

Improving the productivity and efficiency of an integrated mental and addiction care – an application of the theory of constraints and five-focusing step to evaluation of adult ADHD patients

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Abstract

This paper suggests that the productivity and efficiency of social and health care services can be improved considerably by redesigning and streamlining the processes. The paper presents the theory of constraint (TOC) and five-focusing step (5FS) solution to the productivity and efficiency problems of an integrated mental and addiction care outpatient clinic (MTPA-model) team. The MTPA is an integrated walk-in clinic where clinical decisions on key patient groups are supported by a clinical decision support system (CDSS). One of the critical service processes of the MTPA is a CDSS-assisted adult ADHD diagnostics process.

The aim of the paper is to describe the improvement of productivity and efficiency of a typical multidiscipline team of MTPA-model. A combination of the action research approach and design science research was applied to solve the emerging service process problems and create a CDSS. The paper outlines the principles of the TOC applied for the established CDSS-assisted adult ADHD diagnostics process. The bottlenecks or constraints of an adult ADHD process are defined. The data from the designed CDSS and the currently used electronic health record provided material for applying the 5FS methodology for improving the productivity and efficiency of the adult ADHD process.

We suggest that applying the 5FS-process of TOC to mental and addiction care processes generally, and to the multi-professional team especially, is an effective way to negotiate constructively about the bottlenecks or constraints of the process and improve the productivity and efficiency of integrated mental health and addiction care services and operations. Based on the results, a general framework for improving the productivity and efficiency of a multi-professional team and health care services organization by applying the 5FS methodology is proposed.

Keywords: social and health care, mental and addiction health care, theory of constraints, five-focusing step, efficiency, clinical decision support system

Introduction

In recent years, the requirements for productivity and efficiency in social and health care have increased. The current Finnish government announced it as the most important decision of the new government [1]. About 60 percent of collected taxpayers' money is spent on social and health care services in Finland annually. The economy of Finland has plummeted in the 2010s, which has made it inevitable to think of allocating the existing financial resources more appropriately, e.g. by redesigning and reorganizing Finnish social and health care in a new way. One of the most important decisions in Finland in the 2010s will be how to allocate taxpayers' money in the future. Just cutting costs in social and health care will not be enough. The Finnish social and health care must be reorganized and implemented in a new cost-efficient manner. The biggest challenge for the Finnish government is the reorganization of social and health care; a task which earlier Finnish governments have tried to accomplish in vain for the last thirty years.

In the literature of productivity and efficiency, it has been stated that the working environment of social and health care is unique, complex, turbulent, and stochastic in its processes. Thus, the measurements of productivity and efficiency borrowed from the manufacturing industry do not fit comfortably in social and health care [2-4]. Dettmer [5] notes that "Complex systems are anything but mathematically precise". Many productivity and efficiency methods and measurements (e.g. DRG, NordDRG, FullDRG, ACG, APG, DEA, Monte Carlo DEA, and MOO) have been developed and proposed for social and health care [6-12]. Pritchard et al. [13] complain that the potentiality of the Productivity Measurement and Enhancement System (ProMES) intervention for the effectiveness of organizations and teams is not utilized, mainly because "people are working in jobs that severely limit what they can contribute." ProMES is an intervention for enhancing the productivity of work units within organizations through performance measurement and feedback. The methods and measures of productivity and efficiency mentioned above are beyond the scope this paper.

Innovations in productivity and efficiency generated in manufacturing enterprises and processes are not easily transferable to the most growing area of economics – the service sector. By nature, social and health care service processes are intangible, inseparable, variable, heterogeneous and perishable [14]. Service processes are not "products" per se, tangible in the manufacturing term, but intangible. Intangibility means that the quality of the processes is evaluated by patients' and customers' emotions, perceptions, feelings, and expectations. The producing and consuming of care processes happen at the same time; in that sense, they are inseparable. The health and social care processes are very seldom standardized; a lot of variations and heterogeneity exists. The attitude of artistic craftsmanship still prevails in social and health care. The perishability of social and health care means that they are not storable into inventories. Unwillingness to apply the successful methods of manufacturing enterprises have left a lot of opportunities unseized in social and health care.

In 2003, more than two trillion dollars, about 30 percent of the care resources, were lost yearly in the United States due to the costs of poor quality care (overuse, underuse and misuse of resources) that did not provide value for the patient [15]. George [16] states that "the case studies demonstrate how Lean Six Sigma can be used in service organizations just as effectively as in manufacturing – and with even faster results." George continues that empirical data has revealed that the costs of services were inflated by 30-80 percent of waste. He emphasizes that the service processes are full of non-value activities for the customers. He underlines that the service processes are notoriously slow because far too many service processes are unnecessarily complicated and usually in a state of "work-in-process" (WIP), i.e. unfinished. He adds that most service processes are "un-Lean," they have process cycle efficiency of under ten percent. Based on his analyses, George points out that the efficiency requirements of service processes insist on reducing WIP, which is the only way to control the lead time of the process. He emphasizes the Lean lesson that every service process should operate on the pull principle to eliminate variation in lead

time, as only 20 percent of the activities cause 80 percent of the delay.

It is widely accepted that social and health care services in Finland and in Europe are relatively unproductive, inefficient and cost-inefficient (e.g. [8]). The Lean philosophy and methodology, which focuses on removing wastes from systems, was developed in the Toyota Production System (TPS) to make work processes more productive and efficient. "TPS is a way to improve healthcare delivery systems by reducing waste and improving quality" [17]. Already in the 1990s, hospitals in Seattle, USA applied the tenets of the TPS and Lean. The hospitals perceived that the measured performance rates were improved and impressive cost savings were achieved [18]. In social and health care facilities in Finland, there is an increasing number of practical applications of the philosophy and methodology of Lean [19] and the concept of the agile enterprise [4].

The theory of constraints (TOC), developed by Goldratt and Cox [20,21] is the opposite strategy to focusing on cutting costs only. TOC underlines the throughput of the whole organization and its processes, not only decreasing the incurring costs. In a similar way as the Lean methodology prefers flow efficiency to resource efficiency [19], TOC stresses smooth flow of the throughput of the system and processes. "TOC advocates a throughput world, which means that management should focus first on the firm's throughput, then on its inventory and finally on its operating expenses. In TOC, the throughput world is the opposite of the cost world. In the cost world, management puts operating expenses first" [22]. Aligning with Finnish government's overall strategy and goal to increase the productivity and efficiency of Finnish organizations by existing resources, the theory of constraints and five-focusing step (5FS) may be assets in the contemporary, challenging social and health care situation.

A literature search with the terms "productivity and mental, and addiction care" from databases revealed that the productivity decline has been studied mainly in individual psychiatric or somatic diseases [23] or the effect of these on working places (e.g. [24]). Ren et al. [25] state that "TOC five-step focusing process has not

previously been applied in healthcare settings," when they did it in their surgical process. They mention the application of TOC for neurosurgery and eyes. To our knowledge, a similar application of TOC and 5FS in integrated mental and addiction care and multi-professional team does not exist.

This paper presents a case study of rethinking the productivity and efficiency in social and health care at the multidisciplinary team level, and at the unit level. Plainly, productivity is the ratio of outputs to inputs, and at the conceptual level, the productivity of health care differs little from other industries or sectors [11]. The focus of this paper is improving the productivity and efficiency of a multi-professional team in an integrated mental and addiction care outpatient clinic (MTPA-model) by the theory of constraints and its methodology, the five-focusing step. The productivity and efficiency application case of the theory of constraints and five-focusing step was the adult ADHD diagnostics process, which is one of the key processes of the outpatient clinic MTPA.

The theory of constraints and the five-focusing step method applied for the adult ADHD diagnostic process of the outpatient clinic

The first author of the paper had to establish a newly and differently designed outpatient clinic in two months at the end of 2010 [26]. The clinic integrates the care of mental health and addiction patients, with direct access to assessment and treatment without referrals in a 7/24/365 manner. The integrated mental health and addiction clinic (MTPA-model) was opened in the beginning of November 2010. The designed integrated mental health and addiction care model, a 24/7/365 walk-in clinic is responsible for the care of 130 000 inhabitants in southeast Finland. The "extended" MTPA-model includes two inpatient departments (14 beds and 13 beds), located near each other in the same building, which enables smooth and efficient face-offs between the integrated outpatient facilities and the inpatient departments. The redesigned inpatient services do not have waiting lists, either.

The MTPA-model is one of the service units of the South Karelia District of Social and Health Services (Eksote). Eksote is as an integrated social and health care enterprise, a forerunner in the development of health and social care services in Finland, as it combines primary and secondary health care, elderly care and social care in an entirely new way, covering nine municipalities that were earlier working independently. The South Karelia District of Social and Health Services is tax-funded, mainly free for the patient, with a yearly budget of ca 430 m€, with about 30 m€ for mental and addiction care. It has about 4 100 employees, of which about 350 in mental and health care. About 30 employees work in the MTPA-model. Eksote operates in a geographical area of over 5 600 square kilometers.

At the end of 2010 in the case study setting, the redesigned walk-in outpatient clinic faced a new challenge: a new patient group emerged, adult ADHD patients, for whom there were no clinical procedures or guidelines for diagnosing and treating them in the clinic. The near-

est place to diagnose and treat them was in Helsinki, about 230 kilometers away. According to epidemic studies, 2-5 percent of the adult population would be affected by adult ADHD [27]. According to Statistics Finland, there were 83 000 adults aged 18-65 years in South Karelia in 2011, of which the approximated share of adult ADHD patients was 1 600-4 100 people. It would be impossible to send them with referrals to the tertiary level university clinic for diagnostic purposes. Thus, we generated a CDSS to assist in the adult ADHD diagnostic process [28]. The purpose of the clinical decision support system was to implement a new diagnostic process in an efficiently and procedurally readily adopted way. The actors and tools in the adult ADHD process is presented in Figure 1.

The CDSSs (adult ADHD, working ability assessment of psychiatric patients, and opioid substitution) were developed in focus groups, assisted by external consultants working as facilitators. The outcomes of the focus groups were the developed CDSSs as design artifacts.

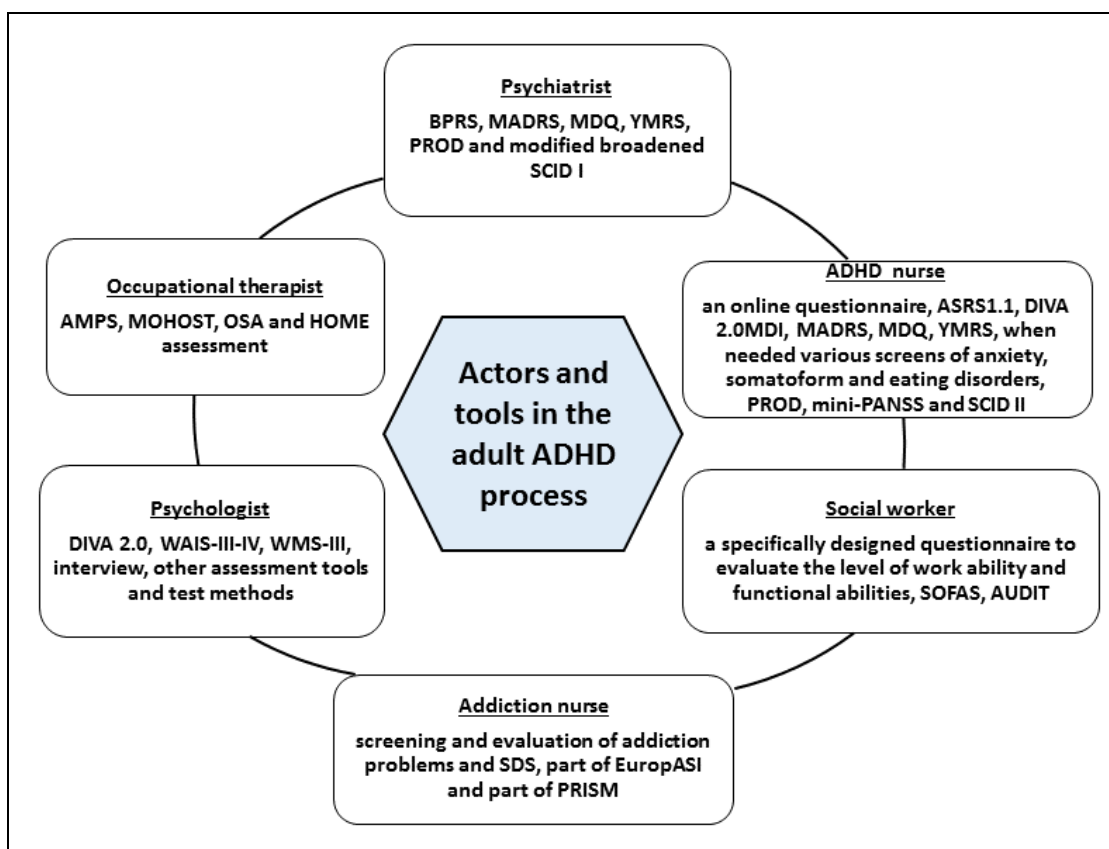


Figure 1. Actors and tools in the adult ADHD process.

We used the action research approach [29] to improve the CDSS-assisted adult ADHD process with TOC and 5FS in 2014-2015. The action research approach was chosen because it was “participating, actionable and studying real problems in ordinary and specific working environment” [30] for the newly established clinic. The action research approach was intertwined with design science research [31] to create the design artifacts, the clinical decision support systems, CDSSs, which was one of the outcomes of the study.

The CDSSs were selected to facilitate fast and efficient training of the employees in the care of mental health and addiction patients. The traditional education methods for learning new things (for example lectures of experts on adult ADHD) were rejected because of the obvious inefficiency of these methods. The known learning curve results say that new things are learned at 5 percent by lecturing, 75 percent by doing and 95 percent by teaching one-to-one [32]. The knowledge base of the adult ADHD CDSS developed as a joint team effort (so as to induce ownership of the change among the members of the multi-professional team). It helped to take advantage of the earlier skills and assets of the psychiatric and addiction nurses, physicians, psychologists, and occupational therapists.

According to Castillo et al. [33], “CDSSs provide enhanced communication across multiple disciplines, improved accessibility to references on best practice, improved adherence to care guidelines, and a more consistent quality of patient care resulting in better patient outcomes. A CDSS alerts and reminders support and encourage continuous learning for nurses at the novice level and reinforce already known knowledge in nurses who are experts. The prompt delivery of care options to the users aids in expediting the decision-making process regarding patient care.”

IT-solutions (software design) in developing processes and teams are supported by the governance of the setting. The South Karelia District of Social and Health Services has already been a forerunner in developing IT-solutions in health care, for example an IT-system for the Assess-Qualify-Place process, which is unique in Finland [34].

TOC approaches organizations as systems, and maintains that every system has at least one constraint, in a similar way as a chain has several links, but only one is the weakest link, the bottleneck, the constraint. Identifying, exploiting, subordinating, and elevating that bottleneck or constraint, the 5FS among other system improvement methods yields more productivity and efficiency. Dettmer [5] states that TOC is a prescriptive theory (it explains why and offers guidance for what to do). TOC can also suggest when and how to employ it or a traditional continuous improvement tool (e.g. Lean, Six Sigma) on the current and sometimes a future system constraint.

TOC views systems and processes in a series of dependent events. It likens systems to chains [5]. As the chain analogy maintains that the chain is only as strong as its weakest link (“bottleneck,” “constraint”), TOC provides insight into process improvement efforts by focusing on the constraint (the root cause of the problem), not just picking random or “low hanging” fruits [6]. According to Dettmer [5], a simple production system that uses raw materials runs them through five components (A, B, C, D, and E) of processes, and turns them into finished products. Each process constitutes a link in the production chain. The goal of the system is to make as much money as possible from the sale of the products. Each one of the component processes has a daily capacity (A= 10 units/day, B= 20 units/day, C= 6 units/day, D= 8 units/day, E= 9 units/days and output/market demand= 15 units/day). Clearly, in this production system, C is the constraint.

In a similar way, in the CDSS-assisted adult ADHD process, each employee in the multi-professional team and a member of it is considered as a component process that has a daily capacity. The daily capacity was measured from our electronic health record (Effica) with the designed software (a CDSS-assisted adult ADHD process, developed by a private enterprise, Chainalytics) at the beginning of the improvement effort and the end of the development effort in 2011-2015.

Based on previous examples and experiences described in the literature, a 5FS-experiment was conducted in the CDSS-assisted adult ADHD process. In 5FS, the pri-

mary purpose of improving processes is to identify and manage the system constraints (more informally the bottlenecks of the system). As the name 5FS denotes, it consists of five different phases [5,20]:

- 1) Identify the system constraint(s) means identifying the resource which limits the throughput (and at the same time the lead time) of the entire system, e.g. a long queue of work or long processing time.
- 2) Decide how to exploit the system constraint(s) means deciding how to modify or redesign the task of the constraint, e.g. the constrained work will be performed more effectively and efficiently.
- 3) Subordinate all else to the constraint(s) of the system means directing all the efforts to improve the performance of the constraining resources.
- 4) Elevate the constraint(s) of the system means adding capacity that will increase (elevate) the overall throughput of the constraint.
- 5) If in previous step 4 a constraint is broken, go to step 1, but do not allow inertia to cause a system constraint, means keeping the improvement of the implemented process going, i.e. continuing from step 1 again.

Our goal was to improve the CDSS-assisted adult ADHD process according to TOC and 5FS. The aim was to decrease the throughput, and the lead time, and abolish unnecessary delays, and if possible, also reduce operating expenses. To sum up, to be an efficient adult ADHD process of continuous improvement, it must consider the three fundamental TOC-questions: 1) What to change? Pinpoint the core problems, which have the major impact, once corrected, 2) What to change to? Construct simple, practical solutions, and 3) How to cause the change? Induce the appropriate people to invent such solutions.

Goldratt et al. [20] elaborated the idea of these questions to the Logical Thinking Process, which consists of six distinct logical trees and the “rules of logic” that

guide their construction. For the first question, there is the Current Reality Tree (CRT), for the second the Future Reality Tree (FRT), and for the third the Prerequisite Tree (PRT). The presentation of the Thinking Process is beyond the area of this paper.

In our research, the goal was to provide the adult ADHD patients with 1) the minimum possible throughput, the lowest lead-time in the process, 2) absence of waiting lists, work-in-process (WIP) and unnecessary delays, and 3) the minimum possible expenses, costs and employees involved in the process. The research questions were: 1) Will the lead time of the ADHD process decrease and the amount of diagnosed adult ADHD patients increase by TOC and 5FS-intervention in 2011-2015, 2) Will the waiting lists, WIP and unnecessary delays disappear, and 3) Will the personnel resources involved diminish in the monitoring period 2011-2015?

Results from applying TOC and 5FS to the CDSS-assisted adult ADHD process

A solution to an apparent process problem of the adult ADHD process was to construct a straightforward and practical solution - a CDSS for adult ADHD patients. The developed CDSS (a designed software to be added to the currently used electronic health record Effica) aimed at guaranteeing the quality and standardized care of the new patients. The MTPA-model has proven its overall efficiency and effectiveness concerning access to services and improved quality of care [35]. The accuracy of diagnoses of multi-diagnostic adult ADHD patients and at the same time an effective implementation of the new, inexperienced multi-team member protocol of assessment of those patients was ensured by the CDSS.

The old adult ADHD process [28] developed for the new patient group faced at the MTPA is presented in Figure 2.

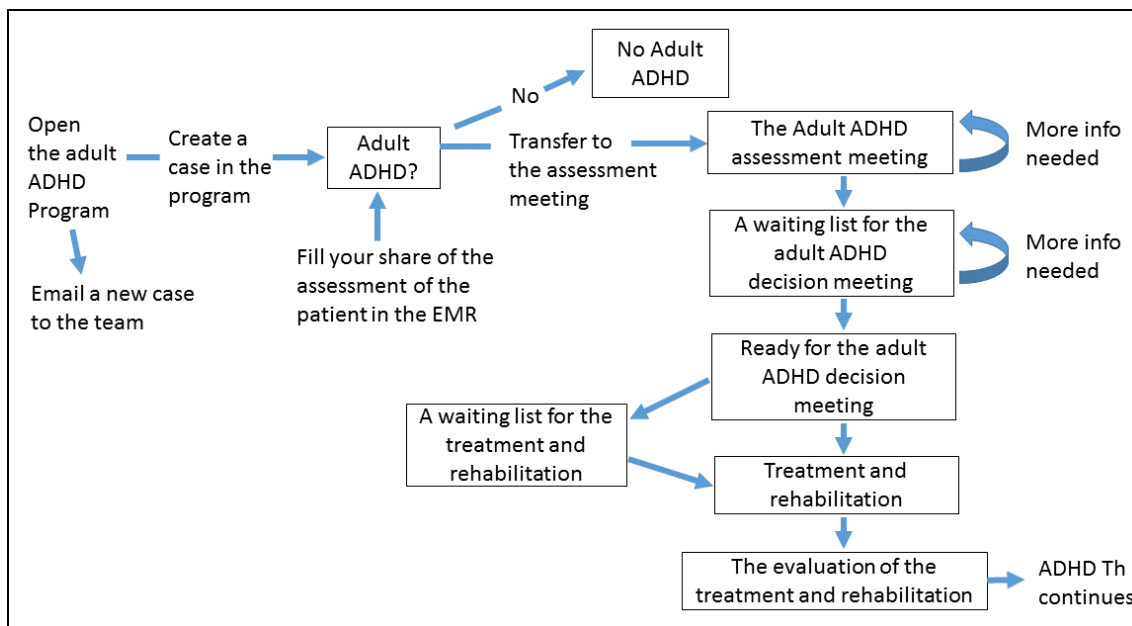


Figure 2. The old adult ADHD process.

The new adult ADHD process was iterated according to the TOC principles. The first principle is “identify the constraints”. There are three different kinds of constraints in a process or system: 1) physical, 2) policy and 3) paradigm constraints [5, 36]. In October 2010, the statistics of Effica (EHR) revealed that an average employee of the MTPA-model had 2.4 direct patient visits per day. At the same time, the employees alleged that they did not have open appointment times for future patients.

The new TOC-framework of the adult ADHD process focused on the physical constraint, which turned out from the time labels of the different employees using the EHR and the adult ADHD clinical decision support system. The results revealed that the psychologists and the occupational therapists had on average two patients per day. These were the physically constrained resources allocated for the everyday tasks of these specialized employees in our organization.

At the beginning of the CDSS-assisted adult ADHD process we concluded that we aimed at the ideal process in the “first time right” –principle [37, 38, 39]. Efficient assessment would be done accurately and thoroughly. After applying the TOC and 5FS-principles, it had to be

decided how to exploit the psychologist and occupational therapist constraints. The diagnosis of an adult ADHD patient did not necessitate the evaluation of an occupational therapist, but it helped the staff after the completed assessment in selecting the right treatment and rehabilitation of the patient. The evaluation of the psychologist was not necessary either in a strict diagnostic sense, but it explained the core difficulties of the adult ADHD patient better than the other employees of the multi-professional team could do.

Subordinating all the psychologists to improve the constraining resources could have been done, but it would have needed extra training in evaluating the adult ADHD patients. The evaluation process was new, and the experience of the evaluation of these adult ADHD patients would cumulate only by conducting the assessments. We decided to broaden the knowledge of the psychologists who were conducting the assessments. We composed targeted neuropsychology training from the top neuropsychologists in Finland. Every psychologist will be able to carry out adult ADHD assessment in the future. With the time labels of the adult ADHD CDSS, monitoring the constraints of the adult ADHD process were possible (resembling a visual Kanban), and necessary decisions to transfer more re-

sources to the process from the other daily chores of the psychologists were done.

To elevate the constraints of the adult ADHD process, the part of the occupational therapist was mainly excluded from the beginning of the evaluation process, and on those occasions when it was needed, it was done later when we were deciding on the rehabilitation options.

The principles of the 5FS of the theory of constraints applied to the adult ADHD process helped us focus our efforts on the limiting issues of the capacity and capability of our other processes. When a regular time constraint complaint of an employee in the organization was met, illustrating the adult ADHD process and its constraints with pictures helped to negotiate constructively with the employees about further steps to solve the constraint issues. Solving the problems of the process by process thinking was proactive, not as the reactive case would usually be, accusing openly or indirectly the slowest employee of the difficulties of the process. The latter type of behavior is quite common in functionally thinking organizations.

With the critical supply chain model (Figure 3) the employees who were unfamiliar with process thinking, could understand and apply the principles of TOC. It helped to find a constructive joint solution to the constraint problems of the adult ADHD process.

The productivity of the CDSS-assisted adult ADHD process increased from 2.6 direct patient visits per day to 4.6 visits per day. The productivity and efficiency of the CDSS-assisted adult ADHD-process rose in throughput. In the MTPA-model, the average was 4.6 direct patient visits per day per employee already in 2012. The trend continued to the end of 2015. 125 adult ADHD patients were recruited in the process in the period 30 November 2011 - 30 September 2015. The clinical decisions concerning the consultation of the occupational therapist and the psychologists sharpened, which saved about four appointment hours per patient. The software layout worked as an electronic Kanban-card (see [40]), which showed the flow of the patient.

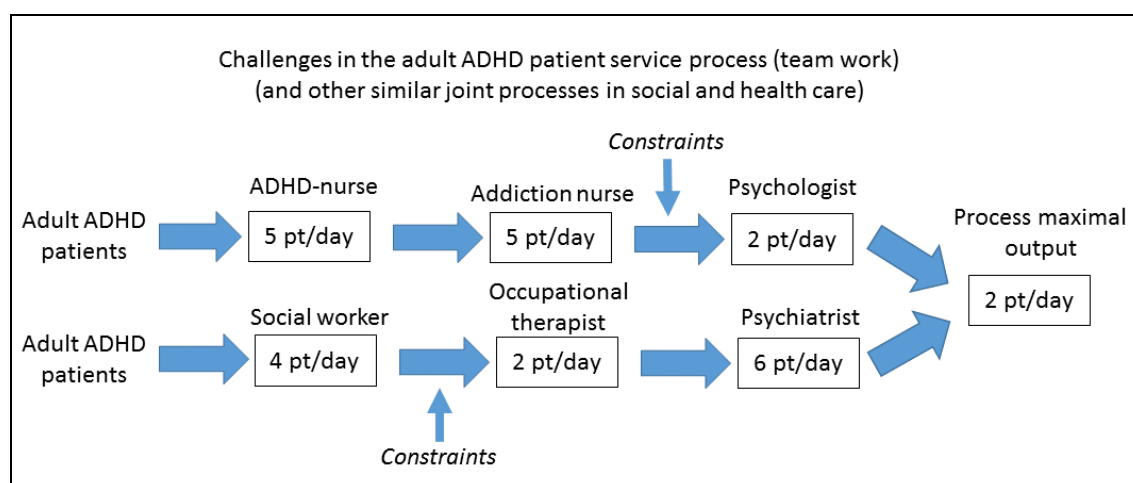


Figure 3. Critical supply chain model of the adult ADHD patient service process.

The waiting list problem did not emerge (we did not have “inventories”). Internal inefficiency and delays did appear, partly because of vendor-lock-in problems. The designed CDSS-software needed an interface integration to the electric health record system (EHR, Effica) to avoid double effort in writing down the findings of the adult ADHD process. The planned monitoring of the lead time did not work because the interface difficulties between the software and the EHR were not resolved. The employees wrote the patient information to the CDSS in batches, when they had extra time to do it, which destroyed the use of the time labels in evaluating the exact lead time. We decided to stop doing double work in writing the same information to both IT-systems. We started to wait for the missing ensemble solution between the EHR and the adult ADHD CDSS. The interface problem still prevailed in December 2016.

The operating expenses did not increase in 2011-2015. No other employees were allocated the adult ADHD process. Some assessment efforts for the adult ADHD patients by other psychologists in the MTPA-model were done. In Germany, Stierlin et al. [41] have evaluated integrated mental health care programs, and the authors maintain that the deinstitutionalization of mental health patients did not cut the expenses, but that was not the case in our extended MTPA-model. The resources to redesign or reengineer the integrated mental and health care were gained from the existing resources by closing two of the four inpatient wards. In the South Karelia District of Social and Health Services, the budget savings of the whole integrated mental and addiction care in 2011-2015 were about six million euros (the yearly budget was about 30 million). In redesigning/reengineering the mental and addiction care services (especially the MTPA-model), budget savings were not the primary focus of improving care, but a successful “side-effect.” Although we had already saved a lot of money, after adopting the continuous improvement mindset, we tried to make additional improvements in MTPA with TOC and 5FS.

Finally, it was easy to reveal the difficulties in the service production of the integrated mental and health care organization, when the theory of constraints and five-focusing step were applied to the processes of the

MTPA-model. The efforts of removing the constraints were a joint enterprise with the action research approach [29], where the inventor emotion and the credits were allocated to the whole team [21]. The theory of constraints offered a shared vision to facing the shop floor process problems of the integrated mental health and addiction care in general. Negotiations of the occasionally changing daily duty responsibilities of the employees were easier when the big picture of the operating principles were understood by every employee.

Discussion and conclusions

Over 60 percent of taxpayers’ money is already spent in social and health care in Finland. Claiming for more resources to operate in social and health care is not an option in the current economic operational environment. The abundant resources should be allocated in a new and innovative way to achieve better results with the same resources. The operational implementation of the strategy is managed poorly in social and health care. According to the Ministry of Finance of Finland, at least 20 percent of resources of health care is wasted [42]. This 20 percent would mean savings of about three billion euros in social and health care [43].

A commonly held belief in mental health and social care is that the care for patients must be offered by multi-professional community mental health teams [41]. In Finland, the newly given law of social care [44] points out the importance of multi-professional assessment of social care clients. The assumption is that the complex situations and cases in social and health care need the expertise of different specialists, which is underlined and secured by the law. The real intention of legislators may quickly exacerbate the resource problem caused by focusing only on resource efficiency, not on flow efficiency (e.g. [19]). The multi-professional teams may misplace and drain the resources from the smooth and flowing operation of social and health care.

An inevitable consequence of the claim for multi-professional teams is having a lot of gatherings and meetings. The limited capacity of the social and health care personnel is already lost in the current inefficient

practice, which includes abundant and ineffective meetings. Nelson et al. [45] state that over 50 percent of all the time spent in meetings is unproductive, worthless, and of little consequence. This teamwork structure without proper consideration of the flow efficiency plunders a lion's share of the capacity of social and health care operations.

As Vissers et al. [46] state, specialist time is the most essential bottleneck resource in a hospital. The specialist time for patient groups is the most important element in the production planning process. The results of this case study indicated that applying the theory of constraints and five-focusing step to planning and scheduling, the specialist time is a viable and efficient way to improve the productivity and efficiency of an integrated mental health and addiction care services organization.

Gupta et al. [47] point the process output and constraints as markers for the achievement of the organization: "The rate of output of the whole system determines the rate at which the purpose (the goal) of the organization is accomplished. Theory of constraints further defines a constraint as anything that limits an organization's higher performance in terms of its goal".

For successful implementation of the TOC and 5FS, the goal and the system view of the organization are a necessity. Traditionally, health care facilities are organized by increasing specialization and independent functions, which in many cases generate problems of sub-optimization and diminish joint enterprises, due to rivaling for the same resources in the zero-sum game. The theory of constraints allocates the resources where they are needed, not by whose they are. The principalities of departments must become extinct and give way to the process organization. In the developing of the whole integrated mental and addiction care, the MTPA-model matured in process thinking far ahead of the other units. Goldratt [21] warns about implementation problems: what happens if one department of the whole organization is ahead of the others, and if innovators do not identify the psychology of the organization, and if the top heads will not buy the solution?

Shortly, Goldratt [21] explains about managing and change that every manager is overwhelmed with problems, which could also be called opportunities. Any improvement in an organization is impossible without change, and any change is perceived as a threat to security. The unavoidable consequence of every change in an organization is emotional resistance, which stems from insecurity, which is provoked by the change. Goldratt reminds that emotional resistance could be overcome only by a stronger emotion. When people are resisting change by emotions, they are not listening to logical evidence, no matter how solid these are. "The proof is in the pudding, and the puddings are not always the same," Goldratt condenses the issue. The solution offered by Goldratt is the Socratic Method. He stresses that if a person is directly supplied with answers, he/she is blocked once and for all from inventing those same answers him/herself. For the employees to be able to own the problems faced by the manager, they should be induced by someone to invent a solution for a problem. By creating the solution for a problem by themselves, they are much eager to own it and not answer with the typical answers about changing things: it is not my problem, I have not caused it, and we are different, it would not work here. By owning the solution for their problem, they might have a stronger emotion than emotional resistance and the change would be possible. As a future research effort, the TOC and 5FS could apply to the other social and health care service enterprises.

In social and health care, there are many advocates in the name of clients and patients, even if we do not have a real voice of the customer (VOC). We have not adequately surveyed from the perspective of the clients and patients of social and health care how the services should be organized. The view of the employees and managers of social and health care dominate the service organizing principles. The patients and clients, as well as the shop floor employees, may have valuable insights into making the services more appropriate, efficient, effective, and productive. We do not have the VOC of the adult ADHD patients at all. In reality, we do not have a measure of the effectiveness of the adult ADHD-process (e.g. [48]).

The theory of constraints and 5FS provide a general and easily understandable framework for improving the productivity and efficiency of the organization. The productivity measurements - throughput, Inventory and operating expenses – are easy to reflect and can help to

focus on the right measurements at the system level. The TOC and 5FS constitute a common and fruitful tool for the whole organization to face the inevitable changes in the social and health care environment.

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