Doctoral Thesis

Starting with a click:

a model of occupational development therapeutic relationship in intervention for autism spectrum disorder

クリックから始める:

自閉スペクトラム症への介入における 作業発達治療的関係のモデル

Supervisors:

Professor Yuko Ito
Professor Ryuji Kobayashi

Doctorate Course Department of Occupational Therapy

Graduate School of Human Health Sciences

Tokyo Metropolitan University

Erayanti Saloko

September 2021

Starting with a click:

A model of occupational development therapeutic relationship in intervention for autism spectrum disorder

クリックから始める:

自閉スペクトラム症児者への介入における作業発達に 対する治療的関係のモデル

Japan Academy of Health Sciences

Printed Vol 24 (3) December 25 2021

Starting with a click: a model of occupational development therapeutic relationship in intervention for autism spectrum disorder

Abstract

Introduction: Autism Spectrum Disorder (ASD) is a complex neurodevelopmental disorder characterized by repetitive and atypical behavior with deficits in social communication and interaction. These deficits have challenged occupational therapists in Indonesia on how to interact with individuals with ASD, and to create a therapeutic relationship for occupational development.

Objectives: This study was conducted to develop a model of occupational development therapeutic relationship for individuals with ASD from the perspective of Indonesian occupational therapists.

Methods: Obtaining ethical clearance from Tokyo Metropolitan University in Japan, the study implemented the grounded theory. Purposive sampling was applied, and 19 Indonesian occupational therapists were recruited as participants. Four focus group interviews were conducted online from May to July 2020. Data were collected from interview transcripts and pictures of interventions in each participant's facility. A constant comparison was applied to the analysis.

Results: Four themes that structured as a process formed a model of occupational development therapeutic relationship in ASD intervention. The process starts with

a click, and finally, results in developing occupational engagement. The model underpins lifespan and occupational centeredness perspectives. The findings are illustrated by quotes taken from the interview transcripts to ground from an authentic perspectives.

Conclusions. This model compromises a simple yet dense process of occupational development therapeutic relationships. Specifically conceptualized for individuals with ASD allows the model to focus on addressing how occupational therapists interact and empower individuals with ASD and their families. Implications of the finding is significant for policy, theory, practice and further research in occupational therapy.

Keywords: autism, occupational development, therapeutic relationship, attachment, co-occupation

クリックから始める:

自閉スペクトラム症への介入における作業発達治療的関係のモデル

日本語要旨

はじめに:自閉スペクトラム症(ASD)は複数の状況における社会的コミュニケーションおよび対人的相互反応における困難さと、行動興味または活動の限定された反復的な様式によって特徴付けられる神経発達症の一つである。ASD のこのような特性により、インドネシアの作業療法士は、ASD がある個人の作業発達のためにどのように相互交流し、治療的関係性を構築するかについて課題としてきた。作業発達とは、個人の成長と成熟に基づいて起こる、人生における作業行動の継続的な変遷である。

目的:この研究は、インドネシアの作業療法士の視点から、ASD がある個人の作業発達における治療的関係のモデルを開発するために実施された。

方法:本研究は所属大学の倫理審査の承認を得て実施された.研究手法はグラウンデッド・セオリーを採用した。目的的サンプリングにより、19名のインドネシアの作業療法士が対象者として選出された。2020年5月から7月にかけて、

4 つのフォーカスグループインタビューをオンラインで実施した。データは、インタビューの逐語録、各対象者の施設での介入時の写真により収集された。分析には継続的比較を採用した.

結果:プロセスとして構成された 4 つのテーマは、ASD 介入における作業療法の治療的関係のモデルを形成した。このプロセスは、クリックの開始から始まり、アタッチメント、アカンパニメント(寄り添い伴走する)、そして最後に、作業療法の成果として作業遂行と参加が期待される作業エンゲージメントの開発につながる。またこの結果は、信頼性の高い視点に基づき、インタビューの逐語録から引用文によって説明された。

結論:このモデルは単純化されているが、作業発達における複雑な治療的関係のプロセスを含んでいる。ASD がある個人について明確に概念化されたモデルであり、作業療法士がどのように相互作用し、ASD がある個人とその家族をエンパワメントするかについて焦点を当てることを可能とした。本研究の成果は、作業療法の方針、理論、実践、およびさらなる研究にとって意義がある。

キーワード:自閉スペクトラム症(ASD)、作業療法、作業発達、共同職業、 グラウンデッド・セオリー

Introduction

Autism spectrum disorder (ASD) is a complex disorder in which individuals experience deficits in social communication and interaction, as well as restricted, repetitive behaviors, interests, or activities¹⁾. Social communication issues include emotional reciprocity; individuals with ASD commonly lack of ability to initiate interaction, respond, or maintain engagement in reciprocal communication.

Individuals with ASD also show deficits in eye contact, nonverbal communication, and difficulties in understanding facial expressions and gestures.

Therefore, developing and maintaining relationships with others are significant issues in ASD functioning.

Occupational therapy refers to the therapeutic use of occupations in meaningful daily activities to support participation in routines, habits, and roles by empowering client factors and performance skills to promote successful engagement in all areas of life²⁾. When addressing the needs of individuals with ASD, occupational therapists use various meaningful activities and strategies concerning activities of daily living, instrumental activities of daily living, health management, rest and sleep, education, work, play, leisure, and social participation³⁾. Early intervention, conversely, mainly focuses on the foundations of body function, sensory regulation, and developmental acquisition as targeted occupational components in intervention goals for ASD; this concentration of

body function outcomes has caused some practitioners to diverge from occupational centeredness⁴⁾.

In Indonesia, occupational therapy intervention for ASD has been ranged from enabling activities to purposeful and occupation-based activities, however most occupational therapists tend to prioritize body functions⁵⁾. The use of sensory integration as most popular framework and short sensory profile as most popular assessment indicate that sensory functions are the most addressed. It also reveals the challenge of Indonesian occupational therapists in translating theory into practices while focusing on occupation as the essence of the profession, specifically in pediatric medical-based intervention. The study also implies the need to develop a model of practice as a tool that might bridge the gap between theory and practice⁵⁾. This is supported by Kielhofner, (2005) and Forsyth et al (2005) on the scholarship of practice⁶⁾⁷⁾. The need to builds 'practice scholar' effectively who develop and implement knowledge directly relevant to practice, as an alternative approach to research. Creek & Feaver (1997) delineates a model of practice as a set of theories applicable in a particular field of practice that provides an explanation of clinical phenomena and suggests the type of intervention⁸⁾. It has been a debate whether available conceptual models of practice are relevant with practices around the globe, since the breadth of occupational therapy practice is international and multicultural societies⁹⁾. It is precise therefore, enquiring whether the models of practice that has been

developed in western societies are relevant to all population with whom occupational therapists interrelate¹⁰⁾.

For those reasons, a model of practice developed from an Indonesian perspective is essential for providing culturally compatible ASD intervention guidelines. Among the total population of 270 million in Indonesia, ASD is one of the highest pediatric cases with a prevalence of 0.36% ¹¹⁾, with approximately 500 new cases per year. Hence, it is significant to study occupational development therapeutic relationship model in intervention for ASD.

The emerge of integrating occupational development into human development theory

The study of human development was once perceived as a study of 'child development' for so long; however, human development is now understood as a lifelong process¹²⁾¹³⁾. Human development courses classically discuss the development of these performance components: sensory, motor, cognitive, language, and social-emotional skills. Wiseman et al. (2005) investigated occupation as a new realm of study within the field of development, emphasizing that occupational development was emergent¹⁴⁾. In the tenet of occupation-centeredness, in which it pertains to the practice of the profession as a whole, indicates that occupation is at the core of our practice⁴⁾ and requires or 'adopt an

occupational lens' 15). Therefore, integrating occupational development, as continuing change in occupational behaviors across individual's life course, will maintain occupational therapists upholding the occupational-centeredness.

Although the current knowledge in this extent is limited, different theoretical models for occupational development already existed. Model from Humphry & Wakefold (2008) reveals occupational-centeredness in developing children everyday activities, depicted in Process Transforming Occupation (PTO) ¹⁶⁾. The interactional model of occupational development (IMOD), offered by Davis & Polatajko (2006) ¹³⁾. IMOD clarifies three levels of occupational development, which is micro development at the level of occupation, meso development at the level of the individual, and macro development at the species level. The IMOD describes the systematic change in occupational behaviors as the outcome of the interaction of the person(s), occupations, and environments.

Another model, the Process of Establishing Children's Occupations (PECO) discusses how children develop their occupations, with four categories of motives that influence the process at any stage: parent views and values, resources, motivations, and opportunities ¹⁷⁾.

Integrating occupation into these development courses is fundamental for enabling the occupation-centeredness of the profession, through specifying on how to aim for occupations in a developmental trajectory in a specific context. In addition to the models of practice described above, studies on the model of

practice for occupational therapist in ASD are necessary to provide culture-friendly guidelines to achieve better intervention outcomes while maintaining occupation-centeredness. Occupational therapy believes that therapeutics occur within interactions, of which individuals with ASD need supports to evoke the connections. Therefore, developing an occupational development therapeutic relationship model for ASD has emerged to guide practitioners' occupational centeredness in intervening in this diagnosis.

Study objectives

This objective of the study is to construct an occupational development therapeutic relationship model for ASD, which is embedded in the perspectives of Indonesian occupational therapists and how they conceptualize their therapeutic relationship that supports occupational development for individuals with ASD.

Methods

Design

To achieve the research objectives, a qualitative study was conducted by implementing the grounded theory of Charmaz (2014) to provide a framework for qualitative inquiries with constant comparative analysis to analyze the data¹⁷⁾. The process of development of the model comprised of initial coding, focus coding

and categorizing, theory building, and dissemination by establishing the concrete data and completing with a rendering of the data as an explanatory theory. The data are in the form of verbatim transcriptions of the focus group interview, memo, and notes.

The evaluative criteria outlined by Lincoln and Guba (2000) were used to collect trustworthy data. Credibility, transferability, dependability, and confirmability were confirmed by the authors. Prolonged communication with the participants and triangulation of data ensured credibility. The categories were peer-reviewed, then multiple researchers verified the analytic process and results. Repeated discussions were conducted with co-authors, research groups, and seminars to confirm the trustworthiness¹⁸⁾.

Data collection

Data collection was conducted from May to July 2020, following ethical approval from the Tokyo Metropolitan University (Reference Number 19089).

Nineteen participants were recruited by employing purposive sampling, then was formed into two groups based on geographical considerations. Each group consisted of nine to ten participants. Focus group interviews were conducted virtually, twice each group, that lasts approximately 90 minutes in Bahasa Indonesia and comprised semi-structured interviews. English transcriptions were used for analysis, including the quotes in the results section. Memos are written

ideas on substantive codes and code relationships as they emerge during the analysis. Notes were also written, along with a constant comparative analysis.

Data analysis

The constant comparative method is used to develop theories from data by synchronized coding and analysis (Taylor & Bogdan, 1998)¹⁹⁾. Developing a theory from rigorous analyses of the transcriptions requires an analytic process that consists of (1) data coding, (2) developing, checking, and integrating theoretical categories; (3) theory building; and (4) writing analytic narratives through inquiry. The coding consisted of the initial, focus coding axial coding and theoretical categories. Memoranda and notes were used to constantly link and compare the relationships between the codes and categories. As categorization was completed, the core category was decided through a rigorous process, and the relationship of categories was depicted in a diagram as a theory. A careful description as follows is as an explanation of the theory.

Subjects

Participants were recruited through purposive sampling by implementing the following inclusion criteria: (1) Indonesian Occupational Therapist, who have experience in working with individuals with ASD for a minimum of 10 years and (2) willing to participate in the research. As it is shown in the Participant

Demographic Data in Table 1, the participants were 19 occupational therapists, aged 34 to 54 years (mean 41.42; SD 5.28) with 13–25 years of experience as occupational therapist working with children with ASD. 63.2% were women, and 36.8% were men. 42.1% of participants work in the medical settings, 26.3% in school-based settings, 15.8% in community settings and 15.8% work as academes.

Table 1.Participants' Demographic Data (n=19)

Attribute	Categories	N (%)	
Age	31–40	4 (21.05%)	
(years old)	41–50	14 (73.68%)	
	51–60	1 (5.26%)	
Gender	Female	12 (63.15%)	
	Male	7 (36.85%)	
Work setting	Medical-based	8 (42.1%)	
	School-based	5 (26.3%)	
	Community-based	3 (15.8%)	
	Academia	3 (15.8%)	
Years of experience	11–15	6 (31.57%)	
(years)	16–20	12 (63.15%)	
	21–25	1 (5.26%)	

Results

The study found four key concepts that emerged from this process are shown in Table 2. The four key concepts along with the categories form a process of therapeutic relationship in occupational developmental for individuals with ASD.

Table 2.Key concepts and categories in the Occupational Development Therapeutic Relationship in individuals with ASD

No	Key concept	Categories of process	Categories of person	Categories of
				environment
1	Initiation	The click		
2	Attachment	Bonding Occupational potential	_	
3	Accompaniment	Coaching-learning Co-occupation	Individual with ASD Significant other(s) Occupational	Structured to natural Selected scale to
4	Occupational engagement	Occupational performance Occupational participation	therapist	general

As it is illustrated in figure 1., four stages are first, *initiation*; second, *attachment*; third, *accompaniment*; and fourth, *occupational engagement*. The stages comprise persons (at least: individual with ASD, family, and occupational therapist), environment and occupations. Following categorization, the main author completed a series of diagrams of the evolving model, and these draft diagrams were shared with co-authors, who validated them by analyzing the relationship between the categories. Theorizing was done by identifying the properties and relationships of the categories, verifying the theoretical relationships, and conceptualizing the theory. The core concept, as the grounded theory study suggests, was attested through rigorous consideration, resulting *The click* verified as a core concept, as shown in Figure 1. Categories and key concepts were organized and scrutinized to create this theoretical framework. Finally, the sorted memos and notes were integrated to support the final theory building and writing.



Figure 1.

Diagram Starting with The Click: A Model of Occupational Development Therapeutic

Relationship in Intervention for Autism Spectrum Disorder

Stages of Occupational Developmental Therapeutic Relationship for ASD

Stage One: Initiation

The initiation stage is defined as the acceptance and impression at the beginning of admitting another for a prolonged connection. Occupational Therapist facilitate a positive environment for significant other(s) and individuals with ASD to learn. The successful connection starts with *the click*, a momentum of early connection followed by attunement to the signals of togetherness. The click is the key in the initiation stage, yet the core of the occupational development therapeutic relationship model. However, the occurrence of clicks is unpredictable. It may occur in the first session of the intervention, or it can take much longer within months.

Observing how the clicks occurred is essential to maintaining a prolonged connection, following the aim of tis stage to create subsequent clicks. The more click moments, the stronger the interconnection among individuals with ASD, occupational therapist, significant other(s), activities, and environment. The successful initiation stage comprises creating click moments not only at the occupational therapy unit, but also at home, and/or in other milieu environments; with other persons.

One participant (P12, 47/F, with 18 years of experience) stated that, "The click, does happen in a way we cannot explain, but the child and therapist can really

feel it. It is a momentum of early connection; it can be positive open gestures like reaching out giving things or eye contact, and oh, they usually use peripheral eye contacts, glance up, instead of central. The click is a really meaningful moment; without this, the next learning will not occur. So, I have to define the moments of clicks, tell the parents about them, and then ask them to also create moments of clicks as much as possible at home. The click is more like a synapse that is connected to each other, so the idea is to duplicate the stimulus and expect the same response of clicks with different persons in different contexts." To ignite the click, readiness of persons, activity, and environment is strongly suggested. Readiness of person is related with implementing the therapeutic use of self. It is carried out by demonstrating altruism, mindfulness, kindness, sincerity, persistence, and excitement. Indeed, the personal and professional qualities of occupational therapist affect the therapeutic relationship. Regarding activity, occupational therapist creates continuous supporting opportunities by implementing the sensory strategy that meets the ASD's sensory profile, communication preference, and learning style. Concerning environment, not only implementing sensory strategy to meet level of comfortable; the model also facilitates gradual development, from structured to natural environment, and from selected to general environment.

Once the click occurs, followed by the processes of attachment, accompaniment, and occupational engagement, as one process in the figure. More connections

however, more clicks, more persons, larger or various environments, indicate better outcomes in the future. The interconnected person, occupation, and environment can be developed into multiple structures in this model, in which occupational development is likely to occur more frequently.

Stage Two: Attachment

The second stage of the occupational development therapeutic relationship in ASD is attachment. It is defined as having a mutually comfortable chemistry or feeling, as the start of emotional connections following natural demands for more connections. The signs of this attachment stage are the constant conformity from individuals with ASD to Occupational Therapist' communication, positive gestures of connections, and both physical and emotional acts of *bonding*.

One participant (P18, 46/M, with 24 years of experience) discussed bonding as follows, "Bonding is a heavy discussion. One individual with ASD usually bonds with one occupational therapist, which is how the therapeutic relationship occurs. If occupational therapist and individuals with ASD have clicked, then emotional connection follows, occupational therapists can transfer knowledge and skills. Yes, it is only when they bond with us that transferring skills becomes easier. Then, we can provide examples of how to carry an activity, and they will gradually learn it step by step within the trusted relationships. I do not think any

other professions discuss bonding, just like ours. I suggest all occupational therapists to make this bonding available."

Another participant explained bonding with a younger individual with ASD and family (P15, 45/F, with 23 years of experience) stated the following:

"Not only with the child, occupational therapist also need to develop the bonding with parents since the first communication, especially if the child with ASD is younger than 2 years old. We also need to bond with parents unless we will fail to handle the child the way we want to. It is impossible to get connected and find potential without bonding with the parents."

Extracted from these two original quotes, the emotional connection and bonding should be maintained not only between individuals with ASD and occupational therapist, but also between occupational therapist and family/significant others.

The triangular attachment is intertwined through quality time.

In the attachment stage, Occupational Therapist work on ASD regulation and other basic components to support learning capacity, such as focus, adaptive behaviors, sensory-motor maturity, and trust within therapeutic relationships.

Moreover, this stage is aimed at finding *occupational potential*, which is defined as the seed of a meaningful occupation. Occupational Therapist and significant others (keen family members) may collaborate to analyze the occupational

potentials of individuals with ASD by reflecting on occupational development milestones related to family values and culture. The occupation potential is characterized as being meaningful to individuals with ASD and validated by family, relevant to culture, and facilitate enjoyment and engagement of the individuals.

Stage Three: Accompaniment

The accompaniment stage is characterized by the act of accompanying or setting someone accompanied, where *coaching and learning* and *co-occupation* occurs. The signs of this readiness include regulated behavior, the ability to maintain focus at a certain period of time, the ability to follow instructions, and the bonding between ASD and others in the therapeutic relationship.

One participant (P1, 36/F, with 13 years of experience) described the accompaniment stage as follows: "So accompaniment is a productive stage in acquiring certain skills in ASD. By having a coach or mentor, both parents and child with ASD can learn through repetition. Not enough 10 times. This should be repeated until they can do it. This also explains how the school-based setting works for individuals with ASD in learning new skills compared to developmental clinics. Eight hours a day at school makes coaching-learning environment for individuals with ASD possible."

Coaching is a form of development in which an experienced person supports a learner or client in achieving a specific personal or professional goal by providing training and guidance. In this model of therapeutic relationship, either occupational therapist, significant others, or other professionals can be the coach. Meanwhile, *learning* is the vigor of individuals with ASD to acquire knowledge and skills through studying and experiencing by grading and adaptation. The structured, productive coaching and learning is reflected from transferring skills through specific methods, like visual strategies, chaining, or graded activities. Similar to the *coaching and learning*, in the accompaniment stage, *co-occupation* is a significant strategy to develop occupation. *Co-occupation* is a central construct that comprises interactive actions and shared meanings in the therapeutic relationship. Co-occupation provides opportunities that would foster occupational development, by optimizing occupational potential. Another participant (P4, 54/M, with 24 years of experience) described cooccupation through this statement, "In Indonesian culture where sharing meaning is essential, co-occupation works best to develop occupation in individuals with ASD. The meaning of occupation does not have to be corresponding, but it is definitely shared'."

It is grounded that providing opportunities through coaching and learning, and cooccupation will promote occupational development within therapeutic relationship. Once occupational potentials are found, then working on them following occupational development milestones is the next step, through *coaching, learning*, and *co-occupation* processes. Coaching and learning strategies involve either component functions or specific skills. These include the enablement of specific skills. Coaching generally takes place in a natural environment in order to support occupational performance. Repetition is important in these processes, including the training of specific skills for activities involved in daily living (including safety at the home, household chores), school (such as handwriting), and productivity (specific skills with computers, farming ducks, or making coffee as a barista).

Co-occupation is another strategy for developing occupations. It enables not only the life skills, but also the sharing of meaning and value of occupation by experiencing and exploring the occupations.

Stage Four: Occupational Engagement

The final stage of the occupational development therapeutic relationship is occupational engagement, which is defined as "being occupied with doing an occupation; process, and progress in an occupation".

As the relationship is sustained from earlier stages, this stage focuses on developing occupational performance and participation. Performance and participation are the product of therapeutic relationship.

Using occupations would include having individuals with ASD progressively work on their desired occupations to improve their performance and participation. To achieve this stage, other professions like instructors or teachers is needed to be significant others. Occupational therapist might introduce aquatic therapy for ASD in the first two stages of the therapeutic relationship, however, when water safety and swimming skill has been developed, and it is validated by family as occupational potential, then swimming instructors can provide more opportunities to achieve higher competence in swimming. Thus, occupational performance and participation will not only be discussing life skills, but also for mental health, self-love and self-actualization.

This concept is in line with one participant's (P4, 54/M, with 25 years of experience) statement, "We use occupation both as a means and a goal, so enabling engagement with occupation is therapeutic, with outcomes in mental stability, self-love, and self-actualization, and as a stepping stone to acquire higher competence in specific occupations".

In this occupational engagement stage, Occupational Therapist may provide more motivation and opportunities for individuals with ASD to observe, put meaning to the occupation, and feel independence. The attainment in this stage of therapeutic

relationship, can be indicated by acquiring higher competence in certain occupational performance and participation Another indicator for this stage is the development of environments from structured into natural/milieu, and from selected to general environment.

Discussion

The research novelties a unique model of occupational development therapeutic relationship for ASD. It supports the occupational development in ASD throughout the lifespan with the click as the start as well as the core of changes. Emphasis in creating experience opportunities on individual with ASD, this process model is started with the click in early occupational therapy intervention. Then, it followed by attachment, accompaniment, and finally, occupational engagement. This therapeutic relationship model configures persons, occupation, and environment; upholding Person Environment Occupation (PEO) Model by Law, et.al (1996)²⁰⁾, Canadian Model of Occupational Performance and Engagement (The CMOP-E) by Polatajko et.al (2013)²¹⁾ and Person Environment Occupational Performance Model by Baum, et.al (2015)²²⁾ and other related theories.

According to the definition provided by occupational scientists who coined the term occupational development, it is the continuing change in occupational behaviors across an individual's life course, resulting from the growth and

maturation of the individual in interaction with the environment ^{14),23)}. The occupational development therapeutic relationship in ASD intervention is defined as the dynamic process of evoking, developing, and gradually engaging in occupation as a result of the interaction of individuals with ASD with other persons, occupations, and the environment.

The click, as the core of occupational development therapeutic relationship model, is the start of the long term connections among occupational therapist, significant other(s), and individuals with ASD. The term 'click' is grounded among practitioners in describing the attuning moments of Occupational Therapist and individuals with ASD. The click may relate to neurotransmitters, as previous study of Fisher (2005)²⁴⁾ that elaborated how neurotransmitters affect relationships through the dopamine, norepinephrine, and serotonin hormones, which work in attraction, and oxytocin and vasopressin, which work in the attachment phase of the relationship.

More on this, the attachment theory has been discussed since 1958 by Bowlby²⁵⁾ that attachment can be understood within an evolutionary context in that the caregiver provides safety and security for the infant, by includes the development of the concept of the affectional bond, which is based on the universal tendency for humans to attach, that is, to seek closeness to another person and to feel secure when that person is present²⁵⁾. Another related theory discussed by Greenspan (2015)²⁶⁾, who is well-known as developing DIR-Floortime, with the essential

functional emotional developmental capabilities (FEDCS) that depicts a gradual improvement in functional emotional, started with self-regulation and interest in the world, followed by engaging and relating.

Nevertheless, the bonding, attachment and connections in the occupational development therapeutic relationship model for ASD put emphasis more as a process to develop occupation.

In the attachment stage, this model appreciates occupational potential as sociological, cultural, and institutional factors that influence temporal, dynamic, evolving changes in capacity which are implemented over the life course (Asaba & Wicks, 2010²⁷; Wicks, 2005²⁸) Wilcock, 1998²⁹) 2001³⁰) 2007³¹). Co-occupation has been discussed as a concept in occupational science. Pickens and Pizur-Backernow (2009)³²⁾ described co-occupation as a new synthesis of occupation by tying its definition to varying degrees of shared physicality, emotionality, intentionality, and meaning. Pierce (2009)³³⁾ depicted co-occupation in mother and children, as "the most highly interactive type of occupation". Cooccupation is used to define how occupations can be performed by more than one person, in a shared social, temporal, and spatial space. It is cooperative, with varying levels of interdependency and synchronicity. Price & Stephenson (2009) also wrote that the co-occupation of parenting as central to provide opportunities and optimizing potentials of children³⁴⁾. Additionally, this study found that cooccupation is recognized as a strategy to develop occupations in individuals with

ASD. By implementing co-occupation, ASD will experience not only life skills but also the shared meanings of the targeted occupations.

The occupational performance and participation in the model are in line with Kielhofner's theory in Taylor (2017), in which occupational performance is viewed as engaging in occupational form, involves completing (or literary going through the form of) a discrete that may involve a series of steps that lead to a coherent whole or desired activity³⁵. Occupational participation defines what we do in broader sense, it describes our engagement in the broad of categories of work (study), play, and the activities daily living that undergird everyday life. Through this definition, this occupational development therapeutic relationship model assures applicability in any levels of ASD, from low to high functioning. The varied methods of communication and learning can be employed to address the needs of each individual with ASD. This model, conversely, sees occupational engagement as a stage of therapeutic relationship, and occupational performance and participation as the expected outcomes.

Environment is featured in each stage of the process of therapeutic relationship, respecting the social cultural value. Consideration of the societal culture in which occupational therapy is practice and the cultural of an individual within any given environment are highly considered. Occupational development emerged at micro level, which is individual's family background, will affect beliefs in self, habits and routines. The environment is designed gradually from structured to natural

and from selected to general environment to induce the family values in advance, then introduce them to the shared meanings in community. Those how Indonesians' perspectives provide culturally compatible in ASD intervention guidelines.

To summarize with, this study conceptualizes the occupational development therapeutic relationship model on the process to develop occupations in individuals with ASD. The model starts with a click, and is presented with relevance to the research objective, constructing an occupational development therapeutic relationship model for ASD based on the perspectives of Indonesian occupational therapists.

Implications

The model supports a lifespan intervention by occupational therapy practitioners working with individuals with ASD. With respect to occupational-centeredness, this model of practice is proposed implementation across different occupational therapy settings: homecare, medical, school, and community settings, for it discusses resources that advance ASD occupational development. Contributing to the development of the occupation for ASD, the model could also guide families of individuals with ASD on how to collaborate with occupational therapist, or the other way around; and what to empower in families with ASD. This model can also serve as a reference as policy in occupational therapy

services, to develop occupation-centered curricula in occupational therapy schools, as well as further research on implementing this model.

Limitations

This is a bottom-up model since it is grounded from occupational therapy practitioners. Although there are some perspectives that suggest the use of occupational therapist models of practice is wide-ranging for occupational therapist has holistic vision, it is important to note that conducting the research on model of practice is limited to certain groups.

This study is based on the perspectives of Indonesian occupational therapists; therefore, this model may not translate well in other contexts. Likewise, this study ensuing key concepts and categories and unable to explain how significant are the relations among categories or key concepts. The for that reason, further research is needed.

Declarations

Acknowledgment

We are grateful to the Tokyo Metropolitan University and Tokyo Metropolitan Government for benefaction of the "Tokyo Human Resources Fund for City Diplomacy" scholarship to the main author. Appreciation is also conveyed to

Indonesian occupational therapists who participated in this study, members of the Pediatric Research Lab, and all sensei and students in international student monthly seminar in Occupational Therapy Department of Tokyo Metropolitan University. Last but not least, we also thank Professor Peter Bontje for providing valuable resources and feedback.

Declaration of conflicting interests

The authors declare no conflicts of interest.

Funding

This research received grants from the Tokyo Human Resources Fund for City Diplomacy.

References

- American Psychiatric Association: Diagnostic and statistical manual of mental disorders, 5th ed. Arlington, VA, American Psychiatric Association, 2013.
- 2) American Occupational Therapy Association: Occupational Therapy Practice Framework: Domain and Process (3rd Ed.). American Journal of Occupational Therapy, 68: S1-S48, 2014.
- 3) American Occupational Therapy Association: Occupational therapy practice framework: domain and process (4th Ed.). American Journal of Occupational Therapy, 74:7412410010, 2020.
- 4) Fisher, A. G: Occupation-centred, occupation-based, occupation-focused: Same, same or different?. Scandinavian Journal Occupation Therapy, 20: 162–173, 2013.
- 5) Saloko, E., Harumi, L, Sumaryanto, E., et. al: Plotting current practices and challenges among Indonesian occupational therapists working with individuals with autism spectrum disorders. World Federation of Occupational Therapists Bulletin, DOI: 10.1080/14473828.2021.1938863, 2021.
- 6) Kielhofner, G: Scholarship and practice: Bridging the devide. American Journal of Occupational Therapy, 59(2), 231-239, 2005.
- 7) Forsyth, K., Summerfield-Mann, L., & Kielhofner, G: Scholarship practice: Making occupation-focused, theory-driven, evidence based practice a reality. British Journal of Occupational Therapy, 68(6), 260-268, 2005.
- 8) Creek, J & Feaver, S.: Models for Practice in Occupational Therapy: Part 1, Defining Terms. British Journal of Occupational Therapy, 56(1): 4-6, 1993.
- 9) Dyck, I.: Multicultural society. In D. Jones, et. al (Ed.), Sociology and Occupational therapy: An Integrated approach. Edinburgh: Churchill Livingstone, 1998.

- 10) Duncan, E.A.S.: Foundations for practice in occupational therapy. Scotland: Elsevier, 2021.
- 11) Institute for Health Metrics and Evaluation: Findings from the Global Burden of Disease Study 2017. Seattle: Institute for Health Metrics and Evaluation, 2018.
- 12) Kail, R V, Cavanaugh, J C: Human development: a life-span view (fourth edn.). Boston: Thomson Wadsworth Publishing, 2007.
- 13) Davis, J A, Polatajko, H J.: Occupational development. In S. Rodger & J. Ziviani (Eds.), Occupational Therapist with children: understanding children's occupations and enabling participation, 7:136–154, Oxford: Blackwell Science Publishers, 2006.
- 14) Wiseman, J., Davis, J.A., & Polatajko, H.J.: Occupational Development: Towards an Understanding of Children's Doing. Journal of Occupational Science, 2(1): 26-35, 2005.
- 15) Yerxa, E.J.: Occupation: the keystone of a curriculumfor a self-defined profession. American journal of occupational therapy, 52: 365-372, 1998.
- 16) Humphry, R, Wakeford, L: An occupation-centered discussion of development and implications for practice. American journal of occupational therapy, 60: 258–267, 2006.
- 17) Charmaz, K: Constructing grounded theory: a practical guide through qualitative analysis (second ed), London: Sage Publication, 2014.
- 18) Lincoln, Y S, Guba, E G: Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), The handbook of qualitative research: 163–188 (2nd ed) Beverly Hills, CA: Sage, 2000.

- 19) Taylor, S. J., & Bogdan, R.: Introduction to qualitative research methods: A guidebook and resource (3rd ed.), John Wiley & Sons Inc, 1998.
- 20) Law, M., Cooper, B. A., Strong, S., et.al: The person-environment-occupation model: A transactive approach to occupational performance. Canadian Journal of Occupational Therapy, 63: 9-23, 1996.
- 21) Polatajko, H.J., Townsend E. A., & Craik J.: The Canadian model of occupational performance and engagement (CMOP-E). in E.A. Townsend & H.J. Polatajko (Eds.) Enabling occupation II: Advancing an occupational therapy vision for health, well-being, and justice through occupation (2nd ed), P. 23.Ottawa, ON: CAOccupational Therapy Publications, 2013.
- 22) Baum, C. M., Christiansen, C. H., & Bass, J. D.: The Person-Environment-Occupation- Performance (PEOP) model. In C. H. Christiansen, C. M. Baum, & J. D. Bass (Eds.), Occupational therapy: Performance, participation, and well-being, 4:49-56, Thorofare, NJ, SLACK Incorporated, 2015.
- 23) Christiansen, C, & Townsend, E: Introduction to occupation: the art of science and living. Upper Saddle River, NJ: Prentice Hall, 2010.
- 24) Fisher, H., Aron, A. & Brown, L.L: Romantic Love: An fMRI Study of a Neural mechanism for Mate Choice, Journal of Comparative Neurology, 493:58-62, 2005.
- 25) Bowlby, J.: The nature of the child's tie to his mother, International Journal of PsychoAnalysis, XXXIX: 1-23, 1958.
- 26) Greenspan, S., & Wieder, S.: Engaging autism: Using the floortime approach to help children relate, communicate, and think, Da Capo Lifelong Books, 2006.

- 27) Asaba, E, & Wicks, A: Occupational terminology: occupational potential, Journal of Occupational Science, 17: 120–124, 2010.
- 28) Wicks, A.: Understanding Occupational Potential. Journal of Occupational Science. 12(3): 130-139, 2005.
- 29) Wilcock, A.: An occupational perspective of health. Thorofare, NJ: Slack, 1998.
- 30) Wilcock, A.: Occupational science: The key to broadening horizons. British Journal of Occupational Therapy, 64(4): 412-417, 2001.
- 31) Wilcock, A.: Occupation and health: Are they one and the same? Journal of Occupational Science, 14(1):3-8, 2007.
- 32) Pickens, N.D & Pzur-Barkenow, K.: Co-occupation: Extending the dialogue. Journal of Occupational Science, 16(3): 163-169, 2009.
- 33) Pierce, D.: Co-occupation: the challenges of defining concepts original to occupational science. Journal of Occupational Science, 16(3):203–207, 2009.
- 34) Price, P.: Stephenson, S.M.: Learning to promote occupational development through co-occupation, Journal of Occupational Science, 16(3): 180-186, 2009.
- 35) Taylor, R.: Kielhofner's model of human occupation: Theory and Application. 5thed, Philadelphia: Wolters Kluwer Health, 2017.