Whether or Not a Lottery-Based Reinforcement System Increases Productivity of Front-line Staff Working in Residential Group Homes

by

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DEDICATION

I dedicate my thesis to my Grandma Faye. She has always been there for me and has supported me through all of my wants and dreams. She has always seen the best in me and continues to inspire me every day. My Grandma has showed me not to let dementia get you down and to take in all you can with life’s moments and make as many memories as you can. Even though some days are better than others, she always has a big smile and a hug for me. I love you “G-ma”, I will always be your dolly.
ABSTRACT

The present study evaluated the productivity of front-line staff during behavioural consultations. The study took place at an agency that oversees 14 residential homes for individuals with developmental disorders in the surrounding community. Behavioural productivity of the staff was baselined using a seven criterion evaluation given during a behaviour analyst’s consultation and continued to be scored on a monthly basis during the implementation of the reinforcement plan. The reinforcement plan consisted of a lottery-based clinical “crackerjacks” program. The residential teams that scored an average of 85% or higher were placed in a draw for a gift certificate of their choice and the residential teams’ names were posted. The program was implemented for three months to determine if there was a positive relationship in the staff’s work performance and the execution of the reinforcement program and monitoring system. Results indicated that there was a positive correlation between the residential staff’s productivity during consultations and the implementation of the reinforcement program for 60% of the residential teams. Results also displayed an increase from baseline to treatment in 70% of the residential teams. Further research is essential to increase the effectiveness of the treatment program in order to have statistical significance.
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Chapter I: Introduction

Overview

In 1987, the Canadian Provincial Government announced their desire to the fading out of institutional hospitalization and the opening of residential faculties for individuals with developmental disabilities (Braddock, Emerson, Felce, & Stancliffe, 2001). Between 1988 and 2008, there has been a 57% increase in the number of individuals’ living in community-based residential care in the United States (Dalton & Sweeney, 2013). In Canada, the prevalence of individuals with a developmental disability is 1% to 3% of the population (Sullivan et al., 2011).

Many of the individuals who are living in residential care are likely to display high-risk and aggressive behaviours (Hassiotis et al., 2009). Maintaining client’s behaviours within residential homes is important to gain adaptable behaviours and living skills for a high-quality of life. Applied Behaviour Analysis has been proven to be an asset in behaviour change in individuals within the group home setting although a number of workers have difficulty implementing the specific intervention procedures (Hilton & Simmons, 1999). Consistency is critical to be effective with individuals with disabilities. Hilton and Simmons (1999) examined the ill effects that behaviour programs can have on clients if they are not implemented correctly by front-line staff. They further explain that data collection is essential when workers are putting a behavioural program into practice.

Careful and proper evaluation is critical to receive positive behaviour change in the functioning of an individual that has an intellectual or developmental disability (Hilton & Simmons, 1999). There is an increased need to examine behavioural programs for frontline staff working with individuals with disabilities (Harchik, Sherman, Sheldon, & Strouse, 1992). Part of the reason for this is because the number of adults that are living in community residential homes is increasing every year (Harchik, Sherman, Sheldon, & Strouse, 1992). The reduction in larger-based institutions gives the need for more efficient direct-care staff as there are more individuals being supported by community-based group homes (Emerson & Hatton, 1998).

The researchers of applied behavior analysis and developmental disabilities have announced their attentiveness to the management and performance of staff working within residential homes (Welsch, Ludwig, Radiker, and Krapfl, 1973). This focus is seen within research however, there is a small amount of investigation containing effectiveness of lottery-based interventions, as well as, on-going consultation with individuals with disabilities. Work placements that involve behavioural implementations with clients that are diagnosed with intellectual, developmental, and or psychiatric disorders involve the guidance and direction of a type of clinical supervisor (Acro, 2008). The effectiveness of the behavioural programs is the clinician’s responsibility to oversee each staff to ensure that the programs are being run appropriately and successfully (Quilitch, 1975).

Present Study

The present study was designed to increase productivity of the front-line staff during consultations. An intervention has been implemented recently for the staff at Bairn Croft Residential Services (BCRS) in their community-based group homes. The lottery-based program was created by the clinical supervisors to increase the productivity of staff during consultations. The two clinical supervisors or clinicians at the present agency each supervise a certain group
homes and manage behavioural programs for all residents. The clinicians are responsible for signing off any behavioural programs, documents, and monitoring all written and visual data analysis. There are seven key criteria for each staff to complete and evaluate in order to have a productive consultation. A consultation is a time for the clinicians to evaluate behaviour management through the use of data and teaching staff appropriate techniques when working with challenging behaviours (McCluskey & Cusick, 2002). It is important to consult on each client in a productive manner in order to aid in the effectiveness of his/her behavioural programs. The clinicians have some evidence to support that the implementation of their lottery-based system reflected positively to both the staff and their productivity. While clinicians felt there was an increase in staff productivity, baseline data was not taken to formally evaluate the program. They observed, recorded, and analyzed the use of the program however, detailed research and more focus on the data is needed to prove the effectiveness. This study will examine the difference between work performance among staff with and without a reinforcement-based intervention while using performance feedback during consultations.

**Hypothesis**

It is proposed that re-introducing the reinforcement program to the group home staff will assist in a performance change. It is further hypothesized that the lottery-based reinforcement program will increase staff productivity when compared to the baseline data that will be collected by the student. It is proposed that the use of baseline and intervention data will demonstrate that a lottery-based reinforcement system is an effective way to increase performance of front-line staff working in a group home setting. It is also proposed that the more prepared staff are for each consult will increase the efficiency and production during the given amount of time. The more productive consultation is the more available time to discuss the residents and their ability to improve in a positive manner. The result of the increase in productivity will reflect positively on the residents in the group homes. Research has found that consistent behaviour support plans and data analysis increases the effectiveness of behavioural programs (Acro, 2008).

This thesis provides a thorough review of literature on staff performance and effectiveness when working with individuals with disabilities. The thesis provides an overview of residential care for individuals with disabilities and on-going consultation between clinicians and staff. Self-management approaches for residential staff will be described and the importance of performance feedback and lottery-based reinforcement programs to maintain work performance. The methodology will illustrate how the lottery-based reinforcement system was put into practice with the group home staff in the present agency within the study. The outcome of the program will be summarized in the results section. Also, strengths, limitations, and need for further research will be outlined in the discussion section.
Overview of Residential Care

Services and supports for individuals with developmental disabilities have changed dramatically over the years (Lakin & Stancliffe, 2007). Residential care supports individuals with intellectual, developmental, and mental disabilities that do not live in their family home (Lakin & Stancliffe, 2007). In the 1980’s, researchers of behaviour analysis became more aware of the demanding research of staff performance working with individuals with developmental disabilities in residential care (Burgio, Whitman, & Reid, 1983). In the 1970’s there was a major shift from institutionalization to community care (Lakin & Stancliffe, 2007). According to Prouty, Smith, and Lakin (2006), the percentage of individuals diagnosed with a developmental disability living in an institution decreased from 83.7% to 16.3% from 1977 to 2005. They state that the remaining percentages of individuals were being supported within a residential home. Also stated by Braddock, Emerson, Felce, & Stancliffe (2001) in the past twenty years, the number of individuals living and needing care in residential homes is quickly increasing. In 1999, there were 23,855 individuals living in all categories of supported care and 44.4% of those individuals were living in group home residential care (Braddock, Emerson, Felce, & Stancliffe, 2001). There is an ongoing increase in the number of people living in community-based and there are simultaneously more decreased sizes of residential care in smaller communities (Lakin & Stancliffe, 2007).

Davis, Rawana, and Capponi (1989) state that there has been increased awareness of group home staff performance of those working with individuals with developmental disabilities. The present research will aid in the exploration of increasing staff performance during consultations. Staff performance during consultations will help staff identify and thoroughly understand clients’ programs to further their ability to implement effective behavior programs with the group home residents.

Benefits of Community-based Residential Care.

Research has been done to examine the effects of both institutions and residential care on individuals lives (Lakin & Stancliffe, 2007). The outcome of this research demonstrates steady and concise evidence that individuals who are living within a community-based home have a enhanced quality of life, gain freedom, and experience additional life-oriented skills (Lakin & Stancliffe, 2007). The Center for Disease Control and Prevention’s (CDC) Healthy People 2010 explain the detrimental effects that institutionalization has on individuals with disabilities, such as the natural happiness and freedom one may have in their life (NCBDDD, 2003). People who are supported by residential care gain more life skills that will enhance their independence (Lakin & Stancliffe, 2007).

Lakin & Stancliffe (2007) explored the differences in lifestyles among individuals living in residential supports compared to institutions. The authors show evidence of the upward trend showing the number of people diagnosed with an intellectual or developmental disabilities living in residential care; an equal trend showing an increasing number of these individuals living within small communities. Lakin & Stancliffe (2007) clarify that smaller-based community care has been beneficial to individuals diagnosed with a disability and continues to be constructive in order to enhance functional life skills. The present study will examine employees that are
Staff Management & Performance Feedback

Kazdin (1980) states that staff management techniques are used by the clinicians within residential care to increase the already presented work skills that the staff are attaining. Clinicians have implemented successful staff management programs, however, there are few procedures that have been evaluated for effectiveness (Quilitch, 1975). The behavioural programs are developed collaboratively with the clinician and staff; it is the clinician’s responsibility that the staff are implementing the programs effectively to ensure that there are positive client outcomes (Quilitch, 1975). Staff-management procedures aid in the success of the behavioural programs as the clinicians have an overview of staff behaviours and productivity.

Performance feedback is a popular strategy used by clinicians to maintain and or change staff performance within the workplace (Acro, 1991). This feedback is provided to the staff by the supervisors (Acro, 1991). Performance feedback is an effective way to reflect encouragement or criticism to direct-care staff (Balcazar, Hopkins, & Suarez, 1985). In a study by Acro, (1991), both on-going process feedback and outcome feedback were used with direct-care staff working in homes with individuals with disabilities. The staff within the study attended a workshop in order to increase their behavioural skills for residential work. During the workshop the staff practiced behavioural techniques and were given feedback during rehearsal through prompts and praise (on-going feedback), as well as, feedback was given during a staff meeting after each day of the workshop (outcome feedback). The success in performance feedback was seen to be effective because of the public feedback to other staff members, and consistency of the feedback (Acro, 1991). It was concluded that the use of process feedback was only effective when outcome feedback is maintained. Acro (1991) suggests that, in order to have successful behavior change through the use of performance feedback, the criterion to achieve effectiveness needs to be clear and concise for staff to understand how they can improve. The present study will describe the intervention to the workers verbally during a presentation and a written memo will be sent to all residential houses. The performance criterion will be explained to the staff and an example of the scoring sheet will be given to all workers in order for all staff to be aware of how they will improve their work performance.

Although process feedback should be implemented by the supervisors to directly change and maintain staff behaviours, it is suggested that research in the future should study the collaborative use of both outcome and process feedback (Acro, 1991). This will be obtained through the present study as the staff will be given process feedback during each consultation and outcome feedback at the end of every month. The clinical supervisors will give immediate feedback on their use of behavioural strategies and from their data collection through each behavioural occurrence. The staff will be obtaining outcome feedback through the completion of the seven criteria that need to be completed during each consultation. The present study may also be productive for research as it may show an effective, easy, and manageable tool for clinical supervisors to monitor their staff in long term. Acro (1991) states that performance feedback has been demonstrated and established to be an effective short-term staff-management tool, however, a long-term tool has not been seen.
Quilitch (1975) compared three staff management procedures which included memos, training sessions, and performance feedback. The memos were sent to the group homes and were used to describe the importance of staff duties and interaction with residents; training sessions consisted of an activity workshop for all staff to show a variety of ways of interacting with all clients for collaborative participation; feedback was presented by a notice poster that was put up in each ward to show the average number of their clientele participation and the effort of the leader among the ward. The four wards within the agency working with individuals with disabilities were monitored Monday to Friday 804 times in a span of approximately 160 days. The author of the study found that performance feedback was a more effective motivational tool for staff performance rather than memos or training sessions. Quilitch (1975) also found that the best results within the goal of the study came from the use of performance feedback. It was said that supervisors should demonstrate effectiveness in an agency’s staff management tool before preceding a long lasting technique as time, effort, and money is in effect (Quilitch, 1975).

On-going Consultation

According to Beidas, Edmunds, Cannuscio, Gallagher, Downey, and Kendall (2013), consultation is a helpful and successful strategy to use within agencies to implement effective treatment programs with individuals. They state that there is an increased amount of literature that support the notion of the use of consultation and that it is a significant strategy for implementation. Within residential programs, the clinician and the front-line worker need to understand, agree, and adhere to the behavioural approach that will be implemented to secure accuracy and a positive outcome with the resident(s) (Kazdin, 1980). It has been stated that to change behaviour, there needs to be visual and background data on the variables maintaining the behaviour(s) (Sanger, 2013). Consultations are a way of gathering client information to plan ahead of time in order to successfully support residents of group homes (McCluskey & Cusick, 2002).

A monitoring program was administered by Burgio, Whitman, and Reid (1983) to examine a collaborative approach between direct care staff and clinical supervisors. The authors hypothesized that allowing staff to actively take part in developing and implementing behavioural programs would result in increased management of the program for the reason of the acceptance of each program. The participants of the study included 10 direct care staff and 15 residents ranging from eleven to eighteen years old who were diagnosed with developmental disabilities. Staff had the opportunity to use self-management skills to increase their performance such as goals, developing graphs, and self praise. Staff were monitored on several behavioural management techniques such as, positive interactions and edibles contingent on praise. Burgio, Whitman, and Reid (1983) concluded that staff performance can be increased and maintained through a non-intensive supervisory participative technique. They also discovered that when staff behaviours are monitored, their performance increased, as well as, their positive interactions with the residents. The agency in the present study uses a comparable technique as the clinical directors create programs and maintain residents’ behaviour collaboratively during consultations. These consultations are not intense as each of the houses in the agency meet with one of the clinical directors every two weeks or once a month.

In a study by Wexley & Nemeroff (1975), behavioural checklists were an essential tool for agency staff to use for their own feedback. Staff working in the agency in the current study use ABC recording sheets for incidents of all maladaptive behaviours in order to view how they
managed the behaviors. These recordings are critical for consultation for the clinical supervisors to oversee each incident to give feedback. Also, within the seven criteria for effective consultation, staff are required to complete a “consult prep sheet” in order to track what they need for consult in order to be productive. According to Sanger (2013), performance measurement is the need to assess if goals are being made within an agency in order to be able to modify behaviour. Huberman and O’Brien (1999) found that managing staff behaviours reflects positively on the progress of the goals made for residents as well as their overall functioning.

Harchik, Sherman, Sheldon, and Strouse (1992) conducted a study to evaluate the use of continuous consultation in order to teach group home staff skills for challenging behaviours. This study consisted of two consultants and nine staff members working within a rural group home. The group home consisted of eight individuals with moderate to severe developmental disabilities. The consultants met with the staff members at the group home 1-2 times per week to observe and review behavioural programs and oversee data (Harchik, Sherman, Sheldon, and Strouse, 1992). The authors concluded that the use of ongoing consultation was effective at increasing staff behaviour management skills when working with residents in group homes. Ongoing consultation displayed an increase in desirable behaviours within direct-care staff and authors suggest the consultation process a necessary component for behavioural maintenance. Harchik, Sherman, Sheldon, and Strouse (1992) also suggest that more research needs to be done in smaller community settings equivalent to the present research.

Reinforcement & Reward

There has been a growing body of evidence that proves the effectiveness of using positive reinforcement to improve staff performance. According to Wexley & Nemeroff (1975), staff, especially new staff should be reinforced by the supervisors for their behaviors in order for the desirable work skills to be consistent over time. According to Cooper, Heron, and Heward (2007), positive reinforcement involves the delivery of a particular stimulus that will increase the desired behaviours in ones repertoire. The use of reinforcement systems to increase specific behaviours has been applied in numerous settings (Lutzker & White-Blackburn, 1979). Reinforcement is utilized in behaviour programs frequently to increase desired behaviours (Piazza, Roane, & Karsten 2011). According to Ayllon & Azrin (1968), utilizing reinforcement with residential staff has been successful when managing their performance.

In recent studies, the use of “positive psychology” has been shown to be effective and gained recognition for individual success (Wiegand & Geller, 2004). In a recent article, Wiegand & Geller (2004) express their interest in the use of a major component of positive psychology known as positive reinforcement. These authors explore the use of positive reinforcement in the workplace and in education. Wiegand & Geller (2004) strongly consider the use of positive reinforcement over negative reinforcement for a success-seeking orientation. They state that a positive working environment will positively correlate with the development of success and well-adjusted working individuals. This article also raises the awareness of combining the use of Organizational Behaviour Management (OBM) and positive reinforcement. OBM has been utilized in various types of agencies in order to increase staff performance (Wiegand & Geller, 2004). Wiegand & Geller (2004) conclude that enhancing a positive atmosphere with the use of the areas of applied behavior analysis, OBM, and positive reinforcement will produce outcomes of success in individuals.
A study by Davis, Rawana, and Capponi (1989) explored the use of positive reinforcement among other strategies with staff. The authors expanded on Kazdin’s (1980) research on the adequacy and effectiveness of staff management techniques with behavioral agencies. The authors created four different descriptions and instructions on four staff management techniques. The techniques included, “instruction and modeling, reinforcement, punishment, and self-management” (Davis, Rawana, and Capponi, 1989, p. ?). Instructions on how to use the four staff techniques were sent to 64 directors to implement in their agencies and they completed the 34-item Acceptability Rating Scale (based on Kazdin, 1980) afterwards. The results of the study concluded reinforcement to be one of the most acceptable interventions and punishment being one of the least accepted.

The present study will be implementing a program with residential staff that will utilize the behavioural techniques that were reviewed in the above literature in order to increase staff performance. Positive reinforcement will be used throughout consultation each time a staff has completed a criterion on the recording sheet. A reward for staff will be incorporated for the direct-care staff as they will be taking part in a lottery-based reinforcement program. Each staff will work together with their group home to meet the set criterion for a successful consultation to have the chance to win a prize for their team.

What is a Lottery-based Reinforcement?

Along with several types of staff management procedures, lottery contingencies have been used by clinicians to manage staff productivity in a variety of studies (Patterson, Cooke, & Liberman, 1972). According to Iwata et al. (1976), the clinician sets a performance criterion and the staff needs to achieve the criterion in order to be placed in the draw to receive a reinforcer. They further explain that a key advantage to this type of management system is the cost efficiency as not every staff will be receiving the reinforcement. Instead of staff working individually, group contingencies are used by grouping staff together to reach the predetermined criterion to have the chance to “win” reinforcement (Patterson, Cooke, & Liberman, 1972).

A performance-based lottery system was implemented in a study by Iwata, Bailey, Brown, Foshee, and Alpern (1976). The authors compared the use of a performance-based lottery system and staff assignments in increasing the work performance of residential staff. All direct care staff working the day shift and all residents living in the agency participated in the study. During the study, the experimenters made daily recordings of the staff behaviours in six key areas of staff performance with the current residents. Staff assignment was implemented by dividing the residents up into small groups and assigning one staff to each group to fulfill the day by day care services. The performance lottery system was implemented by having a pre-determined work criteria based on the required components needed for consultations. Weekly meetings were held in order for the clinical director to announce the staff who succeeded the criteria. These participants were put into a draw and the winner got certain privileges such as receiving days off work. Iwata, Bailey, Brown, Foshee, and Alpern (1976) concluded that the implementation of a positive reinforcement system for staff was a more effective staff management technique. The authors saw increases in performance and productivity in several areas in the daily services of the direct-care staff.

It has become apparent that there is minimal amount of research exploring the implementation of lottery-based programs for staff. The present study will provide applied
evidence for the use of lottery-based reinforcement systems with staff during on-going consultations. There is also a dearth of articles exploring the productivity of staff during consultations with clinical directors. Although the use of on-going consultations has been seen as effective to increase staff performance (Harchik, Sherman, Sheldon, and Strouse, 1992), further and updated research is needed.

**Rationale**

As stated above, in order to have positive behavior change with the clientele in the residential group homes, staff productivity and performance is critical. It is not only the clinician’s responsibility to overview the positive outcome of their numerous clientele but to maintain the pre-existing work ethics of the staffing team (Quilitch, 1975).

The above research illustrates the use of staff management techniques including clinical consultations to maintain adequate job performance of residential staff. The studies above prove effectiveness when implementing a variety of programs to increase staff performance. Although there is evidence on these techniques, there is insufficient research collaborating reinforcement and performance feedback for staff during consultations. It is especially noted that today’s research is also lacking studies demonstrating effectiveness of lottery-based reinforcement programs.

This study is an asset to the agency as it will provide evidence that the reinforcement system the clinicians created is effectively increasing productivity of residential workers. Implementation of behaviour programs and precise data analysis is a large part of managing behaviour and providing the best treatment for the residents. Essential behaviour management depends on staff performance during work hours as well as performance management during consultations. This study will support the evidence that a reinforcement system for front-line staff can increase their productivity during consultations. It is also proposed that increased productivity during consultations can aid in the residents’ behaviour change, however, this cannot be proven within this thesis. An increase in staff performance has been estimated to result in positive behaviour change in clients (Huberman & O'Brien, 1999).
Part III: Methodology

Setting & Apparatus

The present study took place at Bairn Croft Residential Services (BCRS) in the Ottawa area. It is a privately-owned organization that was founded by two business partners in 1991. The agency expanded from one original home to, now, 14 homes. The agency includes residential and collaborative care, as well as, a foster care division that consults with many different foster care parents around the community. They are strictly based on the practice of applied behavior analysis. There are two clinicians at the agency, one who is a Board Certified Behaviour Analysis (BCBA) with a Masters in Psychology, and the second is registered Psychologist who is a BCBA as well.

Each consultation took place within the agency in a board room or in a clinician’s office if there were only 1-to-3 people present. The consultations took place Monday to Thursday and the length of each meeting ranged from three hours to six hours depending on the number of residents living within the group home, the number of issues that needed to be discussed, or the difficulty of clients’ programs. Eight of the home’s consultations were on a bi-weekly schedule and the rest are once a month, which also depends on the complexity and needs of the clients within the residential homes in the agency.

During each consultation, the clinician sat around a table with all of the key-workers currently employed at the resident that is in consultation. The initial step of the consultation consisted of the key-workers handing in any behavioural occurrence, medical, or property damage documents for the clinician to read and sign. The clinician then examines any behavioural assessment documents or data and follows with behavioural program data. The key-workers are expected to have all written and visual data organized and ready for the clinician to read and sign. Any other details, concerns, or questions are discussed about the client along with their behavioural program that is currently being implemented. This process is repeated for each client that is conversed within consultation.

Participants

The participants in the study included all of the key workers within the approximate 110 individuals employed at BCRS. Throughout the agency there are approximately 55 full-time key workers employed in the 14 homes located across the community. The key workers have specific responsibilities to achieve at each consultation to maintain the effectiveness of the client(s) programs. Each key worker is responsible for one to three clients depending on the varied challenges and developmental needs of the client(s). Each key worker is accountable for making any required appointments (e.g., doctor, psychologist, psychiatrist), school duties, all data, graphing data of all data, setting up home visits, and dealing with any other concerns, needs, or wants of the client.

The full-time staff ranged in age from early twenties to early fifties. The number of key workers at each house and consultation ranged from two to six. This depended on the number of clients in a house as well as the complexity and developmental needs of the clients. The qualifications from each staff varied from a college certificate to a university degree. Each house has a supervisor who is in charge of signing all documents before being handed to their clinical
supervisor to examine. The supervisors are also accountable for completing all of the scheduling, general care of the house, grocery orders, distribution and monitoring of client money, review of all documentation such as behavioural data, plans of care, medication sheets, school communications, and clinical reports. There is also a Senior Residential Counselor (SRC) in each home who is chosen and works closely with the supervisor and is in charge of the overall organization of the house and programming. They also help with the developing of treatment plans with the clinician, demonstrating and adhering to the plan, monitoring data, school liaison, as well as any other assigned duties such as menu planning and ordering medication.

Consent was obtained with each key worker before baseline begun. Between October 9th and October 30th, all key workers were given a copy of the consent form, shown in Appendix A, and asked to read it over and any appropriate questions were answered. All of the important details about baseline and the study were given within the consent form, however, the key workers were not told the exact date of when the reinforcement program would begin or that it was the Clinical Crackerjack program that the supervisors created previously. The purpose of the study was to gain accurate evidence that staff performance would increase with the implementation of a reinforcement program. Therefore, this was done in order for the staff to not anticipate when the program would begin and non-intentionally increase their performance before the program was put into practice. All key workers agreed to the program and signed the consent form.

A memo (Appendix C) was placed into all of the house supervisor’s mailboxes’ as a reminder of the Clinical Crackerjack program. The memo indicated the date of when the intervention was being initiated and a brief explanation of the program. An overview of the program was given during an annual meeting that the agency has every three months with all residential staff and the Clinical Supervisors. The student described the program as well as the purpose and the data supporting the type of intervention. There was also an opportunity for questions to be asked by any of the staff. Baseline was obtained once with each of the ten houses consultations due to time constraints of the study. The student recorded if the staff had completed an expectation on the Clinical Crackerjack sheet and the overall percentage was calculated after consultation.

**Inter Observer Reliability**

Before the recording of baseline and intervention, an overview of the data sheet was discussed and multiple exemplars were given by both clinicians to the student to ensure accurate recording. Inter-reliability (IOA) was completed with both clinicians during baseline in order to gain further accuracy on scoring between the student and the clinicians. A resident was randomly picked before a consultation and the student and clinician compared scoring of the potential points of the residents key worker at the end of the meeting. The IOA was recorded during 50% of all consultations and the IOA was 95%.
Procedures

During intervention, the data recording sheet called, “Clinical Crackerjacks” shown in Appendix B was used at each consultation. The Clinical Crackerjack sheet included the criteria that needed to be met at each meeting. There were a total of seven variables to be completed by each staff to have a successful consultation, as well as, to aid in the adaptive behaviour of each resident.

Overview of seven expectations.

If a worker completed an expectation, 10 points was given under the specific category, and zero points was given if they did not. The group homes worked together as teams to collect the most points during consultations. The overall points for each group home were converted into a percentage. The percentage represented the average score out of the seven criteria among the members of each house. Each section of the data sheet is described below and outlines what was expected of the staff during each consultation to earn points for their group home “team”.

Follow recommendations. A copy of all notes were typed by the agency supervisors for their own records, as well as, were given to the key workers to read and share with all staff of the residence. The supervisors wrote out all recommendations on these sheets in order for the staff to know what was expected of them for the next arranged consult. These recommendations include but were not limited to setting up appointments, getting documents signed by the client’s guardian, writing a behavior support program or assessment, and other odd jobs that pertain to the clients’ needs. The key workers received ten points for completing or attempting the recommendations.

Updated graphs. All data of the client’s behavior(s) that were recorded by the residential staff must be graphed. In order for the staff to earn ten points within this section, all data must be graphed up to at least four days before the consult. The graphs must have all details recorded on the days that the event occurred such as, doctor appointments or home visits. This gives the clinicians the opportunity to see an overview of all behaviour and possible correlations in increases or decreases of specific behaviors.

Data brought to consult. Each house within the agency had a data binder for all behaviours for each client within the group home. All data points that were recorded on each graph should be brought to the consult and shown to the clinical supervisor. Also, all data that is not signed by the houses’ clinician should have been brought and shown. Staff recorded on all observable behaviours that were either under assessment or within a program. Behaviours were also viewed through observation sheets that captured important behaviours or dialogue that was seen or heard in the house that would not be otherwise captured in any other behavioural data. Most behaviour data sheets used by the staff were ABC recording sheets, however, there were other types of recording sheets for toileting, token, and other behavior tracking sheets.

Consult prep sheet. For every consultation, each key worker had a prep sheet to fill out information about each client to make sure they expressed all details for the supervisor to put in their files. The prep sheet had a checklist of all the documents, data, and graphs that needed to be brought to the consult and the key workers initialed each item on the list. The consult prep sheet also contained prompted questions such as, general health, school, attitude, home visits, and any
other details or concerns. In order to receive the full ten points, the staff had to have the supervisor of the house to sign the sheet and have it accurately filled out.

**Quality control of data.** All data that were required to bring to consult were to be read by the supervisor or a trusted worker chosen by the supervisor in the house in order to capture any concerns on running behavior programs, the way data were written, and/or positive or negative staff behaviors. This was to be read and checked by circling any concerns before the consultation to ensure that the clinician was aware that the supervisor had talked to the specific staff who wrote the data. All data on the recording sheets had to be initialed after each recording by the person who wrote it, as well as, the supervisor to initial at the bottom of the page showing they had read over the data prior to consultation.

**Presentation of documents.** All other documents for each consultation should have been brought to the consult and filled out accurately. These documents include possible incident reports, serious occurrences, records of medical appointments, as well as, behavior assessments, behavior terminations, individual behavior plans, behavioural support programs, and any routines. These documents must have been edited and signed by the supervisor and program manager before the clinician viewed them at consultation. Also, the documents must have had the correct client information such as, name, date of birth, and correct doctor that was seen at the specific appointment.

**Program explanation.** If the clinician thought it was necessary, the staff would be asked about a client’s behavior program and asked to recite the routine. An example of a question was, “What is client A’s verbal aggression program?” In order for the staff to receive ten points, they had to recite any detail(s) of a program that is asked by the clinician during consultation right away without looking at the copies of the programs in the binders.

The lottery-based reinforcement was put in place by having a pre-set criterion for each house to achieve for their general average of their consultation(s). The residential homes that were on a bi-weekly schedule had their two percentages averaged. If the homes achieved a criterion of 85% or above, they earned a spot in the draw. A memo was sent out to all of the homes displaying a hierarchy of the homes who achieved the 85% criterion and above. The names of the homes were written on a sheet of paper and placed into a tray. The secretary at the front office was chosen to pick out of the tray to reveal the winner of the month. The home that was picked out of the tray received $50 worth of gift certificates of their choice such as gas cards, Tim Horton’s, or any restaurant. The fifty dollars was to be shared among the key workers at the winning residential home.

**Design**

Intervention data was collected for a total of three months, therefore, the houses had three chances to win the $50 by improving their performance during consultations. The Behavioural Psychology student was present during the first month of the study however, due to time constraints, could not be at the agency to collect data for the remaining two months. The agency supervisors collected Clinical Crackerjack data for the two months the student was not there. The student contacted the agency at the end of each month to receive the percentages and house winners.
After each consultation, all residents key worker were given a score out of the total number of variables covered by the key workers during the meeting. The scores from each resident were averaged into a total percentage for the whole residence and recorded on the Clinical Crackerjack recording sheet. These percentages were then displayed in an A-B design across treatment graph. This type of visual analysis was used to display a comparison of treatment effectiveness. If a house was consulted on twice during one month the percentage scores were combined by averaging the two scored together. A graph showing each homes’ progress was created as well as a graph displaying an average of the total percentages throughout all three months of data collection.
Chapter IV: Results

The lottery reinforcement program was implemented with the workers for a total of three months. Intervention started on November 4, 2013 and ended on January 31st, 2014. Consultations took place four days a week with one of the Clinical Supervisors and two days a week with the second Clinical Supervisor. When there were two consultations running at the same time, one of the supervisors recorded the points on the Clinical Crackerjacks sheet and made a copy of the data and provided it to the student.

Even though there were three months of data collection, the student was only present at the agency for the first month because of time constraints of the placement. The agency recorded all the points on the data sheets as the student would and sent the percentage outcomes at the end of each month by email. Specific homes had consultation twice during each month. These homes’ score percentages were averaged. The agency also sent information about the winner of the lottery at the end of each month as well. Table 1.1 shows each homes average percentage score along the three months of intervention.

Table 1.1.

<table>
<thead>
<tr>
<th>House</th>
<th>November</th>
<th>December</th>
<th>January</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>68.81</td>
<td>65.0</td>
<td>86.04</td>
</tr>
<tr>
<td>B</td>
<td>79.35</td>
<td>87.3</td>
<td>87.5</td>
</tr>
<tr>
<td>C</td>
<td>82.5</td>
<td>61.9</td>
<td>78.21</td>
</tr>
<tr>
<td>D</td>
<td>97.62</td>
<td>93.3</td>
<td>95.23</td>
</tr>
<tr>
<td>E</td>
<td>94.69</td>
<td>93.9</td>
<td>98.45</td>
</tr>
<tr>
<td>F</td>
<td>92.69</td>
<td>95.32</td>
<td>88.43</td>
</tr>
<tr>
<td>G</td>
<td>90.28</td>
<td>100</td>
<td>84.9</td>
</tr>
<tr>
<td>H</td>
<td>91.66</td>
<td>98.0</td>
<td>96.2</td>
</tr>
<tr>
<td>I</td>
<td>97.22</td>
<td>95.32</td>
<td>88.43</td>
</tr>
<tr>
<td>J</td>
<td>43.0</td>
<td>87.1</td>
<td>78.57</td>
</tr>
</tbody>
</table>

During baseline, the average percentage of all homes was 79.8%. For the first month of intervention (November), the average percentage was 85.5%. For the second month of intervention (December), the average percentage was 87.71%. During the final month of intervention (January), the average percentage was 88.2%. The overall average percentage during the three months of intervention were 86.52%, therefore, there was an 8.4% increase between the average of baseline and the average of intervention. Table 1.2 compares each house’s monthly average percentage from baseline to the average percentage score of the three months of intervention. As well as Table 1.3 displays the mean, median, mode, and standard deviation of each month during baseline and intervention (Appendix D).
Table 1.2

*Average Monthly Percentage.*

<table>
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<tbody>
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<td>D</td>
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<td>95.38</td>
</tr>
<tr>
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<td>76.67</td>
<td>95.68</td>
</tr>
<tr>
<td>F</td>
<td>74.44</td>
<td>91.98</td>
</tr>
<tr>
<td>G</td>
<td>92.66</td>
<td>91.73</td>
</tr>
<tr>
<td>H</td>
<td>92.66</td>
<td>95.28</td>
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<tr>
<td>I</td>
<td>86.67</td>
<td>93.66</td>
</tr>
<tr>
<td>J</td>
<td>78.57</td>
<td>69.55</td>
</tr>
</tbody>
</table>

Figure 1 displays a graph showing each house’s average percentage score for baseline and for each month during intervention. Figures 2 to 11 shown in Appendix E display each home’s percentage scores throughout baseline and the three months of intervention.

House A displayed in Figure 2 shows an upward trend indicating a positive correlation between staff productivity and the implementation of treatment. There was a percentage increase of 8.56% from baseline to the average of intervention house scores. This team met the criterion of 85% to qualify for the reinforcement draw during the last month of intervention.

House B displayed in Figure 3 shows an upward trend indicating a positive correlation between staff productivity and the implementation of treatment. There was a percentage increase of 12.45% from baseline to the average of intervention house scores. This team met the criterion of 85% to qualify for the reinforcement draw during the last two months of intervention.

House C displayed in Figure 4 shows a slight downward trend indicating a negative correlation between staff productivity and the implementation of treatment. Even though there is a slight decrease in trend, there was a percentage increase of 29.43% from baseline to the average of intervention house scores. This team met the criterion of 85% to qualify for the reinforcement draw during the first month of intervention.

House D displayed in Figure 5 shows a neutral to slight downward trend however this is not significant enough to indicate a positive or negative correlation between staff productivity and the implementation of treatment. The percentage scores within intervention are equal to or just below the baseline percentage showing a 2.1 percentage decrease. Although there is a slight decrease in trend, baseline levels were above the set criterion previous to intervention. Also, this team met the criterion of 85% to qualify for the reinforcement draw during all three months of intervention.

House E displayed in Figure 6 shows an upward trend indicating a positive correlation between staff productivity and the implementation of treatment. There was a percentage increase
of 24.79% from baseline to the average of intervention house scores. This team met the criterion of 85% to qualify for the reinforcement draw during all three months of intervention.

House F displayed in Figure 7 shows a slight downward trend however not significant enough to indicate a positive or negative correlation between staff productivity and the implementation of treatment. All percentage scores within treatment are higher than baseline showing a 23.56% increase. This team met the criterion of 85% to qualify for the reinforcement draw during all three months of intervention.

House G displayed in Figure 8 shows a neutral trend indicating no significant evidence that there is a correlation between staff productivity and the implementation of treatment. There was a percentage decrease of 1.0% from baseline to the average of intervention percentage scores. Although there is a slight decrease, baseline levels were above the set criterion previous to intervention. Also, this team met the criterion of 85% to qualify for the reinforcement draw during two out of the three months of intervention.

House H displayed in Figure 9 shows an upward trend indicating a positive correlation between staff productivity and the implementation of treatment. There was a percentage increase of 2.3% from baseline to the average of intervention percentage scores. Also baseline levels were above the set criterion previous to intervention and this team met the criterion of 85% to qualify for the reinforcement draw during all three months of intervention.

House I displayed in Figure 10 shows a downward trend indicating a negative correlation between staff productivity and the implementation of treatment. However, there was a percentage increase of 8.1% from baseline to the average of intervention percentage scores. Although there is a slight decrease in trend, baseline levels were above the set criterion previous to intervention. Also, this team met the criterion of 85% to qualify for the reinforcement draw during all three months of intervention.

House J displayed in Figure 11 shows an upward trend indicating a positive correlation between staff productivity and the implementation of treatment. There was a percentage decrease of -11.48% from baseline to the average of intervention percentage scores. This team met the criterion of 85% to qualify for the reinforcement draw during one months of intervention.
Figure 1

*Percentage Scores within Baseline and Intervention for all Residents*
Chapter V: Discussion

Overview

The overall purpose of the present study was to monitor residential staff in order to improve productivity during consultations with Clinical Supervisors. An increase in productivity would result in better organization and knowledge of client’s behavioural programs. This is imperative to the agency as their goal is to offer high-quality residential service to increase positive behaviours with their clients. The Clinical Supervisors implemented this monitoring program previously and saw an increase in overall work performance. They wanted to seek further research and evidence that the Clinical Crackerjack program was positively correlated with the increase in their agency’s residential staff work performance during consultations. Even though the student was only present at the agency recording data for one month, the remaining two months of data was recorded by one of the Clinical Supervisors and was identical to how the first month’s data was completed.

Interpretation of Results

The trends displayed in Appendix E show an increasing trend in productivity throughout 60% of all ten residential teams. Houses C, D, F, and I show a slight decrease however the percentage scores remained above or close to the baseline percentage score. Although these particular homes had a slight downward trend, the average of the percentage scores increased after each month indicating a correlation between the staff productivity and the Clinical Crackerjacks program. Seven out of the ten homes’ percentage scores increased from baseline to treatment and only one of the remaining houses had a large decrease.

It is difficult to interpret the skewed results that were apparent within the scores of homes A, C, and J as all residents have different sets of needs within each home. Each house has a different set of clients with distinctive needs, wants, and behaviours. All clients have particular behavioural programs with several being more complex than others which can lead to work stress within staff. It is important to collect all paperwork and behavioural data and report it to the Clinical Supervisors during consultations. During the study, some staff had difficulty with the accuracy of implementing the behavioural programs and data which resulted in a low Clinical Crackerjack score. Obstacles can arise during residential work and it can be stressful which could have affected their attitude or work performance during the study.

The development of this study helped the agency discover that staff’s work performance increases when their productivity is being monitored and reinforced. The clinical supervisors can take this relationship and explain it to their staff in order to raise awareness of their performance with and without a reinforcement program. This was helpful for the Supervisors to indicate specific strengths and weaknesses within residential teams, as well as, give them the opportunity to reward the teams with a strong work ethic. Overall, the intervention that was implemented for the residential staff was a useful way to monitor work performance in order to increase productivity. The Clinical Crackerjack data sheet was a useful and helpful tool for Clinical Supervisors to monitor each house’s staff team to ensure that they were keeping up with their specific documents, behavioural programs, and data analysis. It is in the clients’ best interests for staff to be productive on the floor and during consultations in order for the agency to be working
together as a whole to ensure best practice. The supervisors at the agency continued the program after the present study as they believe it is a healthy and pleasurable way to compete with each other in order to increase and maintain work performance. The feedback from the staff was also positive and the Clinical Supervisors stated to the student that they enjoyed the lottery-based reinforcement program.

**Strengths and Limitations**

The primary strength of this study was showing evidence of a relationship between the program created and the increase in productivity during consultations. There is limited research regarding the effectiveness of lottery-based reinforcement systems and work performance. The present study supports the fact that when staff are monitored and reinforced, their work performance increases. However, there is no evidence to say which aspect of the program increased the staff’s performance or if it was increased from the combination of the staff being aware that they were being monitored and the reinforcement program. It was difficult to say if the monitoring aspect by the student and their supervisor was the reason for the increase in productivity or the reinforcement itself. The lottery-based aspect of the reinforcement program can have a positive and a negative effect on the staff. The positive effect is that it maintains effort for high work performance because of the variable schedule of reinforcement. The staff will continue to work for the high percentage score to be entered into the draw to receive the $50 prize. However, this can have a negative aspect as well because particular houses may put in a large amount of effort to maintain their work ethic and performance scores but do not win the draw several draws in a row.

The staff’s performance scores were averaged at the end of each month and the home teams that received 85% or more were put in a memo and sent out to all residences in order to indicate their scores and the winner of the lottery reinforcement draw. This produced ethical issues because, although the teams that did not reach the 85% criterion were not shown with their percentage score, it could have been easily noticed by staff which homes were not in the memo. This could have increased staff’s stress levels, confidence, or work performance during the study. This leads to the next limitation which entails the outcome of idiosyncratic data. Every house supervisor and worker in the study took the experience in a different way. Many of the staff enjoyed the program and the competitive aspect, however, there were various staff that questioned the program and reinforcement or did not pay attention to it at all. This could have affected certain house scores because of staff not putting in the effort for the rest of their team.

Another limitation within this study was the lack of consistency throughout the data. Throughout the study, both the student and the two Clinical Supervisors collected data. Most of the data were collected by the student during the first month of intervention; however, the last two months were collected exclusively by the Clinical Supervisors as the student was not present at the agency. Although Inter-Observer Agreement was done during baseline measures, it is uncertain that the averages would have been different if the student was collecting all data.
Multilevel challenges

Client Level.

It was difficult at times to stay at a professional level during some consultations as many of the staff at the agency were young adults and shared a few of the same interests. During the study, the student was assessing their productivity during consultations and giving them a percentage score on a data sheet. Most staff enjoyed the reinforcement program but some individuals questioned the need for reinforcement as a worker. The staff also questioned the amount of reinforcement and believed there should be more money for the winner. In order to not raise conflict, the staff’s comments were taken into consideration and were told the benefits of the program and why it was being implemented.

Program Level.

The Clinical Supervisors created the present study, however, they always had consultations separately with different houses. It was apparent that the supervisors scored differently in specific situations as all houses had different need levels and numbers of key workers in the house. It was difficult at times to make sure that all scoring methods matched in each consultation. Routine follow-up meetings were scheduled with the student and agency supervisors to make sure scoring was being done fairly and similarly.

Organizational Level.

During the study, it was challenging to understand all individuals’ diverse responsibilities in the homes. There were many positions within the agency that had specific duties to ensure all homes were being managed and supported. It was difficult to recognize all specific job schedules and routines in order to have a good idea of the structure of the agency.

Societal Level.

It was interesting to see the staff members outside of consult as they were very helpful and welcoming. The student did not get the opportunity to work with the clients within the community; however, there were many instances during consultations where it can be challenging for workers to maintain existing behaviour programs with clients when in public. There are programs in the agency that are not possible to be consistent with in the community for safety reasons. The agency has developed plans for these situations to manage the behaviours.

Contributions to the Behavioural Psychology Field

The present study contributes to the Behavioural Psychology field by providing evidence that monitoring and reinforcing residential staff increased their work performance. Residential staff are a vital component within many individuals’ lives that live in community-based residential homes. It is imperative for staff to uphold a work ethic that is productive in order to maintain the responsibilities of the clients. The present study exhibited a unique way to monitor and reinforce good work ethic among their staff.
Recommendations for Further Research

In further research, it would be more beneficial to use a blind baseline in order to obtain a more accurate correlation between the client’s productivity with and without a program implemented. The staff during the present study signed consent and were informed about the program being implemented before baseline, therefore, their behaviour could have increased during baseline because they knew that their productivity during consultations was being monitored by the student. This leads to less evidence that there is a relationship between an increase in the staff’s productivity and the implementation of the Clinical Crackerjacks program.

It would be helpful for future research to set up a preference assessment with all staff to get an overall idea on certain reinforcements for the lottery aspect of the program. It would be useful to have at least three or five different options to alter each month in order to lower the chances of satiation. Also, future research should run a satisfaction questionnaire during and after the intervention in order to receive feedback. It is imperative that staff respect and enjoy the monitoring program in order to be active and increase their work performance.
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Behavior Management: Achievement Motivation and the Power of Positive
doi:10.1300/J075v24n01_02.
Appendix A: Consent Form- Residential Staff

Project title: Whether or Not a Lottery-Based Reinforcement System Increases Productivity of Front-line Staff Working in Residential Group Homes.

Principal Investigator: Victoria (Tori) Patterson
Name of supervisor: Pamela Shea
Supervisor Contact: pshea@OCTC.ca, (613) 831-5110
Name of Institution: St. Lawrence College
Name of part partnering institution/agency: Bairn Croft Residential Services

INVITATION
You are being invited to take part in a research study. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at the Bairn Croft Residential Services. As a part of this placement, I am completing a research project (called an applied thesis). I would like to ask you for your help to complete this project. The information in this form will help you understand my project. Please read the information carefully and ask all the questions you might have before you decide if you want to take part.

WHY IS THIS STUDY BEING DONE?
This study is being done to finish a project which was previously implemented by your clinical supervisors that will evaluate the usefulness of a reinforcement system with staff. The outcome of this study will determine if the implementation of a team reinforcement system affects the level of staff performance during consultation meetings.

WHAT WILL YOU NEED TO DO IF YOU TAKE PART?
If you choose to take part in this study you will be asked to attend all consultations as usual. Baseline will measure staff productivity to determine levels of performance in 7 key areas. Your performance will continue to be monitored to determine if there is an increase in performance following the implementation of a reinforcement program. During the reinforcement program within the consultation you will get the chance to earn points based on your preparedness during each meeting. The points that you earn will be totaled with your co-workers within each house. Every group home that earns equal to or above 85% on the seven criteria being observed will be placed into a draw to win $50 for the house. You may divide the $50 evenly with the staff in the group home or spend it together, such as a pizza party. The draw will happen at the end of every month or after every house has had a consultation.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART?
Possible benefits of taking part in this research study are that you may become more organized for consultations as you may earn more points for the further prepared you are. Consultations may become more productive and this may increase positive interactions with the residents during their behavioural programs. During this study, it is assumed that your performance as a group home worker may also improve individually and as a team with your co-workers.

WHAT ARE THE POTENTIAL BENEFITS OF THIS RESEARCH STUDY TO OTHERS?
The potential benefits of this research study to others include the clinicians being able to treat the residents to the best of their ability. The clinicians will have all of the material they need during consultation to sign what is needed and suggest behavioural techniques for the staff. The residents within the group homes may also benefit as increased staff performance will increase positive behaviours.

WHAT ARE THE POTENTIAL DISADVANTAGES OR RISKS OF TAKING PART?
Risks from taking part in this research study are minimal but may include becoming emotionally stressed. Each group home is working together to achieve points thus, stress can be a factor when working with other individuals when attempting to reach a goal.

WHAT HAPPENS IF SOMETHING GOES WRONG?
There is no risk for potential accidents however, if you have any questions or concerns about the study you can talk to me, the student, Tori Patterson. There will be nothing changed to your natural consultation environment or your group home where you are employed.

WILL TAKING PART IN THIS PROJECT BE KEPT PRIVATE?
Your names and information will be kept confidential. The names of the houses will be disclosed to only the workers within your workplace for intervention purposes. All consent forms, data, and intervention material from the study will be locked in a secure filing cabinet for 10 years and then destroyed. You can withdraw from the study at anytime without any consequences. If you decide to withdraw, all your information from the study will be destroyed. All information about the study will be destroyed by a paper shredder.

DO YOU HAVE TO TAKE PART?
Taking part is voluntary. It is up to you to decide whether or not to take part in this research project. If you do decide to take part, you will be asked to sign this consent form. If you do decide to take part in this research project, you are still free to withdraw at any time, without giving any reason, and without incurring any penalty, or negative effects.

CONTACT FOR FURTHER INFORMATION
This project has been approved by the Research Ethics Board at St. Lawrence College. The project will be developed under the supervision of Pamela Shea, my supervisor from St. Lawrence College. I really appreciate your cooperation and if you have any additional questions or concerns, feel free to ask me, Tori Patterson (vpatterson26@sl.on.ca). You can also contact my College Supervisor, Pamela Shea (pshea@OCTC.ca) or you may also contact the Research Ethics Board at reb@sl.on.ca.

CONSENT
If you agree to take part in this research project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. An additional copy of your consent will be retained at the agency [and in a secure location at St. Lawrence College, if applicable]. By signing this form, I agree that:

✓ The study has been explained to me.
✓ All my questions were answered.
✓ Possible harm and discomforts and possible benefits (if any) of this study have been explained to me.
✓ I understand that I have the right not to participate and the right to stop at any time.
✓ I am free now, and in the future, to ask any questions I have about the study.
✓ I have been told that my personal information will be kept confidential.
✓ I understand that no information that would identify me will be released or printed without asking me first.
✓ I understand that I will receive a signed copy of this consent form.

I hereby consent to take part.

Participant Name ___________________________ Signature of Participant ___________________________ Date __________

St Lawrence College Student Printed Name ___________________________ Signature of Student ___________________________ Date __________
## Appendix B: Example of Clinical Crackerjack Recording Sheet

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<tr>
<td>10 points</td>
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<tr>
<td>per month</td>
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<tr>
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<td>is completed ahead of</td>
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<td>time and signed by the</td>
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<tr>
<td>supervisor</td>
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<tr>
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<tr>
<td>and examples issues with</td>
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<td>implementation of a</td>
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<tr>
<td>program or program</td>
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<td>structure</td>
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<tr>
<td>per month</td>
<td>--</td>
</tr>
<tr>
<td>All data is read and</td>
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<td>consultation</td>
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</tr>
<tr>
<td>per month</td>
<td>--</td>
</tr>
<tr>
<td>All documentation has been</td>
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<td>signed off by staff and</td>
<td>N/A</td>
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<tr>
<td>supervisors. In addition,</td>
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<td>all documentation is</td>
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<td>per month</td>
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<td>If asked for clarification</td>
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<td>staff can accurately</td>
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<td>explain the program</td>
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Memo

To: All
From: Tara Ouellette and Mary Champagne
Date: October 30, 2013 Re: Reinforcement program

It’s back and better than ever! Clinical Crackerjacks has made a resurrection and will be started on November 4th, 2013. For those of you who did not experience it the first time, it is tons of fun 😊. During clinical consult each house will be evaluated on a resident by resident basis on how prepared they are for consult. There will be eight key areas (please see attached sheet for an explanation) where each resident will either receive 10 points or no points based on completion of the outlined criteria. The trouble shooting section will change to be worth only 10 points maximum whereas previously a team could earn up to 50 points. As before, any house that score an 85% or more will be entered into a draw for a prize for the house (prize value is $50). This will be discussed in more detail at supervision on November 11th, 2013. For houses that have consult prior to November 11th, 2013, please feel free to ask for clarification from Tara.
Appendix D: Table of Baseline and Intervention Statistics

Table 1.3

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Standard Deviation</th>
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<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>79.8</td>
<td>77.62</td>
<td>92.66</td>
<td>12.74</td>
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<tr>
<td><strong>Intervention</strong></td>
<td>85.5</td>
<td>90.97</td>
<td>94.4</td>
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<td></td>
<td>87.71</td>
<td>93.6</td>
<td>95.32</td>
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<td></td>
<td>88.2</td>
<td>88.5</td>
<td>88.43</td>
<td>6.89</td>
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</table>
Appendix E: Graphs of Each Residents Monthly Percentage Scores

Figure 2 House A

Figure 3 House B
Figure 4 House C

Figure 5 House D
Figure 5 House E

Figure 6 House F
Figure 7 House G

Figure 8 House H
Figure 9 *House I*

![Figure 9 House I](image)

Figure 10 *House J*

![Figure 10 House J](image)