calhoun (1999) found that aggression, self-injury, social withdrawal, eating non-edibles (Pica), elopement, and poor self-grooming were common behaviours exhibited in people with a dual diagnosis. A team of professionals must work together to create a recovery plan that benefits the individual most. The professionals included in this team are psychiatrists, psychologists, social workers, nurses, and occupational therapists (Borge, Angel, & Røssberg, 2013). Being able to collaborate with staff members who have different of backgrounds can be difficult. That is why the purpose of this study was to create a resource for nursing staff to aid in their learning in the field of behaviour therapy. The researcher’s hypothesis was that creating an accessible resource for nursing staff would help increase their knowledge about behaviour therapy and potentially help them feel more competent when assisting behaviour therapists with patient’s behaviour interventions. There was three resources created in the form of a double sided laminated handout/ flyer. The handouts consisted of descriptions and guidelines for applied behaviour analysis competencies such as Picture Exchange Communication System (PECS), antecedent interventions, and reinforcement schedules. A satisfaction survey was handed out to the nursing staff once they were able to review the resources. After the surveys were handed out to staff, 10 staff members were able to report back, giving positive feedback about the resources visual appeal, readability, and accessibility. Overall, the agency was completely satisfied with the product. It is hoped that the nursing staff will continue to utilize the resources to aid in their learning processes.
Acknowledgements

I would like to thank all my friends, family, and professors for supporting me and helping me succeed in the Behavioural Psychology program. I could not have made it without the constant reassurance and reinforcement. To my BPSYC friends, thank you so much for holding my hand when I needed you and for just being by my side through thick and thin. To my family, thank you for pushing me out of my comfort zone and always letting me know that I am capable of anything I set my mind to. And to my boyfriend, you are always there when I need you, thank you for giving me guidance and unconditional love. These four years have flown by, and I was able to succeed thanks to all of you!
Table of Contents

Abstract ........................................................................................................................................ ii
Acknowledgements ....................................................................................................................... iii
Table of Contents ......................................................................................................................... iv
Chapter I: Introduction ................................................................................................................ 1
  Chapter Overview ....................................................................................................................... 1
Chapter II: Literature Review ..................................................................................................... 2
Chapter III: Method ...................................................................................................................... 6
  Participants ................................................................................................................................. 6
  Design ...................................................................................................................................... 6
  Procedures ................................................................................................................................. 7
  Evaluation ................................................................................................................................. 7
Chapter IV: Results ...................................................................................................................... 8
Chapter V: Discussion .................................................................................................................. 8
  Thesis Summary ...................................................................................................................... 8
  Strengths ................................................................................................................................. 9
  Limitations .............................................................................................................................. 9
  Multilevel Challenges ............................................................................................................. 9
  Contributions and Recommendations for Future Research ..................................................10
References ....................................................................................................................................11
Appendices
  Appendix A: Behavioural Competency Manual Survey .........................................................13
  Appendix B: Applied Behaviour Analysis Resource for Nursing Staff .................................15
  Appendix C: Manual Evaluation .............................................................................................21
Chapter I: Introduction

Patients admitted into a mental health hospital interact with many different staff members each day. For patient care to be sufficient and successful, staff members need to be able to work with people that have other disciplinary backgrounds. Nurses, doctors, social workers, behaviour therapists, occupational therapist, psychiatrists and other professionals to work together to provide the most comprehensive care for each patient. This is helpful for generating creative ideas and solutions. The team of staff members witness each patient’s symptoms and behaviours when they work with them, but each will have a unique perspective and is trained to assessment different aspects of these behaviours.

People with a dual diagnosis may have different symptoms and behaviours that can be related to either their mental illness or intellectual disability. Dudley, Ahlgrim-Delzell, & Calhoun (1999) found that aggression, self-injury, social withdrawal, eating non-edibles (Pica), elopement, and poor self-grooming were common behaviours exhibited in people with a dual diagnosis. These behaviours cannot only take a toll on the patient, but the staff members as well. Staff members need to act in a specific manner and become flexible when interacting with patients such as being friendly, supportive, but also be an authoritarian (Pazaratz, 2000).

Shore, Iwata, Vollmer, Lerman and Zarcone (1995) explain how working with clients that have challenging behaviours can affect the staff’s behaviours in certain ways. Staff may be less consistent with routines when dealing with clients with inappropriate behaviour. These factors contribute to staff members’ overall productivity and wellbeing. If the employees could all use a specific resource to refer to when dealing with patient behaviour, it can help prevent the patients’ inappropriate behaviour from occurring in the first place.

Applied Behaviour Analysis (ABA) interventions can help staff reduce patients’ inappropriate behaviour, and increase more appropriate, socially acceptable behaviour; however, not all staff members know how to implement ABA interventions. If direct-care staff members are able to learn more about Applied Behaviour Analysis, then they can increase their success in implementing self-care plans for clients (Luiselli, Bass & Whitcomb, 2010). Luiselli, Bass, & Whitcomb also state, for staff training to be effective and increase staff’s competencies, the training must be integrated into their current routine, hands-on, quick and easy for staff to complete.

Creating a resource that all staff members, from any discipline, can access and understand can be effective in improving staffs’ behavioural competencies and can increase their confidence while on the job.

Chapter Overview

This thesis contains five chapters. First there is the Introduction. After there is a Literature Review that includes a review of relevant literature. The literature includes information about effective staff training procedures, behavioural interventions used with patients with a dual diagnosis, and strategies in designing a training manual/program. The Literature Review chapter also includes how the literature analysis, the problem statement, and the study are related and defines gaps within the literature. The chapter following is the Method, describes the format of the manual and also gives detail about the setting, design, materials used, evaluations, and the participants. The next chapter, Results, includes a summary of the manual, and the evaluation results given by the participants. The Discussion/Conclusion chapter focuses strengths and limitations from a multilevel systems perspective including client, program,
organization, and society, implications for the Behavioural Psychology field, and recommendations for future research.

Chapter II: Literature Review

There is a team of professionals required for high quality care in inpatient mental health settings. According to Luiselli, Bass, and Whitcomb (2010), direct-care staff can have very different educational backgrounds. The professionals included in this team are psychiatrists, psychologists, social workers, nurses, and occupational therapists (Borge, Angel, & Røssberg, 2013). Each professional has a different duty, but they all have one thing in common, their responsibility for the well-being of the patient. Additionally, it is important to be mindful of each staff member’s educational backgrounds in order to achieve the best results in staff performance. This means that you should be aware of what each staff member is actually capable of, and giving them roles and duties that are appropriate for them. There are times where a staff member may need the help of a person with a different educational background. Having confidence at work can be difficult when you have lack experience. Donat, McKeegan, and Neal (1991) surveyed staff that work in psychiatric hospitals and found that, in the state of Virginia, inpatient staff tended to reinforce “passive institutionalized behavior” which led to an increase patient’s behaviour problems. Donat et al. (1991) found that behavioural interventions in these psychiatric hospitals were not consistently implemented; staff did not know about these programs, and hadn’t been trained in the interventions being used. Donat et al. (1991) added that nursing and aide staff have a difficult time managing behaviours due to other duties they are. These issues can explain why some inpatient behaviours can actually deteriorate over time instead of improving while admitted in a mental health hospital. Consistency is a priority when running programs, but sometimes staff members need an extra hand running these programs. Additionally, stress can be increased when patients have a complex diagnosis that has an array of potential problem behaviours. Donat et al. (1991) explained how training that teaches how to apply relatable skills to everyday occurrences on psychiatric wards is hard to come by, and is needed for training to transfer from the training class to the working environment.

When working in the field of Dual Diagnosis (DD), Werner & Stawski (2012) found that knowledge and confidence go hand in hand. Werner (2012) also explained how finding people to work with this population can be difficult due to the negative light that is held towards these individuals and their challenging behaviours. Werner & Stawski (2012) reviewed studies about training professionals to work with people with DD and found the skills that needed to be improved are the professional’s knowledge, competence, attitudes, and the quality of the services they provide for those with DD.

The Canadian Mental Health Association (CMHA) defined dual diagnosis as “an individual with a mental illness and a co-occurring developmental disability.” The CMHA also stated that people diagnosed with a developmental disability are three to four times more likely to develop a mental health issue. The definition for dual diagnosis can differ depending on the agency. Werner (2012) described how a multidisciplinary team is needed to assist with medical conditions, cognitive difficulties, and deficits in communication. Some barriers for those who work with a person with DD can include having a lack of knowledge about people with DD’s needs, psychiatric diagnostics, and patient treatment (Werner & Stawski, 2012). Another aspect of working with people with mental health issues or special needs is the potential for aggression or self-harm. Killick and Allen (2004) explain how it is common for staff to be trained in
physical intervention techniques. This can be something that is seen as very off-putting and can deter staff from wanting to work with this population. Killick and Allen (2004) found that training staff in alternatives to physical/ intrusive interventions increased their confidence in working with people with DD. Teaching staff how to handle difficult behaviour can act as a preventative measure for aggressive/violent behaviour. This confidence will be evident in the working environment because staff will not hesitate to intervene with inappropriate client behaviour. If staff members do not possess these skills that are needed to work with this population, the overall performance of the team can be negatively affected. The feeling of uncertainty and unease can spread from staff member to staff member until there is a shared negative opinion or attitude that is created about a client or diagnosis. People with a DD who are admitted into an institution can eventually reintegrate with the community if the multidisciplinary team has a plan/intervention in place for them (Werner, 2012). An effective plan for increasing these skills includes properly training the professionals involved so they are prepared to work with this population.

Ryan (2011) listed aspects that need to be taken into consideration before changing ones behaviour: chronological and developmental age, behavioral capabilities, community, family history, religion, ethnicity, and their values. Werner & Stawski (2012) also added that the patient’s mental health needs to be taken into consideration when creating treatments. For clients with DD, their environment needs to become more supportive in adopting new ways of thinking. If the environment alters in this way, staff can take on newer practices to use with treatments easily (Birleson, 1998). Birleson (1998) also outlined how institutions need staff members that are able to reflect on tasks given. This way, agencies can develop an understanding of how the interventions are created. To remove gaps in service implementation, the staff’s knowledge and attitudes about DD, as well as the training they have completed, must be taken into consideration (Werner & Stawski, 2012). Werner & Stawski (2012) came to the conclusion that there is a cycle of inadequate training which leads to the mal-treatment of people with DD, which leads to further inadequate training for future psychiatrists. A way to end this cycle is not only through proper training, but also giving the opportunity to use these skills with direct contact and supervision of those with DD (Werner & Stawski, 2012). Trainers need to adopt alternative ways to teaching in order to create the most effective training program (Granpeesheh, Tarbox, Dixon, Peters, Thompson, and Kenzer, 2010).

Training staff members in Applied Behaviour Analysis (ABA) involves teaching concepts and skills to implement the measures (Granpeesheh, Tarbox, Dixon, Peters, Thompson, & Kenzer, 2010). ABA can be effective in not only altering patient behaviour, but altering staff behaviour as well. Baer and Wolf (1987) listed some important aspects of ABA, which include the program being “generalizable, conceptually systematic, technologically sound, practical, and effective”. Creating behaviour changing programs for those with a DD can alter other behaviours as well. Roane, Fisher, and Carr (2016) described how behaviours that create positive outcomes are reinforcing and, therefore, the behaviour will increase, while behaviors that create negative consequences are punishing and will decrease the behaviour over time, or the behaviour will stop occurring all together. This is an important aspect to remember when working with people with a dual diagnosis because your behaviour as a staff member impacts how the patient will behave. Cooper (1982) described how Applied Behavior Analysis uses methods that focus on targeting and then defining a specific behavior, then creating and implementing an intervention that can change the behaviour and meet the patient’s goals. Once the intervention is implemented its effectiveness is analyzed and then the intervention either continues or it is redesigned.
Ryan (2011) described how to assess staff member performance over time, repeated measurement and graphing are used. For a training program to be successful, trainers need to be observing and modifying the staff's trained behaviour. Ryan (2011) also described how measuring their progress allows teachers to analyze how effective the training methods are in teaching new skills. If the programs are not effective, teachers can modify them to improve the program to meet the needs of the staff. The behaviour that is being trained or changed has to have a clear definition and the methods used are illustrated using a step-by-step outline. For a training program to be designed it needs to be practical and meaningful for the person being trained (Ryan, 2011). Finally, Ryan (2011) explained how to ensure the trainee is performing the skill accurately, the program is individualized and the trainee is positively reinforced. Parsons, Rollyson, and Reid (2012) explained that being able to verbally relay intervention procedures and definitions is not enough. To enhance behavioural competency training procedures, some organizational behavior management techniques can be incorporated into programs. These programs can include antecedent and consequence procedures, as well as self-management (for example, goal setting) (McClelland, 2008). Before behaviour analysts can successfully train staff, there needs to be further research in best-practices for effective staff training for Applied Behaviour Analysis (Parsons, Rollyson, & Reid, 2012). To ensure that staff members feel properly equipped with the skills to understand and implement interventions for people with DD, a resource needs to be available to help teach behavioural competencies. If staff members do not learn how to work with this population, they will not gain practical knowledge about the population and may avoid working with patients with DD all together (Werner & Stawski, 2012).

Currently, training procedures focus on skills training rather than ensuring staff members maintain performance (McClelland, 2008). To acquire new job skills, verbal-skill strategies are not enough, like lectures and presentations, for example. These methods are more effective to enhance current knowledge (Gardner, 1972). Both the environment and the training programs need to be altered for staff and patients to thrive. Parsons, Rollyson, & Reid (2012) explained how training programs need a clear outline that includes a description of the target skill and the steps needed for skill acquisition. Trainees also need to be willing to commit to the entire training process. If staff members are willing to learn then it will help with the continuation of the training program. It is best that the training takes part in the same environment in which the staff members work. Trainers and trainees will then be in a familiar place where everyone is aware of rules and routines and application of skills from training to work will occur with greater ease (Luiselli, Bass, & Whitcomb, 2010). Parsons, Rollyson, & Reid (2012) also explained how training should involve describing the target skill, both verbally and in writing, having the trainer demonstrate the target skill, and then having the trainees practice this skill. The trainer should provide feedback and repeat these steps until the trainees are confident they have mastered the skill. The supervisor needs to have a role too, and this should be to check in with staff to ensure the skill is being maintained over time (McClelland, 2008). McClelland (2008) described how tools like reinforcement, pivoting, and redirecting can be taught to staff to manage patient’s behaviours. Reinforcement increases the probability of a behaviour recurring to happen again. Pivot is the use of extinction when a patient displays an inappropriate behaviour followed by reinforcement when the patient displays an appropriate behaviour. Redirecting is when a patient is directed to engage in a more appropriate behavior, and staff members provide praise to reinforce that behaviour. Training programs can include aspects of Organizational Behaviour Management treatment, such as the one McClelland (2008) created. This treatment included performance modeling, privately displayed data, goal setting, laminated cards listing the steps for
each tool, tokens earned for tool use and increases in positive interactions in which a prize would be rewarded, public recognition in the work environment, and private praise. Cooper, Heron, and Heward, (1987) created a model to help people understand ABA. The steps included: selecting a behaviour to be analyzed, measuring the behaviour, selecting treatment procedures, implementing the procedures and then evaluating the procedures. Cooper et al. (1987) went into more detail with these steps. First, selecting the behaviour that needs to be analyzed involves focusing on the specific behaviour, operationally defining the behaviour, creating goals and objectives, and then involving people that have an influence on the behaviour. Cooper et al.’s (1987) second step, measuring the behaviour, involved choosing a procedure to measure the target behaviour, collecting data, and continue to collect data daily. The third step, selecting treatment procedures, involves finding the contingencies that are already in place, choosing what materials to use, and finding a setting to implement the intervention in. The fourth step, implementing the procedures, involves keeping an eye on the effects the intervention has on the behaviour by comparing it to the baseline data, and then changing any procedures that need altering. The final step, evaluating effects of treatment, involves collecting all of the data, and either changing the treatment or fading it out over time. These steps outlined by Cooper et al. (1987) focus on the main aspects of implementing a treatment. These steps can be used by any staff member when learning how to create a plan for a specific patient.

If there is not enough time available or staff members are not able to meet at once, creating a resource that can be used to teach staff new skills can be helpful. Training manuals describe what the expectations for the job are and clarify roles and skills needed (Pacovsky & Tetzlaff, 1998). Pacovsky and Tetzlaff also described how training manuals need to include a mission statement, history of the department, goals and objectives, expectations of the job, daily routine and appointments, protocols, equipment, and data forms. Lanigan (2010) described the importance of laying your information out in sections or modules. These modules should include smaller groups of text so the pages do not overwhelm the reader (Lanigan, 2010). The manual teaching applied behaviour analysis competencies included major ABA techniques as each module, and then included small sections describing the technique and how to practice it. The steps to practice or complete the task/skill should be written in a logical order and there should be examples provided (Lanigan, 2010). The easy steps can help focus or direct the reader, and this can make them feel like the goal is attainable. Dalto (2013) stressed the importance of knowing your audience. Since inpatient units for patients with DD have a multidisciplinary team, the training manual needs to be written in a way that all disciplines would be able to understand and follow. Dalto (2013) also explained how using scenarios can be beneficial for the trainees. Having a situation you can relate to can help increase motivation and interest. Also, remembering these scenarios can be important if you are put in a real life situation because you can refer back to what you learned during the training. Linigan (2010) found how the visual appeal of a manual is very important. The content inside matters, but if it is displayed in an overwhelming manner, people will not want to read the content. Lanigan (2010) described the importance of supplying the trainees with the resources used to create the manual. For example, having a reference page at the back of the manual or providing websites with learning content. Navarrete’s (2011) study found that utilizing technology was effective in increasing teachers working with children with autism’s ABA skills. Technology can be easier to access for some, and creates a visually appealing training resource. Granpeesheh, Tarbox, Dixon, Peters, Thompson, and Kenzer (2010) also described how eLearning can be beneficial because an expert trainer does not have to be available during the training. They also stated how a disadvantage to
eLearning could be that if the trainees have questions, there is not a trainer available to answer the questions. That is why it could be beneficial for staff to have a resource that is used on the job, in both digital and hardcopy forms because staff trained in ABA will always be available to answer questions. Also, staff members can have different learning styles. So, if there was a teaching resource that was solely presented through one form of media, some people may not benefit and ultimately not utilize the resource.

Hospitals require that particular disciplines are tasked with the responsibility of keeping the programs running smoothly for the patients. But if programs cannot be generalized from one discipline to all disciplines, the implementation of certain interventions can be restricted, and may not be able to be implemented at all. For a working environment to be successful, all staff members need to work together and help each other from time to time. By creating an effective training resource for all staff that aims improve the techniques used to train staff in ABA, there should be an increase in the direct-staff care member’s behavioural competencies (Luiselli, Bass, & Whitcomb, 2010). Increasing the staff’s behavioural competencies can, in turn, decrease the patient’s inappropriate behaviours and help teach more socially acceptable behaviours (Luiselli, Bass, & Whitcomb, 2010). Also, by creating a resource that is easy for the diverse staff members to understand, it can increase the likelihood that other staff will help with the implementation of the behavioural interventions with the patients with dual diagnosis in the future (Dalto, 2013; Werner & Stawski, 2012). This can be done by creating an easy to access manual that has important ABA skills included with multiple ways to practice these skills (Linigan, 2010). For the training to be successful it needs to be cost and time efficient, and all of the staff members need to have access to the ABA training (Navarrete, 2011). Whether it is the eLearning that Granpeesheh, Tarbox, Dixon, Peters, Thompson, and Kenzer (2010) described, or if it is a hardcopy manual that Linigan (2010) described, having something available that can assist staff with patients challenging behaviours can potentially decrease the staff’s stress and feelings of incompetence and increase their confidence in ABA and on the job duties.

Chapter III: Method

This study, which aimed to increase staff members’ behavioural competencies involved the creation of a manual. This format can be the most beneficial for direct care staff members because it is easy to access and since it is portable, they can choose the location in which it is best for them to learn in. The creation of the manual began with an evaluation on the staff members’ current resources. This evaluation initiated the creation of the manual by providing information about what staff members deem as important and not important to include in a training manual. The evaluation also provided staff members’ opinions on how a training manual should look.

Participants

The participants included in this study were 10 direct care staff working in an inpatient dual diagnosis unit at a mental health hospital. The job titles of the participants are registered nurses and the participant’s ages were 25 and older. There were 8 women and 2 male participants. The reason behind this gender split is because the majority of the nursing staff working at this specific mental health hospital are female. This manual was created using relevant literature and resources that include information about best practices and details regarding behaviour therapy. The participant’s role in the creation of this manual was to evaluate
and give their opinions on the manual created. The manual was aimed to be a resource for direct care staff working in an inpatient unit with people who have a dual diagnosis. The target population that can benefit from this manual includes registered nurses, occupational therapists, and recreational therapists. Behaviour therapists can use the manual as a teaching resource or as a reference. This manual was aimed to increase behavioural competencies regarding Applied Behaviour Analysis (ABA) for direct care staff members who do not have previous training or an educational background in behaviour therapy. Direct care staff members take part in evaluating the manual after the creation takes place. The manual was aimed to educate these direct care staff members on ways to intervene with patient’s problem behaviours when they arise. The manual was designed as a supplementary resource to help support and educate staff on appropriate behaviour intervention techniques.

**Design**

The manual was created by the author during a 14-week field placement for the Honors in Behavioural Psychology program for the author’s applied thesis. The manual’s creation began during the 14 week placement and is finalized during the winter semester. The manual was chosen to be focused on educating staff members on key aspects of behaviour therapy that are used with patients with a dual diagnosis on the inpatient unit frequently. This decision was made due to the high demand of behaviour interventions for patients with a dual diagnosis. The manual created is intended to be appropriate for all staff members of all disciplines to comprehend. The manual includes several behavioural competencies that are deemed as important by the behaviour therapist staff. There was a survey (Appendix A) that behaviour therapist and registered nursing staff members were given to outline their opinions on what they feel is important for all staff members to be knowledgeable in when it comes to ABA. The results from the manual concluded which behaviour therapy techniques/interventions are seen as being most important to teach in this setting. The behaviour therapy techniques that are included in the manual are: delivery of reinforcement, reinforcement preference assessments, prompting procedures, conditioned reinforcement, differential reinforcement, writing behaviour support plans, delivering instructions, behavioural momentum, antecedent interventions, graduated guidance, behaviour recording, functional behaviour assessment, chaining, task analysis, Picture Exchange Communication System (PECS), maintenance and generalization, and selecting a target behaviour and goals. Different studies and literature reviews that used these techniques to either implement with patients or teach fellow staff members were used as resources to collect information regarding each behaviour therapy technique included in the manual. These studies were also used to create the scenarios and to identify how the information should be laid out in order to benefit the reader.

The manual is kept within the inpatient unit where staff can access and refer to it on a daily basis, in an area that is easily accessible. The manual is placed in a three-ring binder, and has the quizzes and resources pages included inside the binder pockets.

**Procedures**

The introduction of the manual gives instructions to staff members on how to navigate through the different modules included in the manual, and when the manual can be useful to refer to. The manual includes modules regarding each behavioural principle. The modules for each principle includes: a definition of the principle, an outline on how and when to implement the principle, case scenarios, and a quiz on the topics in each section. The behaviour therapists also have access to the training manual, so they will be available to answer any questions staff
may have about certain behavioural principles. The manual can be used as a resource when the behaviour therapists implement a new intervention for patients target behaviour. The behaviour therapists can use the manual to educate their co-staff members on how to assist with implementation and maintain the intervention over time.

**Evaluation**

The staff members’ acquisition of the behavioural competencies is measured as a part of the study. But, there are evaluations provided for the staff members to complete once the manual has been completed (Appendix C). The evaluation is anonymous and includes questions regarding the manuals readability, accessibility, visual appeal, clarity, and usefulness. Once the evaluations have been reviewed, the manual is revised using the staff members’ feedback. The evaluations and revisions helps the manual become user friendly and can increase the likelihood that direct care staff members will use it as a reference. Staff then filled out the evaluation which rates the handout on its visual appeal, readability, accessibility, and usefulness. Ten nursing staff completed the evaluation. The researcher asked the nursing staff members to leave comments about positive and negative aspects of the handout. A 10-point rating scale was used to evaluate the PECS handout. A rating of “1” indicated that the handout was not beneficial, and a rating of “10” representing that the staff member was able to benefit from the handout.

**Chapter IV: Results**

Three double-sided handouts were created to assist with training nursing staff about Applied Behaviour Analysis. After 12 staff members completed the Behavioural Competency Manual Survey (Appendix A), it was decided by the majority of the staff members wanted to learn more about Picture Exchange Communication Systems (PECS), Antecedent Interventions, and Delivery of Reinforcement. It was also decided, by the 12 staff members surveyed, that they would benefit most from information displayed in a handout format. After the survey data was collected and reviewed, three resource handouts were created (Appendix B). These handouts are to be used as a resource for the nursing staff to utilize when assisting behaviour therapists with support plans for patients with a dual diagnosis. The behaviour therapists can use these as a training resource for new staff members who do not have prior training in behaviour therapy. Evaluations were given to the nursing staff regarding the handouts created. The handout “PECS: What You Need to Know” was given to the nursing staff to review.

After a review of the 10 evaluation forms, the results suggested that the agency was satisfied with the format of the handout. The mean score given for the PECS handout were 9 for visual appeal, 8.3 for readability, 9 for accessibility, and 10 for usefulness. There were comments made about changing the colour scheme and reducing the amount of text. This feedback was used to alter the remaining two handouts into a similar format. Positive comments were made about the visuals, clarity, simplicity, and colour.

**Chapter V: Discussion**

**Thesis Summary**

The field of mental health has been expanding in recent years which means that agencies are having to constantly keep up with the new literature and latest findings. Mental health hospitals include staff from many different disciplines working with many different diagnoses. Behaviour therapists are trained to intervene with problem behaviours as part of their regular duties. Some behaviour therapists choose to create interventions for those with a dual diagnosis.
Dudley, Ahlgrim-Delzell, & Calhoun (1999) found that aggression, self-injury, social withdrawal, eating non-edibles (Pica), elopement, and poor self-grooming were common behaviours exhibited in people with a dual diagnosis. Although the behaviour therapists have the skills to manage these behaviours, other staff members, like nurses for example, may not have these same skills. The purpose of this study was to create a resource for nursing staff to apply when learning about certain behavioural interventions used by the behaviour therapists at their agency. Nursing staff expressed that they were unaware of most behavioural interventions, and would like to learn more. After receiving their feedback about what interventions they would like to learn about, three handouts were created. Picture Exchange Communication System (PECS), antecedent interventions, and reinforcement schedules handouts were made specifically for the nursing staff. These handouts included definitions, who to use the skills with, when to use them, and most importantly, how to use them. After receiving positive feedback on the handouts, it was decided that this type of resource will aid in the staff’s learning process.

**Strengths**

A strength in this study would be that the creation brought up ideas and concepts on which nursing staff and behavioural therapists could agree. They both used their opinions to sum up what would be most important for nursing staff to learn. The nursing staff and the behaviour therapists both have very different job descriptions and duties, but creating something that helps both groups can assist with their collaboration for future activities/projects.

After receiving the feedback from the nursing staff on the handouts, it is clear that having a condensed resource is going to be very beneficial for them to learn more about behaviour therapy. The staff members are very busy, so they commented on having something that was small and easy to read was going to be better than having another large manual to read.

**Limitations**

**Existing Limitations and Issues.** Although the study included 10 feedback forms regarding the handouts, the forms should have been given to all nursing staff and even behaviour therapists so the results would represent the majority of the staff on the unit. Also, the feedback given by the nursing staff was mostly positive, but the behaviour therapist’s opinion is also important.

**Anticipated Limitations and Issues.** The handouts created only covered three areas of behaviour therapy. Although these interventions were deemed important by both nursing staff and behaviour therapy staff, there are still many aspects of behaviour therapy that the nursing staff could be taught or made aware of so that they know what therapy is available to the patients. These interventions were seen as being important, specifically with the patients currently on the unit, but future patients may need different interventions implemented. For the behaviour therapists to find the time to add more ABA handouts may be difficult due to the daily demands of the job.

**Multilevel Challenges**

**Client Level.** Creating supports for patients who have a dual diagnosis can be very complex. Customizing each patient’s plan of care takes time because each patient has their own set of needs. Ensuring that patients are complying with their medication or support plans can also be difficult when they are experiencing symptoms that accompany their diagnoses. Whether it is delusions, hallucinations, or even problems communicating, it is important to alter how you approach each patient so they can understand that you are trying to help them.
Program Level. The creation of each program that is implemented involves diverse professional opinions. There are many aspects that need to be taken into consideration when creating these programs. Some examples of considerations include: medication times; hygiene; meal times; patient compliance; how many patients are willing; the functioning level of each patient; and more. The programs run daily need the support of multiple staff, and if they are not available, programs may not be run. If the schedule for each day is written out before hand it can help organize staff, and prepare patients for upcoming events.

Organizational Level. Mental health hospitals have staff members from many different disciplines. These disciplines cover all aspects of a patient’s plan of care. For example: nutrition, recreation, behaviour plans, medical help, and more. It can be difficult for staff members who have a certain educational background to fully understand what other staff members can do. For example, a nurse may not understand the role a behaviour therapist has, and vise versa. If staff are willing to collaborate and share their ideas and opinions in a productive way, the supports given will benefit the patients overall recovery.

Societal Level. When a patient is referred to a mental health hospital, the hospital needs to collaborate with the community agency before, during, and after the patient is admitted. The goal for a patient is not to have them remain admitted indefinitely. Their goal is to help them recover, and then reintegrate them back into the community. For this to be successful community agencies need to work with the hospital and take on a responsibility to continue the plan of care after the patient is discharged. This can be hard for agencies when they have developed a negative view of the patients because of a lack of competency in the management of difficult behaviours. Agencies can sometimes stigmatize patients with a dual diagnosis which interferes with the quality of the services given. For patients to receive quality services, agencies should not stigmatize patients, but rather keep an open mind.

Contributions and Recommendations for Future Research

As mentioned, there will need to be more handouts and resources created and made available for nursing staff to aid in their learning process. Although nursing staff and behaviour therapists have different duties, the importance of collaboration needs to be highlighted by management. For a patient to receive the best services, the staff members need to act as a team and put their ideas together to come up with the solution that will benefit the individual most. Creating more resources for the nursing staff can provide them with the support and information that they need to provide interventions already being implemented by behaviour therapists. The will provide the reinforcement and consistency needed to bring about stronger and lasting change for patients. Buy-in is needed from both nurses and behaviour therapists for successful implementation of these interventions.

Since the field of behaviour therapy is still growing, behaviour therapists will need to help other staff members learn how behaviour therapists help with the client’s recovery. Ensuring that the language used is understandable for all disciplines is also important when teaching others about behaviour therapy. These handouts will not only initiate the learning or training for nursing staff, but it may also initiate discussion between disciplines on how important it is to be aware of each other’s competencies and duties.
References


Appendix A

**Behavioural Competency Manual Survey**

The following questions were created to assess behaviour therapist’s opinions on the importance of specific behavioural competencies and how the information should be displayed. The results from this survey will be used to create a condensed behavioural competency manual for Ontario Shores staff. This survey can be answered anonymously and all answers will be kept confidential. The survey should take approximately 10 minutes to complete. Please answer the following questions honestly.

1. Which of the following competencies do you feel are the most important for ALL staff to be familiar with (Circle 3)

<table>
<thead>
<tr>
<th>Delivery of Reinforcement</th>
<th>Reinforcement Preference Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditioned Reinforcement</td>
<td>Differential Reinforcement</td>
</tr>
<tr>
<td></td>
<td>Prompting Procedures</td>
</tr>
<tr>
<td>Writing Behaviour Support Plans</td>
<td>Delivering Instructions</td>
</tr>
<tr>
<td>Behavioural Momentum</td>
<td>Antecedent Interventions</td>
</tr>
<tr>
<td>Graduated Guidance</td>
<td>Behaviour Recording</td>
</tr>
<tr>
<td></td>
<td>Functional Behaviour Assessment</td>
</tr>
<tr>
<td>Chaining</td>
<td>Task Analysis</td>
</tr>
<tr>
<td></td>
<td>Picture Exchange Communication System (PECS)</td>
</tr>
<tr>
<td>Maintenance and Generalization</td>
<td>Selecting Target Behaviour and Goals</td>
</tr>
</tbody>
</table>
2. Are there any other competencies you feel are important for staff to be familiar with, and if so, why?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

3. Rate the following forms of media in order of how much you prefer to learn information from (Most preferred- 1, least preferred- 7)

__ Handout
__ Pamphlet
__ Book/ manual
__ Website
__ Power Point
__ Video
__ Other: _____________
Appendix B

Applied Behaviour Analysis Resource for Nursing Staff

**Picture Exchange Communication System (PECS): What You Need to Know**

**What is it?**
PECS is an augmentative communication system that was created to help children with autism learn to communicate their wants and needs. PECS can be used to develop speech as well.

**Who does it help?**
PECS was created for individuals with autism spectrum disorder and related developmental disabilities. It can be used with people of all ages with communicative, cognitive, and physical difficulties. There should be 2 trainers, a back-prompter who stands behind the patient and provides gentle physical prompts, and a communicative partner, who holds their hand open to receive the picture and also asks the questions. The communicative partner does all the talking during each training session.

**Why do we use it?**
Agencies use PECS to teach patients how to initiate communication. The end goal is to have the patient answer questions and make comments independently.

**When should PECS be utilized?**
Patients can use PECS whenever they want to communicate something. You should run the program when the patient has motivation to receive the item/activity.

**Where should PECS be used?**
PECS can be used in any setting (school, home, hospital, community), as long as you have the materials to run the program and the patient is in the right state of mind.

---

**Dos and Don’ts of Teaching PECS**

**Do:**
- Wait for them to approach you (initiating conversation)
- Alternate reinforcers – food, toys, etc.
- Provide the reinforcement quickly

**Don’t:**
- Verbally prompt them
- Conduct all training in a single session
- Withhold access to necessities (food & water)
**Going Through the Phases**

**PHASE I: The Physical Exchange or How to Communicate**

What you do: back-prompter uses a light physical prompt to guide the patient's hand to the binder, the communicative partner holds their hand open to accept the picture. Over time, as the patient progresses, the back-prompter fades the physical prompts.

What they learn: pick up a picture of the item, reach toward the trainer, and release the picture into the trainer's hand.

**PHASE II: Distance and Persistence**

What you do: have the binder accessible to the patient, and when they approach you with the appropriate picture, hold your hand open to accept the picture. Increase the distance the patient has to travel to give you the picture.

What they learn: to generalize handing over the PECS by using it in different environments with different people. They learn how to communicate across distances.

**PHASE III: Picture Discrimination**

What you do: provide multiple pictures in the PECS binder that they have to choose from.

What they learn: to select from two or more pictures to ask for their favorite things. These are placed in a communication book.

**PHASE IV: Sentence Structure**

What you do: have a “sentence strip” available in which they can create a sentence using an “I want” picture and another picture provided in their PECS binder and accepting the sentence strip. Provide the reinforcer as quickly as possible.

What they learn: to create a sentence on a Velcro strip which includes an “I want” picture and a picture of the thing they want.

**PHASE V: Answering Questions**

What you do: ask “what do you want?” and wait for the patient to hand you the “I want” picture, and then the picture of the item or activity they want.

What they learn: to use the PECS sentence strip to answer the question, “What do you want?”.

**PHASE VI: Commenting**

What you do: ask the patient questions such as “What do you want?” “What do you see?” “What do you have?”

What they learn: to comment in response to questions such as, “What do you see?” and “What is it?”. They learn to make up sentences starting with “I see”, “I hear”, “I feel”, “It is a”

Resource:

[http://students.depaul.edu/~hguenli/AAC/phases.htm](http://students.depaul.edu/~hguenli/AAC/phases.htm)
Antecedent-Based Interventions (ABI):
What You Need to Know

What is it?
Strategies that alter aspects of the patients environment which act as a setting event (things that influence a behaviour) for the problem behaviour to occur.

Who does it help?
ABI is most commonly used for people diagnosed with autism spectrum disorder. But, ABI strategies can be utilized with anyone, in any learning environment, for any problem behaviour.

Why do we use it?
ABI strategies are meant to be used as a preventative strategy. The goal is to find what the reinforcers or triggers are in the environment and then set up the environment in a way that will decrease the likelihood of the problem behaviour occurring.

When should it be utilized?
The idea behind ABI is to change the environment BEFORE the behaviour occurs. Having a set plan before you enter the environment with the patient is key, not only so you feel confident, but so the environment is changed before the patient even thinks about engaging in the problem behaviour.

Where should it be used?
ABI can be used in any environment in which the problem behaviour occurs in. Whether the environment is at home, in the community, or at school.

```
A  B  C
Antecedent  Behaviour  Consequence
```
Examples of Antecedent Interventions

Utilize Patients Preferences

- Talk about patients hobbies
- Make references to patients favourite TV shows, movies, videos
- Add pictures of patients favourite characters or use patients favourite colours for regularly used items (schedules, note books)
- Provide high levels of attention or give time to escape from activity

Altering the Environment

- Reducing the difficulty of a task
- Create routines/daily schedule
- Present information clearly by using concrete language
- Create regular sleep times
- Rehearse the schedule before each transition time

Allow Choices

- Have patient choose: which activity to do first, where to sit, what walking route to take, what TV show to watch, what time of day to shower
- If plan is canceled, have them choose when to do it later

Remove The Triggers

- Treat health issues
- Check in with them periodically about their emotional state
- Address issues regarding medication side effects
- Arrange objects, people, and furniture in certain ways that are less likely to trigger the behaviour (sitting 2 people further apart at meals, removing objects that can be used as weapons)

Resources


Delivering Reinforcement: What You Need to Know

What is reinforcement?
When you give or take away something that ultimately increases the occurrence of the behaviour.

Who does it help?
Reinforcement is used all the time, sometimes people do not even realize they are reinforcing someone. It can be used with both humans and animals. Everyone is capable of learning.

Why do we use it?
Reinforcement should be used to either teach new skills or increase appropriate behaviours. Sometimes inappropriate behaviours can be reinforced by accident, that is why it is important to understand the function (what is causing the behaviour to happen) first.

When should you deliver reinforcement?
Reinforcement should be delivered immediately after the appropriate behaviour is displayed. It is important to not be manipulative when using reinforcement. The behaviours that should be reinforced should be deemed as either being A) socially appropriate or B) decided by the team as being a patient's target behaviour, not just the behaviours YOU want.

Where should you deliver reinforcement?
You can reinforce behaviour in any setting. Teachers often utilize it in the classroom because it teaches students what behaviour is appropriate in the classroom (raising hand before speaking, completing all your homework, playing nicely with others). Any environment is a good environment to teach in.
Examples of Schedules of Reinforcement

Continuous Reinforcement

- Giving reinforcement after every instance of the behaviour.
  - Example: giving patient a high five after every piece of garbage they clean up after lunch.
  - Use as a quick way to teach someone a new behaviour.
  - Eventually switch to an intermittent reinforcement schedule so the patient does not become tired of the constant reinforcement.

Intermittent Reinforcement

- Giving reinforcement at a specific time.
- Use to increase the occurrence of behaviours that they already know how to do.

1. Ratio Reinforcement

   - Fixed Ratio: reinforcing someone after a specific number of times they display the behaviour.
     - Example: saying to a patient “good job!” after they finish 3 colouring sheets.
   - Variable Ratio: reinforcing someone randomly, averaging out at a specific number.
     - Example: high fiving a patient randomly while they answer questions during orientation group.

2. Interval Reinforcement

   - Fixed Interval: reinforcing someone after a specific amount of time has passed.
     - Example: letting a patient use the computer after spending 10 minutes cleaning the unit.
   - Variable Interval: reinforcing someone after a random amount of time has passed.
     - Example: around every 20 minutes, approach patient and talk about how good they are at socializing with others.

Resources

Appendix C

Manual Evaluation

The following questions were created to assess registered nursing staff’s opinions on the Behavioural Competency Manual created by the Behavioural Psychology placement student. The answers you provide will aid in the creation and revision of the manual. Please answer these questions honestly. Your answers will be kept confidential. This survey should take approximately 5-10 minutes to complete. Your feedback is greatly appreciated.

1. On a scale of 1-10, please rate the manual on the following criteria:

- Visual Appeal 1 2 3 4 5 6 7 8 9 10
- Readability 1 2 3 4 5 6 7 8 9 10
- Accessibility 1 2 3 4 5 6 7 8 9 10
- Usefulness 1 2 3 4 5 6 7 8 9 10

2. In your opinion, what is the best aspect about the manual and why?

______________________________________________________________________________
______________________________________________________________________________
_________________________________________  _____________________________________

3. If you could change, add, or remove something about the manual what would it be and why?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________