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## Dressing toddlers at the Emmi Pikler nursery school in Budapest: caregiver instrumental behavioral pattern

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### ABSTRACT

The goal of this research is to analyze the instrumental behavior of the caregiver at the Emmi Pikler nursery school in Budapest while dressing children from two to three years old to go outdoors to play in the garden. In order to study this routine in its usual context, the observational methodology has been chosen, adopting an *ad hoc* field format. The results show that the caregiver follows an instrumental behavioral pattern while dressing children, even when the child's attention, interest or desire moves away from the ongoing activity. To the extent that these educational behaviors involve the child's cooperation in the task, they promote both the child's understanding of the concept of care, and the acquisition of dressing skills.

### KEYWORDS

Piklerian pedagogy; early childhood education; observational methodology; behavioral pattern; dress

## Introduction

During early childhood, care routines provided by the caregiver form a substantial part of the lives of infants and young children. As Spagnola and Fiese (2007) point out, through daily routines young children and preschoolers learn new skills and culturally acceptable behaviors. According to Boyce et al. (1983), routines are observable and predictable since, as Wolin and Bennett (1984) argue, these are interactions that follow established patterns of behavior that are repeated over time. As stated by Spagnola and Fiese (2007), the predictability of routines provides the toddler with a sense of organization, which, according to McNamara and Humphry (2008), ensures that the child understands the overall vision of care. In addition to routine care, Moreno-Zavaleta and Granada-Echeverri (2014) stress that the forms of care received during the early years determine the prototype of affective interactions at later stages. That is to say, care is reproduced in the same way in which it has been experienced, both in the case of self-care and in the care of others. At the Emmi Pikler nursery school in Budapest, daily care is scrupulously organized by regulating the behavior of the caregivers with the aim of providing the young child with a care environment that is appropriate for his or her physical and mental needs and interests, and that fosters cooperation (Kálló 2016).

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In 1946 Emmi Pikler took over the management of Lóczy Residential Nursery in Budapest, her contributions to the development of early global motricity without adult intervention are well known (Pikler 1940, 1968, 1969). Pikler's radical approach, innovative understanding of children's inner potential, and the way in which care routines were instrumental in avoiding the hospitalization (Spitz 1945) of both infants and toddlers raised in that institution. According to Kálló (2016), Pikler understood care and education as inseparable entities that gave value to children's daily lives. In fact, Falk (2018) asserts that the truly revolutionary feature of this educational methodology was the caregiver's behavior, which was completely alien to adult authoritarianism. For Pikler it was of vital importance, to such an extent that Kálló (2016) suggests that a form of *choreography* was established so that all the caregivers would proceed in the same way (Herrán 2013). This rigor was such that McCall et al. (2010) argued that caregiver sequences were predictable for children, and according to González-Mena (2004), they could anticipate caregiver behavior. In addition, Herrán (2013) points out that each child had its *own caregiver*, who provided care for a few children – two or three – in a way that ensured quality and time by guaranteeing a stable, secure, and privileged relationship. In the same way, McCall et al. (2010) described care routines as moments of individualized attention given by their own caregiver. Consequently, and as also observed by González-Mena (2004), a secure and trusting relationship is established between them. To this end, each care routine in Lóczy was deconstructed to the smallest details in order to take into account the needs, interests, and capacity of the children to participate and learn as well as to progress towards completion of the specific care given by the caregiver. In the words of González-Mena (2004), care is not about how quickly children acquire care skills, but about using cooperation to offer children what they need; until they show clear signs that they no longer need it. In other words, the qualitative leap that occurs when the care provided by the caregiver becomes self-care without impositions is the clearest evidence of the acquisition of true autonomy in that care. Today, the Emmi Pikler nursery school in Budapest has replaced the Lóczy foster home, faithfully following the principles inherited from the Piklerian philosophy (Herrán 2013).

One of these daily care routines is dressing children for outdoor play, a vital routine considering that in this nursery school children spend most of their time playing outdoors. The climate in Hungary is continental, with very cold winters and very hot summers. Due to the temperature fluctuations that are typical of these climates, there is considerable variation in the garments that are worn. Hence, this care is of critical importance, since dressing in these environments involves careful planning, requiring time and complex routines due to the characteristics and quantity of garments. The relatively few studies concerned with dress care date from the 1970s to the late 1990s have focused on the independent skills of children and adults in occupational therapy from an instructional teaching point of view (Martin et al. 1971; Azrin, Schaeffer, and Wesolowski 1976; Diorio and Konarski 1984; Inglesfield and Crisp 1985; Day and Horner 1986; Young et al. 1986; Sisson, Kilwein, and Van Hasselt 1988; Reese and Snell 1991; McKelvey et al. 1992; Hughes, Schuster, and Nelson 1993; Sewell et al. 1998; Lancioni et al. 2006, 2007). On the other hand, in the piklerian philosophy the genesis is placed in the child and in his/her health, development and wellness. The care is provided as tightly as possible to the abilities and idiosyncrasies of the child (Herrán 2013). Consequently, it is a natural learning given that in no case is it intended to instruct the child in his/her skills or in the care.

Acquiring the ability to dress autonomously at this age is undoubtedly of critical importance, and therefore the opportunities offered by this care should not be ignored. Hatcher and Squibb (2011) emphasize that dressing children for outdoor play involves a considerable amount of time and opportunities for interaction between child and caregiver. Whilst Dunst et al. (2001) support the idea that the dressing routine is a natural source of learning, offering the opportunity to learn both specific skills related to the routine itself and other social and cultural aspects through the caregiver's behavior. In the same vein, according to the theory of Cultural Learning put forward by Tomasello, Kruger, and Ratner (1993) and Tomasello (2016), human beings transmit ontogenetic information and behaviors with a greater degree of fidelity than other animal species. Likewise, true cultural learning requires the learner to understand the model as an intentional agent, learning through the intentionality of the model's behavior and what is relevant to such behavior (Tomasello, Kruger, and Ratner 1993; Carpenter, Akhtar, and Tomasello 1998; Carpenter, Call, and Tomasello 2002; Tomasello 2016). Therefore, the behavior of models becomes particularly important since the learner tends to learn by imitating the instrumental behaviors of the model in the same way as it was demonstrated, as well as by interpreting the objective of the model. In addition to learning culturally, human beings also create culturally. Thus, Tomasello et al. (2005) argue that sharing the collaborative intentions and interactions of participants who share the same objective is necessary for creating in a cultural way, that is, to work cooperatively to achieve a common objective, as advocated by Warneken and Tomasello (2007). To this end, Tomasello (2016) points out that each participant must pay attention to common actions as well as to the objectives to be achieved. Only then will they be able to play both roles cognitively and decide which action plan to carry out, taking into account the other participant's action plan. Tomasello (1995) indicates that for true joint attention, it is necessary for the participants to experience the same event at the same time and to be aware of the objective under pursuit. In the same vein, Smith (1999) argues that joint attention plays a socio-cultural role in offering children warm and reciprocal interactions and experiences with adults. Research related to learning and cultural creation has been conducted in experimental contexts (Tomasello, Kruger, and Ratner 1993). Nevertheless, research based on the daily life of human beings, regulated by routines that occur in natural contexts; provide the clearest example of the performance of cultural learning and creation (Rogoff et al. 2003; Rogoff et al. 2007). Therefore, the care routines provided by the caregiver are the main tool for cultural learning and creation at this age.

Unfortunately, the caregiver's behavior has not received the attention it deserves and little research has been conducted to address this issue. Dressing children is an action of daily care, and therefore, should be studied in their natural environment, that is, with the participants approaching the real task in the context in which it occurs naturally (Tang and Leifer 1991). Only in this way is it then possible to capture in detail the aspects of real human interaction. The observational methodology developed by Anguera (2003) is ideal for this purpose since it is a scientific procedure used to analyze human interaction, with the objective of identifying and understanding how the activity is executed in the natural context through the interactions between the participants.

Therefore, given the benefits of outdoor play in relation to the health and motor and psychic development of young children, dressing-related care takes on considerable significance in their daily lives, firstly, for thermoregulatory purposes and secondly, for the

benefits and educational opportunities it presents. At the Emmi Pikler nursery school in Budapest, dressing children is characterized by quality cares and autonomous activity (David and Appell 1986, 2010). In this way, the caregivers dress the children, promoting their autonomy and attending to the smallest details. Thus, while these caregiver routines promote the actions of dressing, their interaction with the children is modulated. As a result, dress-related care consists of two dimensions, one instrumental and one relational (Belasko 2016), which are combined with the ultimate objective of achieving the child's integral and autonomous involvement.

The main goal of this research is to analyze systematically the instrumental dimension of caregiver behavior at the Emmi Pikler nursery school in Budapest by observing children being dressed to play outdoors. In particular, our aim is to identify specifically the observable behaviors associated with dressing that the caregiver employs during care; that is, to discover whether this succession of behaviors constitutes an established pattern. The caregiver is expected to use the same sequence of actions to dress the child with the garments, that is, his/her action is not the result of chance. However, it is also to be assumed that this pattern will vary to the extent that the caregiver —whilst taking care of the child's interests and needing their attention, interest and desire to continue the task— does not carry out any action without their cooperation. Thus, we anticipate that the caregiver will adapt this behavioral pattern to involve the child. In this sense, the goal is to identify what, if any, are the alternative behaviors that constitute the behavioral pattern of dressing.

## Method

The observational methodology has been chosen to analyze this early educational care. As described by Anguera and Hernández-Mendo (2013), this methodology consists of a scientific procedure that reflects the occurrence of perceptible behavior. It enables the record and analysis of behavior that occurs in natural or everyday contexts of the object of study in the absence of standard measurement instruments, and instead using a suitable instrument built *ad hoc* along with the appropriate parameters (Anguera 1988, 2003, 2010).

## Design

Observational designs are flexible according to the formulated goals (Anguera, Blanco-Villaseñor, and Losada 2001; Blanco-Villaseñor, Losada, and Anguera 2003; Anguera et al. 2011; Sánchez-Algarra and Anguera 2013; Portell et al. 2015). The design proposed for this study, considering the indications of specific rules in systematic observation is Idiographic/Follow-up/Multidimensional (I/F/M) (Anguera, Blanco-Villaseñor, and Losada 2001). This is idiographic, given that we analyzed the behavior of one caregiver that implies an intensive observational study (Rodríguez-Medina et al. 2018; Belza, Herran, and Anguera 2019; Lapresa et al. *in press*); it has a follow-up, since in this diachronic study the data were collected over three months and is intra- and inter sessional (Blanco-Villaseñor, Losada, and Anguera 2003; Portell et al. 2015), and is multidimensional by contemplating multiple dimensions and dimensions of caregiver behavior shown by the observation instrument (Sánchez-Algarra and Anguera 2013; Blanco-



**Table 2.** Codes established for the sub-criterion *Behavior*.

Macro criterion	Instrumental
Criterion	Instrumental action
Sub-criterion	Behavior
Codes	(V201) look for the garment(s) (V202) bring the garment(s) (V203) hold the garment(s) (V204) search for the garment (V205) leave the garment(s) on the floor (V206) remove the garment (V207) begin to remove the garment (V208) observe removal of the garment (V209) help to remove the garment (V210) collect the garment(s) or object(s) (V211) ask for the garment (V212) prepare the garment (V213) present the garment (V214) give the garment(s) (V215) dress the child with the garment (V216) begin to dress the child with the garment (V217) observe dressing with the garment (V218) provide help in dressing with the garment (V219) fasten zipper, tie lace or button (V220) take the garment(s) to its place (V221) other behavior (V222) wait (V223) not visible (V224) relocate the garment(s) (V225) retouch the garment (V226) open zipper, untie lace, or button

2015). For data recording, we used the HOISAN beta 1.6.3.3, computer software (Observation Tool for Social Interactions in Natural Environments) (Hernández-Mendo et al. 2012; Hernández-Mendo et al. 2014). Once the recording was finished, the data were exchanged using specific observational methodology computer software (SDIS-GSEQ) to conduct the sequential analysis and thus detect possible patterns (Bakeman and Quera 1996).

### Procedure

In order to conduct this study, the sample of behavior was collected by video-recording the experienced caregiver at Emmi Pikler nursery school in Budapest between April and June 2013. The caregiver was video-recorded once per week, using the same schedule in real time without cuts, thus ensuring consistency between-sessions. The process of being video-recorded has no influence on either caregiver or toddler; professionals from all over the world make uninterrupted video-recordings and are used to being video-recorded. Even so, the video-recordings were made with due discretion, avoiding bias. We collected data from a total of 8 sessions. In order to optimize our analysis according to the proposed goals, the sessions were divided into conceptual units, that is, to capture the minimum information capable of being identified with its own meaning. To this end, appropriate criteria must be established according to the aims of the study (Anguera and Izquierdo 2006), in this case, being linked to the variation in the instrumental behavior of the caregiver, that is to variations in the sub-dimension *Behavior*. By using this process, 142 units were obtained. These units were registered with HOISAN beta 1.6.3.3 computer software. Once the registration was finished, the data were exchanged using SDIS-GSEQ

computer software, after which the analysis stage began with the purpose of detecting possible instrumental behavioral patterns of the caregiver.

### **Data quality control**

In order to guarantee the quality of the data, its reliability, and bias, the quality of the data was checked in two ways (Anguera et al. 2000; Castellano et al. 2000; Anguera and Blanco-Villaseñor 2003; Blanco and Anguera 2003; Anguera and Hernández-Mendo 2013; Blanco-Villaseñor et al. 2014). In particular, we calculated both inter-observer (external) reliability and intra-observer (internal) reliability using the Krippendorff's canonical concordance. For intra-observer reliability an author of the study, recorded 15% of the sample twice and at different times, the comparison has obtained a high and satisfactory value of 0.99. In the case of inter-observer reliability, 15% of the sample was recorded twice. One by an author of the study and the other by a trained external observer, the degree of agreement between the two has been 0.99, again a high and satisfactory value.

## **Results**

In order to detect the caregiver's instrumental behavioral pattern, lag sequential analysis was carried out (Sackett 1980; Gimeno et al. 2006; Bakeman and Quera 2011; Garzón et al. 2011). All of the instrumental behaviors covered in the *Behavior* sub-dimension were determined as given and target in order to analyze the associative relationships.

Both retrospective (lag -1) and prospective (lag + 1) delays were considered to detect the consistency between the instrumental behaviors before and after each delay. Instrumental behaviors that reached a frequency equal to or greater than 5 and that revealed significant values ( $>1,96$  for  $p < .05$ ) in retrospective or prospective delays were taken into account to constitute the instrumental behavioral pattern (Table 3 and Table 4). Figure 1 represents the sequential connections between instrumental behaviors and the value of significance constituting the micro-stages of the instrumental behavioral patterns of the caregiver.

It is clear from Figure 1 that the caregiver's main instrumental behavioral pattern consisted of: (V204) search for the garment; (V212) prepare the garment; (V213) present the garment; (V215) dress the child with the garment; (V219) fasten zipper, tie lace, or button; and finally (V225) retouch the garment. In addition, we detected alternative combinations of behavior, that is, sequential connections with lower significant values that do not belong to the main pattern. Such as, for example, the case of (V204) search for the garment, which is connected to (V203) hold the garment(s). The same occurs in the case of (V212) prepare the garment, which is connected to both (V205) leave the garment(s) on the floor and (V215) dress the child with the garment. A further example is provided by (V213) present the garment, which is connected to (V205) leave the garment(s) on the floor. Finally, (V219) fasten zipper, tie lace, or button was connected to (V204) search for the garment.

## **Discussion**

The results obtained confirm that the caregiver studied here follows a sequence of systematic common actions in order to dress children to play outdoors, consisting of

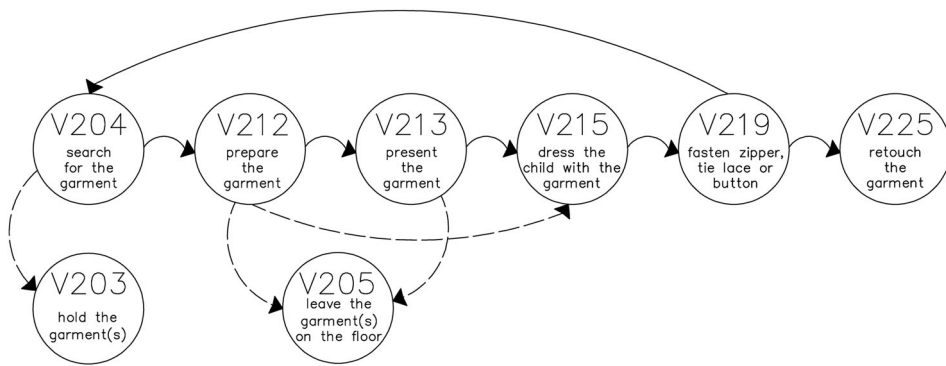


**Table 3.** Significant values of the adjusted residuals obtained in the sequential analysis of the *Behavior* sub-criterion in delay lag –1.

Given:	(V203) hold the garment(s)	(V204) search for the garment	(V205) leave the garment(s) on the floor	(V212) prepare the garment	(V213) present the garment	(V215) dress the child with the garment	(V219) fasten zipper, tie lace, or button	(V225) retouch the garment
(V203) hold the garment(s)	17,37		9,83					
(V204) search for the garment	2,57			21,8				
(V205) leave the garment(s) on the floor		2,48						
(V212) prepare the garment			2,35	7,62	10,35	7,19		
(V213) present the garment			3		5,92	7,9		
(V215) dress the child with the garment						14	13,56	
(V219) fasten zipper, tie lace, or button		5,63					12,25	4,41
(V225) retouch the garment								7,12

**Table 4.** Significant values of the adjusted residuals obtained in the sequential analysis of the *Behavior* sub-criterion in delay lag +1.

Given:	(V203) hold the garment(s)	(V204) search for the garment	(V205) leave the garment(s) on the floor	(V212) prepare the garment	(V213) present the garment	(V215) dress the child with the garment	(V219) fasten zipper, tie lace, or button	(V225) retouch the garment
(V203) hold the garment(s)	17,37	2,57						
(V204) search for the garment			2,48				5,63	
(V205) leave the garment(s) on the floor	9,83			2,35	3			
(V212) prepare the garment		21,8		7,62				
(V213) present the garment				10,35	5,92			
(V215) dress the child with the garment				7,19	7,9	14		
(V219) fasten zipper, tie lace, or button						13,56	12,25	
(V225) retouch the garment							4,41	7,12



**Figure 1.** Graphic representation of the caregiver's instrumental behavioral pattern. The arrows with continuous line show the course of the instrumental pattern while those with discontinuous lines show the alternative behaviors of the adaptation of the instrumental pattern.

seven different behaviors. This demonstration of an instrumental behavioral pattern for dressing children, that is, a choreographed sequence (Herrán 2013; Kálló 2016), highlights the value placed on care at the Emmi Pikler nursery school in Budapest.

The identified instrumental behavioral pattern begins when the caregiver looks for the garment (V204) among the pile of garments on the floor. Then, the garment is prepared (V212) before beginning to put it on the child. This action is carried out without coming into direct physical contact with the child's body, but is instead always mediated by the garment itself. With this, the caregiver pursues a double objective. First, it ensures minimal manipulation of the body as well as facilitating the child's activity. To this end, depending on the characteristics of the garment, the caregiver collects the long parts (sleeves and legs) and then opens buttons, zippers, and Velcro straps. Second, this provides valuable information to the child about the order and characteristics of the particular garment, thus facilitating their cooperation. Thus, the child anticipates the necessary movements to wear the garment. Thanks to this information, the child knows what is involved in the process and can anticipate and execute the precise movements effectively, increasing confidence in the caregiver and establishing a safe relationship with him/her (González-Mena 2004). When the caregiver has the garment ready, they do not directly proceed to dress the child, but instead presents the garment (V213), by holding it and placing it in front of the child as an invitation to participate in the process of dressing. The invitation is real, and the caregiver adheres to this behavior whilst awaiting the child's cooperation. She waits until the child voluntarily prepares their body and posture, that is, she looks for a willingness to start dressing (V215) each garment, since in the Piklerian approach, according to Falk (2018) there is no sign of authoritarianism from the caregiver, and in no case is the child forced to participate in such care. Similarly, as noted by González-Mena (2004), there is no sense of urgency or abruptness in the caregiver's behavior. When wearing garments, the caregiver holds and adjusts the garment while the child inserts their arm or leg into it, thus allowing the child to participate actively. For this, it is necessary that both the caregiver and the child understand the other person as an intentional agent, understanding which is the shared objective, and the role that each one plays to coordinate their actions (Tomasello et al. 2005; Tomasello

2016). Therefore, the child is able to predict and carry out the necessary cooperative actions to achieve that objective, and even more so if these actions are clearly presented to him/her. To finish dressing – and if required by the garment – buttons are fastened or zippers and Velcro straps are closed (V219). If there are more garments to be worn, the behavioral pattern is initiated again from the beginning. The pattern is not interrupted once the child has been dressed with each garment, since the caregiver plans the care beforehand and decides with which garments each child should be dressed according to the weather conditions in each case. Once decided, she brings at once all the necessary garments from the wardrobe in the lobby in order to not interrupt the pattern. Finally, once the child has been dressed with all the garments, she adds a final touch (V225), making sure that all the garments are well placed. To do so, she checks the small details of the garments such as cuffs, collars, zippers and hoods, before finishing with the child in question. Even though this behavior does not constitute dressing, it should not be regarded as being any less significant than the dressing process itself. It is this behavior that closes the pattern and thus the care, since, after this, the child goes to play outdoors, whilst this also corresponds with another child receiving such care. At this moment, the child may be dressed and physically ready to play outdoors, but psychologically this may not be the case. By retouching, the caregiver gives the child time to psychologically prepare, whilst they can carefully observe all the details of the garments in order to ensure that the child is comfortable and these do not hinder their subsequent activity. This retouching behavior, therefore, prepares the child for a transition.

The findings of the study have also confirmed that the caregiver cannot always repeat the pattern in the same way. It is necessary to keep in mind that the role of the caregiver is not only to dress the child, but to also encourage the child to cooperate in dressing. Cooperation, following the definition of Warneken and Tomasello (2007) is understood as a set of interdependent functions supported by the action of the child, directed towards a common objective, which, in this case is to dress. For this, it is essential to share both the objective and the attention at the same time (Tomasello 1995). Therefore, when it is detected that the child has lost attention, intention or desire during the care process, the caregiver adopts alternative behaviors that correspond to the adaptation of the pattern itself. Otherwise, by not sharing the objective or the joint attention, the child will not participate in the care, he/she will not cooperate. Consequently, the final objective of the care will be lost, that is, to learn to care for oneself and secondarily, for others, as a consequence of the behavior of the caregiver, as suggested by Moreno-Zavaleta and Granada-Echeverri (2014). This follows from the notion that children learn by imitating the behavior of adults (Tomasello, Kruger, and Ratner 1993; Carpenter, Akhtar, and Tomasello 1998; Carpenter, Call, and Tomasello 2002; Tomasello 2016). Thus, during the course of care, the caregiver ensures that the objective remains common to both parties, that the care has the child's joint attention and, of course, that they are willing to cooperate. In a negative case, the pattern is paused, and the caregiver waits for the child, evidence of this being shown by the caregiver using alternative ways of holding the garment (V203) or leaving the garment on the floor (V205). By adopting these alternative behaviors, the caregiver clearly conveys the message that the care is still in progress and that they are simply waiting for his/her cooperation to be completed. When the child's joint attention is recovered and the goal is once again shared, the child will be able to cooperate and the caregiver will resume the activity. In this way, by being

dressed, the child not only becomes aware of the care, but also benefits from warm and reciprocal interactions and experiences, as noted by Smith (1999). The fact that the caregiver adapts their behavior pattern means that the child becomes aware of the care and the alternatives offered, so that they provide their indispensable cooperation in carrying out the routine, and, by default, consent to the action of the caregiver, who waits for their cooperation without authoritarianism, reproach, or haste.

To conclude, the findings of this study highlight the importance of the caregiver's behavior in dressing children. For dressing children, the Pikler caregiver follows a behavioral pattern that is without any improvisation other than that required by the child's rhythm, attention, and interest at any particular moment. This pattern is the most valuable tool at a child's disposal for learning the care behavior of dressing, as well as new skills and behaviors, as indicated by Spagnola and Fiese (2007). The caregiver, aware of this, focuses all herself on the relevant actions involved in the process. In this way, and thanks to the repetition of the behavioral pattern, the child can anticipate what will occur, thus ensuring that they achieve an overall view of the care being given (González-Mena 2004; McCall et al. 2010). As McNamara and Humphry (2008) assert, the child understands the general organization of care through the various behaviors of which it is composed, rather than isolated behaviors, so that they are able to make sense of the whole process (Spagnola and Fiese 2007). Therefore, the child will voluntarily participate in the care in cooperation with their own caregiver (Herrán 2013), nowadays *main* or *concerning* caregiver, due to the mutual trust that is established between them. Care is provided in an ideal environment, where children benefit from the natural learning opportunities (Dunst et al. 2001) and from time and interaction opportunities (Hatcher & Squibb, 2011) derived from the benefits of having their own caregiver providing individualized care (McCall et al. 2010). Thus, children understand Pikler caregivers as intentional agents providing the adequate conditions for cultural learning and creation (see also Tomasello, Kruger, and Ratner 1993; Carpenter, Akhtar, and Tomasello 1998; Carpenter, Call, and Tomasello 2002; and Tomasello 2016). Thus by fulfilling the final goal of the care, the child learns to not only care for their own self, but also to care for others. This way of caring – taking into account every last detail – is both a unique part of the heritage, and a hallmark of, the Pikler-Lóczy education.

### **Limits of the study and directions for future studies**

This study has focused on the instrumental dimension of care. However, the relational or interactive dimension of care could not be studied, due to its magnitude. Therefore, the immediate challenge is to study the latter in order to be able to analyze how it unfolds and to what degree (and in which manner) both dimensions – instrumental and relational – are associated. It would be of interest to study the behavioral instrumental pattern associated with each garment, since the distinct features of each garment would differentially affect the dressing pattern to be deployed. Thus the aim would be to analyze how the characteristics of the garments influence the behavioral pattern of the caregiver. Finally, it would be interesting to study the behavioral instrumental pattern in relation to each child, and to explore how the caregiver adapts their behavioral pattern according to the child's characteristics, interests, and evolutionary and learning stage.

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## Disclosure statement

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