

Transforming social regularities in a multicomponent community-based intervention: a case study of professionals' adaptability to better support parents to meet their children's needs

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Abstract

This paper presents an in-depth case study of the dynamic processes of mutual adjustment that occurred between two professional teams participating in a multicomponent community-based intervention (CBI). Drawing on the concept of social regularities, we focus on patterns of social interaction within and across the two microsystems involved in delivering the intervention. Two research strategies, narrative analysis and structural network analysis, were used to reveal the social regularities linking the two microsystems. Results document strategies and actions undertaken by the professionals responsible for the intervention to modify intersecting social regularities to deal with a problem situation that arose during the course of one intervention cycle. The results illustrate how key social regularities were modified in order to resolve the problem situation and allow the intervention to continue to function smoothly. We propose that these changes represent a transition to a new state of the ecological intervention system. This transformation appeared to be the result of certain key intervening mechanisms: changing key role relationships, boundary spanning, and synergy. The transformation also appeared to be linked to positive setting-level and individual-level outcomes: confidence of key team members, joint planning, decision-making and intervention activities, and the achievement of desired intervention objectives.

Key words: community microsystems; social regularities; mutual adjustment processes; internal functioning; mechanisms.

Introduction

Community-based interventions (CBIs) are partnership-based interventions in which partner organizations deploy multifaceted, complementary intervention activities to address multiple determinants of well-being (Hills, 2004) with the hope of creating synergy among separate components in order to achieve desired results (Schensul, 2009). A growing number of authors have proposed the use of an ecological approach to better understand how CBIs function and how to optimize their chances to achieve synergy (Ryerson Espino & Trickett, 2008; Gallimore, Goldenberg & Weisner, 1993; Kelly, 1986; Maton, 1989; 2000; Kingry-Westergaard & Kelly, 1990; Merzel & D’Afflitti, 2003; O’Donnell, 2006; O’Donnell, Tharp & Wilson, 1993; O’Donnell & Tharp, 2012; Seidman, 1988, 1990, 2011, 2012; Sorensen et al., 1998; Tseng & Seidman, 2007; Tseng, et al., 2002). Within this tradition, the social regularities framework is of particular interest, as it highlights the internal functioning of these complex interventions (Christens, Inzeo & Faust, 2014; Seidman, 2012). A social regularities approach facilitates the examination of how CBIs initiate and maintain the processes necessary for gathering resources and for building the relationship and power structures required to achieve their objectives (Shapiro et al., 2013). Given the complexity of interventions which offer multiple complementary intervention components, which are often composed of different work teams, and which operate in separate physical settings, generating and maintaining synergy, coherence, and efficiency is a complex achievement.

Despite the interest in and growing popularity of CBIs, little empirical work has examined the dynamic processes involved in their creation and development (Hawe et al., 2009; Tseng & Seidman, 2007). In response to this gap, our research presents an in-depth case study of the dynamic processes involved in the transformation of key social regularities linking two

intervention microsystems involved in a CBI for families referred to child protection services for negligence. The method used in this study relies on an adaptation of the critical incident approach (Lecrec, Bourassa and Filteau, 2010) in which professionals produce richly detailed accounts of a specific problem situation. Using the concepts of social regularities and critical incidents, we explore how the professionals involved in this CBI changed their patterns of interaction in order to resolve a problem situation and create a state of more adaptive system functioning.

The research setting

This research was carried out in the context of a CBI designed to support families referred to the child protection system for negligence. The intervention was established in 2005 by a partnership between a social service institution that is part of Québec's child protection services (CPS) and the early childhood education department of a post-secondary technical college that trains young people in a variety of technical careers, including early childhood education. The intervention is offered to families who accept to sign an agreement on voluntary measures to resolve their negligence issues. This agreement ensures them custody of their children as long as they follow the agreed upon intervention plan. In the case of the intervention at the focus of our study, the intervention plan involved two components: parent services (PS) offered by the social service institution, including casework services and a parent discussion group, and children's participation in an early childhood education (ECE) setting.

The objective of the parent services (PS) component of the intervention is to help parents develop skills necessary to better meet the developmental needs of their children. The parent services include a combination of casework services, peer support group meetings, and weekly workshops that deal with themes related to parenting, such as children's needs, family routines

and positive discipline techniques. These services are offered by the CPS professional team, which is composed of a program director, a caseworker who handles individual level planning and casework for participating families, and two social work parent group facilitators who lead the parent group meetings and workshops.

The objective of the ECE component of the intervention is to provide early education and stimulation for children of referred families, many of whom manifest developmental delays associated with negligence. The ECE setting also serves as an internship setting for the college's students in early childhood education. The ECE professional team is comprised of the ECE director, two college instructors, two child educators, and that semester's cohort of student interns (12). Table 1 summarizes the principal roles and responsibilities involved in the two microsystems that constitute this intervention.

Table 1 Actors Involved in the Two Settings Intervention

Microsystems	Actors	Role description
Parent Services (PS) offered by CPS (referred to as the PS microsystem)	CPS manager	Administrate the PG, coordinates tasks with the ECE and PTC and coordinates work with the caseworkers.
	CPS caseworker	Creates, follows up on and evaluates the family intervention plan.
	Parent group (PG) Facilitators	Leads the workshops, holds weekly meeting with the ECE team and updates the caseworker on the family members' progress.
Early childhood education (ECE) services offered by the ECE department of the post-secondary technical college (referred to as the ECE microsystem)	ECE Director	Administrates the ECE, coordinates tasks with the CPS, is a professor of the PTC, coordinates assessments and implementation of the ECE's training approach.
	College Instructors	Mentors the student interns, supports the educator in childcare.
	Child Educators	Cares for children and assists the College Instructor in mentoring the student interns.
	Student Interns	Helps carry out stimulation activities and offer age appropriate care to children in the ECE component of the intervention

The collaboration between these CBI components aims to create synergy between the two teams by bringing together the perspectives, skills and resources of the professionals in order to better support participating parents and children. Children participate in the ECE setting while

their parents attend the parent services. The CPS thus benefits from the fact that parents are able to attend parent services while their children are well cared for, as well as from having children in their care receive early educational intervention services. The technical college benefits from being able to develop and offer ECE services for this specialized population as well as from being able to offer their ECE students the opportunity to participate in specialized training. Participating families benefit from parent support and training that helps them better meet the developmental needs of their children, as well as from the early educational services for their young children.

The intervention operates in two 12-week intervention cycles per year, in the fall and in the spring. During each intervention cycle, professionals from both teams realize a series of activities that ensure proper functioning of the intervention (see the Method section for more details). Activities conducted by the two work teams were observed in real time over the course of one full intervention cycle to understand the social regularities linking the two professional teams responsible for the two intervention components.

Social settings theory: A framework for understanding social regularities

Understanding the joint work of the two professional teams involved in this CBI requires a contextualized view of how social regularities operate within and across the two microsystems under study. Social settings theory provides a framework focusing on the operations of social settings that is particularly appropriate for studying community-based interventions (Christens et al., 2014; Seidman, 2010, 2012). A *social setting* is conceptualized as a system that has a spatial location and defined limits that is composed of three major components: social regularities, resources, and the organization of these resources (Tseng & Seidman, 2007; Seidman, 2010). Starting with these elements, social setting theory strives to explain the processes and

mechanisms inherent in these settings and how they are connected to individual-level and setting-level outcomes (Seidman, 2012).

The key concept of this framework is that of social regularities (Seidman, 2011). Social regularities are patterned social interactions which over time determine individual-level and setting-level outcomes (Seidman, 1988, 1990). Social regularities include norms (e.g., beliefs, expectations), relationships (e.g., communication links, friendships), and participation in activities (e.g., involvement in routines). Social regularities are shaped by the roles taken on by individuals in the setting. These roles provide dominant scripts which structure activities and relationships of the setting and which also shape the meaning and perspectives that are adopted by actors in the setting (Seidman, 2011). For example, the relationships between a social worker and an educator in a community setting are largely shaped by the social worker's role as a family case worker and educator's role as a child development specialist.

Additional concepts of the social settings framework pertain to the resources that are distributed to and within the setting and how those resources are organized (Tseng & Seidman, 2007). Resources may be human, physical, economic, or temporal. The organization of economic resources, for example, involves how money is budgeted, used, and shared within the setting.

The process of transforming key social regularities may be a critical aspect of professionals' ability to work in synergy (Nation, Bess, Voight, Perkins and Juarez, 2011). We explore this idea in a situation where the two professional teams involved in this intervention adjusted their interactions in order to deal with a problem situation that was not solved in the ordinary functioning of the intervention system. In other words, we observed a problem situation from a critical incident perspective (Lecrec, Bourassa and Filteau, 2010), an approach which offers a way to explore the functioning of a social system. Combining the critical incident approach with

the concept of social regularities allowed us to examine how actors changed key social regularities in order to achieve better intervention outcomes.

Research aim and objectives

We adopt a contextualized perspective in this study to examine how two professional teams involved in a CBI mutually adjust their functioning to adapt their intervention to a critical problem situation which was not resolved through the interaction patterns that typically characterize the system. Specifically, the questions that guide our study are: 1) What strategies and activities did the members of the two professional teams undertake to transform the key social regularities between their two microsystems in order to achieve program goals when typical patterns of interactions were not sufficient to solve the presenting problem? 2) What individual-level and setting-level outcomes were associated with the changes to key social regularities? 3) What mechanisms facilitated these changes?

In this study we assume that the nature and characteristics of the interactions between professionals are key determining factors in explaining the functioning and the results of the intervention. We have thus placed our focus here on the professionals who were responsible for planning and realizing the intervention.

Method

Research design

This qualitative study adopted an in-depth single case study method (Yin, 2013). We chose this research strategy as it fits well with the requirements of empirical research such as ours, which seeks to answer exploratory “how” and “why” questions, which operates in a context in which the researcher has little oversight over how the research will progress, and which adopts a research goal of understanding the influence that contextual conditions have on the case.

According to Trickett & Schensul (2009), this approach is particularly relevant in ecological studies that seek to answer the question of how intervention activities evolve and contribute to intervention results at various levels.

Data sources and participants

Data gathering was done through fieldwork that lasted for six months. Between June and December of 2014, the first and third author participated in an evaluation of the ECE component of the CBI under study. This evaluation study enabled all authors to have access to general information about the intervention and its two component microsystems, which guided choices about the research design for the in-depth case study focused more specifically on partnership dynamics and intervention functioning. Through the first author's participation in the evaluation study and additional fieldwork, he became immersed in understanding the ECE component microsystem, its partnership with the PS microsystem, and the overall functioning of the two professional teams working together to offer complementary intervention activities. During the summer of 2014, the first author identified activities to be observed and negotiated his participation in these activities with the intervention staff. Between September and December of 2014, he conducted intensive fieldwork based primarily in the ECE setting, following one complete intervention cycle with the families.

A particular problem situation became the focus of analysis in October of 2014, when the first author realized that the normal functioning of the intervention was challenged by an incident of pediculosis (lice infestation) affecting the child of one of the families participating in the intervention. The pediculosis was not brought under control for a number of weeks. The occurrence of this problem situation and the fact that roles and typical interaction patterns were not sufficient to resolve the problem required the program staff to change their normal modes of

functioning. Thus, the emergence of this problem situation and the staff's reaction to it helped to reveal the mutual adjustment processes that staff enacted to adapt the intervention system to the demands of the problem situation. Between October and December 2014, the first author closely followed the evolution of the problem situation, and observations focused on the activities and strategies adopted by the professionals to deal with the problem situation. A series of interviews was conducted at the end of the intervention cycle which included questions specifically addressing the perceptions of these professionals about changes to their ordinary activities and interactions that were made in reaction to the problem situation.

Data for the case study was gathered using three primary sources:

Direct observations. Between September and December of 2014, the first author conducted 46 hours of observations of the intervention activities, formal and formal staff meetings, and informal exchanges among staff, children, and parents. An additional 63 hours of observation were made of the intervention unfolding in the ECE setting (two full-time days a week for the first three weeks of the intervention and one full-time day a week for the last three weeks of the intervention cycle). A semi-structured observation guide was created and used to structure observational notes. The guide contained a list of activities related to the four partnership processes - decision-making, communication, administration and conflict resolution – and provided space for the researcher to note the following elements: 1) a description of the setting, 2) a description of the qualities of the interactions involved in the activities (ex.: emotional tone, corporal engagement, information sharing), and 3) analytical notes. Specific activities that were observed included:

- 1) *The initial meeting to present participating families:* An initial meeting of professionals from both teams was held at the start of each intervention cycle. The objective of this

meeting was to transfer background information about each participating family from the CPS team to the ECE team.

- 2) *Twelve weekly informal meetings*: Meetings were held one day each week at the ECE setting after the children left for the day. The purpose was for members of the two teams to exchange information about their respective assessments of participating parents and children, specifically when a problem concerning families occurred.
- 3) *The end-of-cycle evaluation meeting*: A final meeting was held at the ECE setting at the end of each intervention cycle. The goal of this meeting was for interns to provide a verbal and written evaluation to the caseworker about changes observed in the children's development and about the relationship with children's parents over the course of the intervention cycle.
- 4) *Intervention activities and informal exchanges*: Actors from each team collaborated with their team members to carry out planned intervention activities in their respective organizations (casework management and parent group meetings at the social service institution; early childhood education services at the ECE setting). They communicated and collaborated with the staff from the other team when necessary by email, telephone, or in person.

Fieldwork allowed the first author to become familiar with the intervention and allowed direct observations of the interactions among the professional members of both teams as well as interactions between staff and families in the ECE setting. These observations also led to the identification of the critical incident/problem situation, the analysis of which became the basis for the current article.

Interviews. Two series of interviews were held during the observed intervention cycle and one series after the intervention cycle. At the beginning of the observed intervention cycle, 14 interviews were conducted that included all of the staff from both on-site teams (N=9) together with additional professionals connected to this intervention (N=3). Because the ECE Director was the founder of this CBI, three of these 14 interviews were carried out specifically with her to explore issues related to the history of collaboration between the two professionals teams and their internal functioning. An interview guide was used to inquire into the other participants' experiences with the intervention and their perceptions of joint teamwork and of intervention results. Towards the end of the intervention, ten additional interviews were held with those professionals (N=10) who were directly involved in the problem situation to assess the strategies they used to handle the problem situation. After the end of the intervention cycle, three validation interviews were conducted with the ECE director and the CPS manager in order to iteratively refine the ongoing analysis. All interviews were fully recorded and transcribed.

Administrative Documents. Both professional teams provided access to documents associated with the intervention starting from the initial creation of this CBI in 2005. This material was categorized and used to complement information provided from interviews and observations. Documents included some that were created by the ECE (program implementation guide, student interns' notebook, case files of both children involved in the problem situation, assessment reports on these children) and others created by the CPS (a reference framework for implementing intervention components, manuals for the clinical-casework intervention approach and for the parent group).

Ethics approval

Ethical clearance was obtained from the Ethics Research Committee of the Faculty of Social Sciences of the Université du Québec à Montréal. Participants signed consent forms permitting direct observations and for individual interviews. In addition, parents signed consent forms giving their permission to be observed and indicating their willingness to have information be shared with the researcher about their situation.

Data Analysis

We employed two analytical strategies used by researchers who have taken a contextualist approach: a narrative analysis and a structural network analysis of social-ecological systems (Neal & Neal, 2013; Neal & Christens, 2014). The first strategy consists of constructing a detailed event history using raw data (Langley, 1999). The analytical value of this approach is manifold, as it provides clues about the links between distinct intervention components at which interactions can be observed, enables the identification of a series of interactions occurring at different levels, and helps define analytically relevant subjects (Pettigrew, 1990). The second strategy entails a structural analysis of the social networks in and between microsystems that highlight the roles and relationships among actors and their transformation over time (Neal & Neal, 2014). This strategy was used to analyze roles and relationships among different actors of the intervention system.

Results

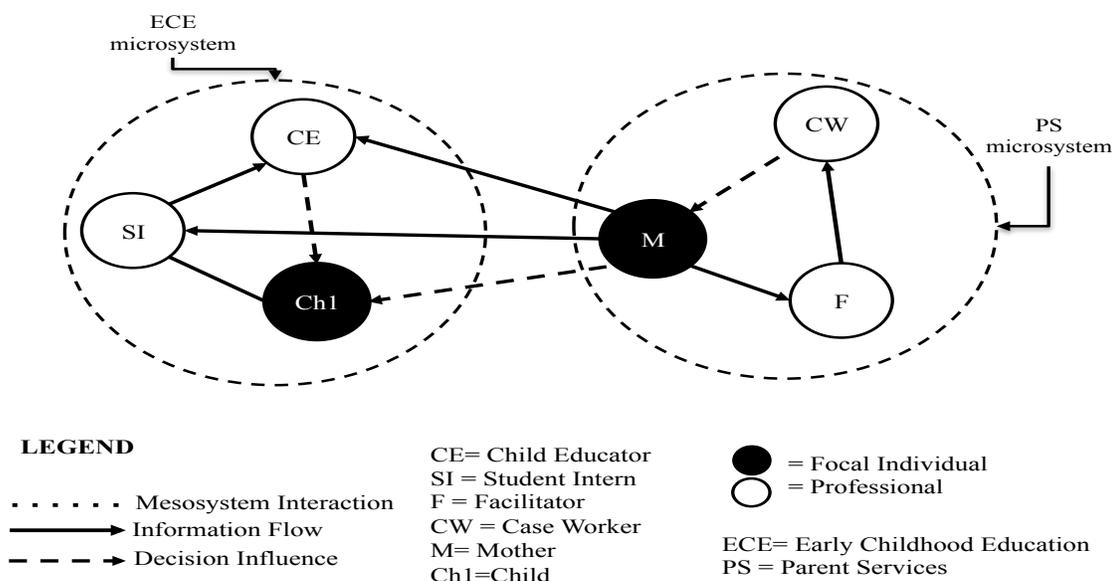
Our analysis of this intervention system's response to a particular problem situation revealed a dynamic process in which key social regularities were transformed by the professional staff in order to successfully resolve the problem. The data and analysis documenting this change are presented in four sections. First, we describe the initial key social regularities linking the two microsystems. Second, we describe the strategies and actions undertaken by the professional

teams to handle the emerging problem situation and to transform these social regularities when the problem situation was not resolved using typical interaction patterns. Third, we describe the resulting key social regularities linking the two microsystems. Finally, we analyse the mechanisms that appear to have facilitated the transformation of these social regularities.

The initial key social regularities of the two microsystems functioning

From standpoint of the main protagonists of the problem-situation, three key social regularities appear to characterize the initial functioning of the two intervention microsystems: 1) an organization of roles and responsibilities based on areas of expertise; 2) withdrawal from the partner's area of expertise according to an implicit rule to "not intervene in the area of expertise" of the partner team; and 3) a relative paucity of mesosystemic interactions between the PS and the ECE microsystems, most of which were focused on information exchange rather than joint activity. Figure 1 presents the initial configuration of the key social regularities linking the two microsystems involved in this intervention:

Fig. 1 Initial Key Social Regularities Linking the Two Intervention Microsystems



First, the organization of roles based on areas of expertise meant that the ECE microsystem provided specialized expertise in child development interventions for children living in vulnerable contexts while the PS microsystem provided specialized expertise in interventions for neglectful parents. Thus, each microsystem targeted different *focal individuals*. In reference to the family at the heart of this problem situation, the mother of the children presenting the problem situation was the main focus of the PS microsystem, while the children occupied the focal position for the ECE microsystem. As a child educator (first interview) pointed out: *“We really have different roles here [and] we don’t necessarily have the same client. We work with children, they work with parents”*.

Second, the implicit rule that governed the interactions between these two microsystems appeared to be to "not intervene in the area of expertise" of the partner team. Each party held the expectation that other professionals would not interfere in the other's microsystem functioning.

As the CPS manager stated:

“... [CPS] won’t interfere in the intervention for the children. And the daycare won’t interfere in the intervention for the parent. Unless there are some situations where we have to talk, we need to discuss, but usually what we do is that each of us will work... in a more focused way either with the child or the parent” (First Validation Interview).

Interactions among professionals were marked by a setting script that established what each team was responsible for, and these responsibilities were defined in terms of the family member who participated in its microsystem. Given that the Child 1 did not interact directly with the PS staff and was not seen as a focus of intervention for the PS component of the intervention, the PS microsystem was part of the exosystem with respect to Child 1.

Third, in the initial state of the intervention system, there were few mesosystemic interactions directly linking the professionals who worked with participating families. Most

members of the ECE and the PS teams only participated all together in two formal activities at the beginning and end of each intervention cycle: an initial meeting to present participating families and an end-of-cycle evaluation meeting. These were not joint planning or intervention activities; rather they were carried out primarily to facilitate information exchange. For example, during the introduction of the families, the parent-group facilitators shared selected information about the families participating in the intervention, including information about the family members (e.g. age), the reason for bringing them in (e.g. child neglect), and concerns about the children's development (e.g., limited vocabulary). The ECE student interns were responsible for creating a personalized development support plan for the children based upon this information. During the intervention cycle, the CPS caseworker typically interacted only with the ECE director, not with other members of the ECE microsystem team. The only two actors who regularly crossed the boundary between the two microsystems were (1) the facilitator, who participated in the weekly informal meetings with the ECE setting staff as well as the beginning and end of cycle meetings, and (2) the mother of the family presenting the problem situation, who attended parent services in the PS microsystem and who picked up her children and interacted with staff of the ECE microsystem.

These three characteristics of the key social regularities linking the two microsystems describe the “initial” state and normal functioning of the intervention system.

The Dynamic Process of Transforming Key Critical Social Regularities

Substantive transformations to the key critical social regularities linking the functioning of the two microsystems under study were observed after the emergence of a problem situation that arose during the third week of the observed intervention cycle. Below we analyze the events related to the problem situation that illustrate the strategies and activities that the professionals

undertook to transform the key social regularities between their two microsystems in order to achieve program goals.

Week 3: Lice arrive on the scene

In week 3, a student intern found lice in one child's hair (Child 1) and communicated this information to the child educator specialized in conducting head lice screening and treatment. The operating principles of the ECE specified that educators should normally turn to the ECE director to manage this type of situation using established procedures. These procedures include having the director notify the parent about the presence of lice, excluding the Child 1 from the ECE if lice are observed, up until the time that the child is observed to be free of lice and nits, and conducting screenings to detect any possible further problem once the child returns. In this case, the child educator disregarded the procedure to pass through the ECE director to implement these steps. Instead, the child educator communicated the situation directly to the mother, excluded Child 1 from the ECE, and requested the mother to proceed with an anti-pediculosis treatment for the child (Observation of 09/25/15). During the normal weekly informal meeting, the child educator informed the facilitator about the situation (Observation of 09/25/15). The PG facilitator received the information and indicated that she would send it on to the caseworker in charge of the case file. Child 1 was excluded from the ECE while the mother continued to participate in the PG.

In the fifth week, the problem became worse as the brother of Child 1 as well as the student intern in charge of Child 1 were found to have contracted lice. Again, the child educator informed the facilitator about the deterioration of the situation and this time requested that the facilitator push to have the caseworker intervene to help mobilize the mother to solve the problem (observation of 10/02/14). This request appeared to break the implicit rule that specified that

each team should focus on the family member under their charge. Nonetheless, the facilitator accepted the request and informed the caseworker about the pediculosis affecting Child 1 and now Child 2. As stated by the facilitator: *"They [ECE staff] were at ends facing this problem...Certainly, I'm not indifferent to what the educator had to live through three times, they had it much worse than me and I'm not insensitive to that. We are partners"*.

The caseworker communicated by telephone that she would support whatever decision was made by the ECE in accordance with their operating principles (interview with caseworker), which meant that she expected not to get involved in a shared decision with the ECE staff. This situation resulted in the decision by the ECE staff to exclude Child 1 and 2 from the ECE setting, although no changes were made to the mothers' participation in the parent services.

Week 6: Contacting the caseworker

After a fall break in week 6, the children returned to the ECE setting and the quantity of lice in both of the children's hair was observed to have dramatically increased. The staff of the ECE microsystem drew the conclusion that the mother had stopped treatments to eliminate the lice. The child educator decided to telephone the caseworker directly, rather than passing by the facilitator. During the call, they decided by mutual agreement to adopt a new procedure to deal with the lice problem. The new procedure established that when the ECE team confirmed the presence of lice on either of the children from this family, the child would be automatically excluded from the ECE as well as the mother from the parent group. This was a new policy given that in previous instances, the child was excluded from the ECE setting while the mother was allowed to continue the parent group activities. This interaction represented the first direct interaction between the child educator and the caseworker, an interaction which led to a joint decision concerning a shared strategy for dealing with the problem situation.

Week 7: The conflict detonates

In week 7, the child educator found another live louse on Child 1's head, an event which precipitated the ECE initiating the new procedure of excluding the mother from the parent group as well as the child from the ECE. This measure prevented the mother from attending a desired activity that day, which provoked a crisis for the mother. When the facilitator arrived at the ECE for the departure of Child 1, she was requested by the ECE director to intervene in order to calm the mother down (second interview with facilitator). After this intervention and for the first time in the course of this intervention cycle, the ECE director, the two college instructors, the child educator, and the facilitator participated in an informal meeting where they presented and discussed their positions about the problem situation from their respective professional points of view (observation of 11-06-14). They agreed upon a definition of the problem situation, to the effect that the mother did not have the necessary means or motivation to solve the problem on her own. They also agreed on a joint solution: both the ECE and the PS microsystems should clearly express their expectations to the mother about what was expected of her in terms of helping to resolve the lice problem, while simultaneously providing her with help from both teams for this task, including financial assistance to purchase treatments. The two teams also ratified the procedure which had previously been established by the child educator and the caseworker, of excluding both the mother and child from intervention activities if lice were found.

Weeks 8-11: Problem situation under control

From weeks 8 to 11, the mother returned to her regular participation at the parent services and purchased the treatment that had previously been suggested to her and regularly applied it, resulting in the pediculosis coming nearly entirely under control. Child 1 regularly attended the ECE and fewer and fewer indications of pediculosis were noted. Throughout this period, the

child educator continued to meet regularly with the facilitator, who in turn continued to inform the caseworker about the current evolution of the problem situation. Toward the end of the intervention cycle, the ECE team detected the presence of only a few dead nits on Child 1, suggesting that the problem situation had largely been resolved.

At the end of the intervention cycle, many positive outcomes at different levels appear to be associated with the transformation of the key social regularities linking the two microsystems. At the individual level, several actors experienced positive outcomes. The child educator reported feeling greater confidence in herself after having confirmed her ability to handle this type of situation. As she noted: “It allowed me to say: Ok, I can handle situations like this... I’m more confident in situations like this. It suits me to manage them. You know, I’m not afraid... I’m able to get through it” (second interview, child educator). The child educator also reported that she perceived a strengthening of the trust relationship with the mother based on mutual respect. The student intern who had been in charge of the children from this family reported having experienced a meaningful learning experience from supporting Child 1 and managing the relationship with the mother (interview with student interns). According to reports from ECE Director, the CPS manager and some professional of the two professional teams, the mother was beginning to recognize the effects of her behavior on her children and was beginning to change her parental practices, carrying out the weekly treatment suggested for her children, consistently setting clear rules and limits, and carrying out the activities and tasks requested by the child educator and the student interns. Moreover, again according to the ECE professional team, Child 1 experienced significant progress in various developmental areas (observation of 11/12/14), such as taking naps, eating seated at the table, and remaining focused on stimulation activities for up to 45 minutes. According to the professional teams, these changes were closely associated

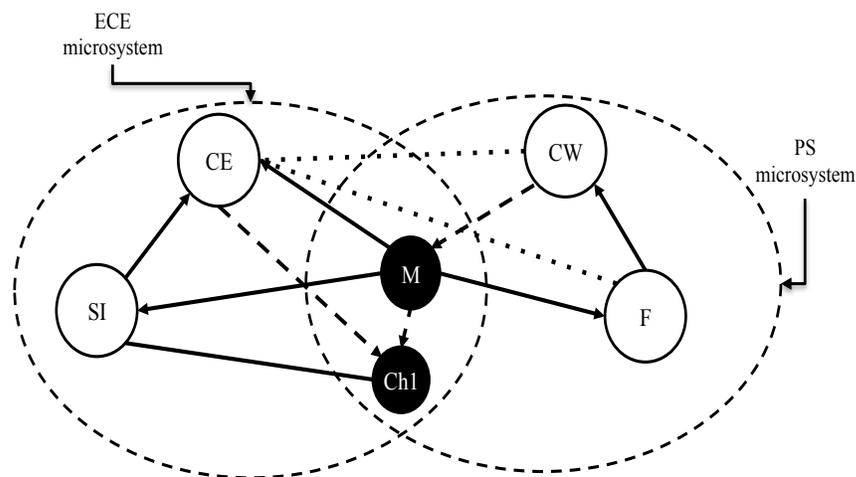
with the continuous assistance offered to the children in the ECE setting as well as the growing ability of the mother to better guide her children.

At the setting level, outcomes included new mesosystemic interactions between the PS and ECE microsystems. After several weeks of indirect communication mediated by the facilitator, the mesosystemic interaction between the child educator and the caseworker allowed these two actors to take a joint decision concerning the exclusion of the mother and Child 1 from the activities of the both microsystems. This joint decision seemed to have led to a significant change in the course of the following events, including increased collaboration with the mother. Working together, the ECE and the PS microsystems were also successful in coping with the crisis caused by the exclusion measure applied to the mother and Child 1. Finally, the nature of the mesosystem links also appeared to have changed from a primary focus on information exchange to joint planning and decision-making. For example, the critical mid-cycle meeting to resolve the problem situation resulted in the professional teams' producing a joint definition of the problem situation and a joint strategy to tackle it. Another important setting level outcome was also indicated by the fact that the pediculosis began to come under control starting in the seventh week of the intervention cycle. Thus, the joint action of the two microsystems resulted in a successful resolution of the problem situation.

Key social regularities in the new state of the intervention system

The dynamic process of transforming key social regularities appeared to lead the intervention system toward a new state of functioning. Figure 2 presents the configuration of the social regularities linking the two microsystems after the resolution of the problem situation:

Fig. 2 Resulting Key Social Regularities Linking the Two Microsystems



First, the implicit rule governing the interactions between the two microsystems changed from “don’t intervene in the area of expertise of the partner team” to “work together to find a solution.” The interactions between the teams appeared to be governed by a new setting script in which the professionals saw themselves as having equal responsibility for intervening in relation to the family system, not just in relation to its isolated members. The two teams expressed a new expectation that everyone be actively involved in resolving problems that arise in either intervention microsystem. This expectation was evidenced by the agreement concluded between the professionals in the mid-cycle meeting and confirmed in the validation interviews conducted after data analysis was concluded.

Second, new mesosystemic links were created between the ECE and the PS microsystems which aided in fluid communication and information sharing between the teams and joint rather than complementary intervention activities. Significantly, these connections appear to be related to the two microsystems functioning less as separate units and more as coordinated entities. Observations of the weekly informal meetings, telephone conversations and inter-team meetings during the second half of the intervention cycle suggested that the professionals were not limited

to a mere information transfer; rather, they participated jointly to define the problem situation, the strategies to resolve it, and the criteria to evaluate the results of their actions.

Fourth, the two microsystems came to function with a coherent intervention approach. Their focus became the relationship between the mother and her children as a family system, with each microsystem putting into place intervention activities that supported the collective goal.

Intervening mechanisms

The results presented above suggest that a dynamic process of transforming key social regularities took place during the observed intervention cycle. However, questions remain regarding *how and why* this change occurred. On the basis of our analysis of the functioning of intervention system over time, we propose that changes to the key social regularities linking the two microsystems were facilitated by three mechanisms.

The first mechanism involved changing *key role relationships* (Fairweather, 1972, in Seidman, 1988; Seidman, 2012). In particular, an important change occurred in the relationship between the child educator and the ECE director when the educator decided to act on a situation instead of referring it to the ECE director as stipulated in the ECE general operating principals. The child educator took charge of one aspect of the role of the director in this situation by directly communicating a policy decision to the mother. She also changed the nature of her link with the facilitator and initiated a new link with the caseworker. Upon multiplying her collaborative relationships, the educator increased her access to resources and influence over the situation. For example, the educator opened a new communication channel between the ECE and the PS microsystems through which information was exchanged and decisions were made with respect to the mother's expected behavior for handling the problem and the consequences of noncompliance: the simultaneous exclusion of Child 1 and the mother. The application of this

measure modified the status quo of the previous six weeks in which Child 1 was excluded from the ECE while the mother continued to participate in the parent-group. After this measure, the mother's willingness to collaborate with the team members improved and the number of lice on Child 1 decreased.

The second mechanism involved the *boundary spanning* role occupied by the facilitator, a key role linking the two intervention microsystems. In particular the relational qualities (Christens et al, 2014) enacted by the facilitator who occupied this role appeared to have facilitated the transformations that permitted the intervention system to adapt to and resolve the problem situation. Beginning with the appearance of the problem situation and all through the observed intervention cycle, the facilitator maintained an *attitude of openness* to the experiences of the ECE professionals that encouraged permeability between the ECE and the PS microsystems. This was especially true during the period when the ECE team asked the facilitator to push the caseworker to get involved in the problem situation. Additionally, the facilitator used various channels to circulate information between the ECE and the PS microsystems, producing an effect of mutual sensitization. These factors contributed to making organizational boundaries more permeable (Kelley et al., 2000), improving collaboration between the teams, and creating greater flexibility for adapting the intervention to the problem situation.

The third mechanism was the *synergy* among the professionals that developed following the key mid-cycle meeting that the two teams held to deal with the problem situation. Until this meeting, the problem situation went unresolved despite more intense and frequent interactions between the child educator, the facilitator, and the caseworker. Interactions prior to this meeting had been marked by the position of authority that the caseworker had with respect to the mother

and the overall intervention plan that was mandated for the family by CPS. The mid-cycle meeting held in week 6 to deal with the problem situation represented the first joint activity in which the professionals of the ECE and PS microsystems collectively decided how to proceed with the target family. The professionals who participated in this meeting acted as equals, regardless of their professional identity, the position they occupied on their team, and the status of institutions to which they belong (Kelley et al., 2000). In this context, both teams were able to combine their resources to define, understand, and resolve the problem situation and to establish by consensus a common position for dealing with the problem. This synergy can be seen as both as a facilitator or mechanism that promotes change as well as an intermediate partnership-level outcome.

Discussion

This study highlights the presence of a dynamic process of transformation in the key social regularities of the CBI at the heart of our case study. Our findings are consistent with Seidman and Tseng's (2007) hypothesis that patterns of interaction, or social regularities, are key leverage points for producing desired changes in community settings. Changes in the patterns of interaction between the two professional teams allowed them to resolve a significant problem situation and achieve a state of more adaptive functioning. A comparison of the initial and subsequent functioning of the intervention system suggests a significant transformation of the key social regularities linking the two microsystems. These transformations were associated with positive outcomes at the individual level and at the setting level that were observed by us and also perceived by the intervention professionals as tied to the successful resolution of the problem situation. This temporal patterning (Seidman, 1988) is significant both because it is meaningful from the perspective of the protagonists of the problem situation and because it is

suggestive of a causal link with the positive outcomes documented in the case. As Seidman (1990) points out: “the functional meaning of a social regularity ultimately derives from its predictable association with significant psychosocial outcomes” (p. 93).

The dynamic process of transforming these social regularities appears to have been facilitated by three mechanisms. The first mechanism involved changing the key role relationships of one key actor, the child educator most closely involved in the problem situation. Looked at from the perspective of the concept of relational power (Neal, 2014), the changes that the child educator made to her role increased her relationships with other participants within the intervention system and facilitated access to additional resources, such as information and decision making power.

A second mechanism that appears to have facilitated transformation of the key social regularities is the boundary spanning role occupied by the facilitator, who regularly crossed between the two microsystems. The importance of boundary spanning roles has been highlighted in previous work (Bond & Keys, 1993; Kelly, 2007; Christens et al., 2014) and is typically conceptualized as a mechanism through which one participant in a system establishes a relationship with a participant of another system with the explicit goal of identifying and exchanging resources between the systems (Kelly, Ryan, Altman and Stelzner, 2000). Our results provide evidence of the additional importance of the relational qualities (Christens et al., 2014) associated with this role. From the beginning of the observations conducted for this case study, the facilitator who occupied a key boundary spanning role demonstrated personal qualities that fostered communication and collaboration between the two teams. She exhibited an open stance toward the difficulties that arose in the ECE microsystem and actively facilitated communication between the two microsystems. When normal patterns of social interaction were not sufficient to

resolve the problem situation, she was able to draw on resources from her boundary spanning role as well as to activate her own personal qualities to successfully foster changes in the social regularities in place and nurture new ones. The qualities of this boundary-spanning actor can be characterized as demonstrating *relational sensitivity* (Christens et al., 2014; Gergen, 2009), a personal stance that expresses responsiveness and openness to the actions and experiences of others. These relational qualities appear to have been an important facilitator of change.

A third mechanism that appears to have facilitated transformation of the key social regularities of this intervention system was the increased synergy that emerged towards the middle of the observed intervention cycle. This synergy is illustrated by the mid-cycle meeting between the two teams in which the professionals combined their perspectives to redefine the problem they were facing and to seek common, innovative and more effective strategies to resolve it (Lasker & Weiss, 2003a). At this point, the two professional teams succeeded in adapting the intervention to demands encountered because of the problem situation. Our findings seem to support the hypothesis of Lasker, Weiss and Miller (2001) that synergy is an important mechanism through which partnership functioning has an influence on partnership effectiveness. Their new efforts resulted in better cooperation with intervention participants and better outcomes resulting from the intervention.

These findings also support the idea of synergy not only as a mechanism that facilitated change, but also as an intermediate partnership-level outcome that led to positive psychosocial outcomes for staff and family members (Seidman, 1990; Lasker et al., 2001) and led to positive setting-level outcomes for the intervention system (Tseng & Seidman, 2007). For example, at an individual level, the child educator attributed her increase in confidence and skills to having occupied a leadership role for the first time within the ECE microsystem. At a setting level, if the

presence of lice is viewed as a symptom of parental negligence, their persistence over time and their propagation during the first half of the intervention cycle suggest that the normal functioning of the two microsystems was not able to produce the desired outcomes. In contrast, their progressive and sustained decrease following the significant changes to the social regularities of the intervention system suggests that the intervention is subsequently functioning more effectively and producing desired outcomes. These findings are consistent with hypothesis of Bond and Keys (1993), who state that synergy “is not a permanent state, but rather it may occur at time in an organization’s history when multiple forces come together to allow opportunities for coempowered collaboration” (p. 17). Our case illustrates that increasing collaboration among the key actors allowed the intervention system to find a more effective strategy to deal with the problem situation.

Through these three intervening mechanisms, the key social regularities normally linking the two microsystems were transformed, leading to a positive resolution of the specific problem situation described in this case study. The initial pattern of interaction that characterized the functioning of the two microsystems relied on a high degree of hierarchical differentiation within and across the two microsystems. For example, the child educator was not supposed to manage the problem situation or contact the caseworker directly, but solely inform the ECE director and the facilitator who were responsible for performing these functions. This observation suggests that this CBI’s organization was focused on formal roles rather than on the personal resources of participants, a state which tends to characterize intervention systems that have reached an advanced level of development (Kelly et al., 2000). While this type of hierarchical differentiation is important for institutionalizing interventions, it is also closely linked to reduced flexibility and a separation between the activities and intervention foci of the two microsystems. A certain level

of openness and flexibility must be present in any system to allow it to adapt to new conditions (Kelly et al., 2000). The emergence of new social regularities appeared to provide the flexibility necessary to allow the two teams to deal effectively with a previously intractable problem (Altman, 1995).

Finally, our analysis of the dynamic process of transformation in the key social regularities linking two microsystems leads us to pose the question: What type of change are we really dealing with in this case? The concept of first and second order change is often used in the systems change literature to understand the nature, scope and sustainability of system changes (Altman, 1995; Cowen, 1980; Foster-Fishman, Nowell & Yang, 2007; Seidman, 1988). First order change consists of changes to the existing patterns of interaction which do not fundamentally change system structure. In contrast, second order change implies transforming the basic structure of the system so that it does not revert to its previous state. We suspect but cannot verify that the transformation of key social regularities that we observed in this case may represent a type of second order change, in that the professionals involved in this CBI not only changed their definition of the problem situation, but also the relational structures in place between the two microsystems. In spite of the apparent substantial nature of this transformation, it is not clear whether these changes will be lasting or temporary. Even if temporary, the changes may contribute to the organizational memory of effective strategies for solving problems. Perhaps these strategies can be thought of as dormant social regularities.

Limitations of the Study

This study presents the results of an in-depth case study of a single case, using data primarily collected by the study's first author. Despite the strengths of this research, we should note some limitations as well as directions for future research. First, as a single case study, this study's

findings are specific to the case examined. However, this is a case that is considered to be prototypical of our phenomena of interest. The CBI under study is has achieved meaningful sustainability over a period of more than ten years. This sustainability provides some suggestion that this intervention system has consistently been able to adapt to new situations and new challenges, potentially through similar dynamic processes of transforming social regularities.

A second limitation of the research is the small sample size of interviewees. It is important to note that interviews were conducted with all of professional staff members from both teams at the beginning of the intervention cycle (N=14), and with 10 of these same actors at the end of the intervention cycle. Additional validation interviews were conducted with three key informants to review initial analysis results. While conducting additional interviews with these key actors, or conducting interviews with other more distal actors could possibly have provided additional insight into the issues at hand, the rich content of these interviews and the degree of saturation that emerged during the analysis suggest that a well-grounded description was obtained of the professionals' views of their adjustment processes.

The presence of a single researcher on site examining highly dynamic processes constitutes a further limitation of this study. To palliate this limitation, the researcher undertook a significant period of fieldwork prior to the data collection phase of this study in order to become familiar with how the CBI functioned and be better positioned to capture circumstances and events. Additionally, a strategy of triangulating data from interviews and observations was applied to enhance the reliability of the results (Altheide & Johnson, 1994). Observations were made in real time of the interactions among these professionals to complement information obtained from interviews. Our analysis of the two sources of data support the correspondence between the professionals' behaviours observed during ongoing activities and their reports of their

experiences participating in these activities gathered through interviews. Finally, the researcher submitted the results of the preliminary analysis and interpretations to key informants involved in the case as well as to researchers in the area of CBI functioning in order to increase the transferability (Guba & Lincoln, 1985) of the study's findings as much as possible.

A further limitation of this study is that the perspective of families participating in the intervention was not included in the data collection. This decision was made consistent with the primary research focus on partnership dynamics among the professionals involved in planning, conducting, and modifying the intervention. We based the choice on the premise that the nature and characteristics of the interactions between professionals were the key determining factors in explaining the functioning and the results of the intervention. While fully recognizing that perspective of families would have been a valuable addition to the study, questions of access, feasibility and confidentiality led to the choice to include only professionals as interview participants in this study. The study thus represents a deep examination of the internal functioning processes of this CBI that allowed us to closely examine the event sequences involved in the weekly interactions between the professional teams and the associated events and outcomes. We hope that this contributes to the credibility and integrity (Whittemore, Chase & Mandle, 2001) of the study's results.

Conclusion

This research illustrates how a social regularities framework can be applied to analyze and understand processes of maintenance and change involved in the operation of a multicomponent community-based intervention. While this paper explores a particular CBI comprised of two intervention microsystems, we think that the findings have significance for understanding the dynamic processes involved in the creation, maintenance, and development of other CBIs

beyond the specific case under study. The results provide empirical evidence contributing to the understanding of the dynamic processes involved in the maintenance and transformation of social settings (Christens et al, 2014; Hawe et al., 2009; Tseng & Seidman, 2007). Changes that were made to the dominant patterns of interaction between two professional teams and the emergence of new interaction patterns allowed for flexible, joint action and adapted the intervention to emerging demands. The results also suggest three intervening mechanisms that appeared to facilitate systems change in this specific context: changing key role relationships, boundary spanning, and synergy. These three mechanisms appeared to be associated with the ability of the intervention system to adapt to emerging demands and constraints arising from the experiences of the participating families, from the roles, relationships and status of the intervention staff and the institutions to which they belong, and from the wider context.

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