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Comparison of U.S. and Tajik infants' time in containment devices

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Abstract

How infants are held or contained throughout the day shape infants' experiences, particularly around movement and exploration. In Tajikistan, caregivers use "gahvora" cradles, which severely restrict the body and limbs. The present study explored the variability and use of containment devices in U.S. and Tajik infants. Using time diaries, we compared 12-month-olds in the U.S. and Tajikistan on the types of containments used and time spent in them throughout the day. During the day, Tajik infants accumulated more time in gahvoras than infants in the U.S. spent in cribs, primarily used for sleep, suggesting gahvoras served other functions. Given the availability of other devices, U.S. infants' time was distributed in short yet frequent bouts across devices. Accumulated time in these containments matched accumulated time Tajik infants spent in gahvoras. Tajik infants accumulated more unrestricted time on the ground, which was distributed in prolonged bouts, than U.S. infants. Findings highlight differences in infants' everyday experiences during the developmental period when motor skills emerge. By embracing commonalities and exploring differences between cultures, this study offers insights into differences in infants' everyday experiences and opportunities for movement.

Keywords

time diary; infancy; cross-cultural differences; infant containment; motor development

Cross-cultural research vividly illustrates the vast differences in how caregivers enable or restrict movement among their infants. To hold, carry, and contain infants for sleep and play requires physical structures like seating devices, cribs and cradles, or caregivers' arms —containments—that support infants' bodies and provide the context in which infants'

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skills unfold. Across Africa and West Caribbean, caregivers toss infants into the air, suspend them by the neck or from the ankles, and jiggle them by the limbs (for review, Adolph et al., 2010; Karasik, 2018). Caregivers of Mayan communities in Mexico wrap infants in a “rebozo” shawl that ties to their body (Brazelton et al., 1969). Ache of Paraguay place infants in a carrying basket on their heads and fetter vines around children’s ankles to prevent them from wandering (Kaplan & Dove, 1987). Pueblo Indian caregivers belt infants to cradleboards sometimes hung vertically on posts or to parents’ backs (Dennis & Dennis, 1940). Quechua caregivers of Peru situate infants in warm “manta pouches” to protect infants from the harsh climate (Tronick et al., 1994). In parts of Asia, caregivers contain infants in sandbag (Mei, 1994). In the U.S. spacious playpens, cribs, and various seating containments used throughout the first two years (Callahan & Sisler, 1997). For caregivers, the use of containment offers solutions to be able to work, complete daily tasks, and care for children, while keeping infants occupied, safe, and clean. For infants, these containments place different constrains on movement and exploration given that it is within these everyday physical contexts infants acquire basic manual, postural, and locomotor skills. For example, while in their cribs, infants are limited from exploring the room, but they can roll, sit, pivot, rock on hands and knees presumably solidifying the events of the day (Berger, DeMasi, & Horger, 2021).

In Tajikistan and other parts of Central Asia, Middle East and Northern Africa, caregivers have solved the problem of handling, containing, and sleep all at once. For generations, caregivers have used a traditional “gahvora” cradle (Figure 1A), in which babies are laid supine with arms, legs, and torso swaddled and bound (Bloch, 1966; Epstein, 1981; Hansen, 1961; Karasik et al., 2018). Although, the gahvora practice shares may characteristics with other childrearing practices of containment like swaddling and cradleboards, its use is not limited to only the first few months after birth and to times of day when infants are asleep (Karasik et al., 2018). Twelve- to 24-month-olds in Tajikistan can spend 15+ hours in the gahvora without having to be taken out: Infants remain clean (an external catheter drains waste) and fed (mothers breastfeed by leaning over the cradle).

To Western caregivers and researchers alike, the practice of gahvora cradling is striking both for its severity in restricting infants’ bodies and for its prolonged use, especially during the second year of life. The gahvora practice inspired us to ask: What is the nature of containment practices in the U.S.? Perhaps it is easy to overlook the obvious: In the U.S., homes tend to have lots of baby gear. Studies report that containment use is prevalent, with over 90% of participants reporting owning infant car seats, carriers, cribs, bouncers, changing tables, playpens, highchairs, strollers, mechanical baby walkers in their homes, among others (Abbott & Bartlett, 2001; Callahan & Sisler, 1997; Fay et al., 2006; Myers, 2006; Siddicky et al., 2020). On average, newborns to 5-month-olds spend nearly 6 hours a day and up to 16 hours in containments (Callahan & Sisler, 1997; Fay et al., 2006).

Despite the prevalence of infant containment in U.S. homes and use during early months of life, we know surprisingly little about the specifics of caregivers’ use of containments during infants’ second year, particularly around 12 months, when most U.S. infants are either independently crawling or already walking (Martorell et al., 2006). Given that by the start of the second year, typically developing infants in the U.S. are reaching for objects,

sitting independently, and crawling and walking, researchers have focused on infants' activities outside of containments. During their waking day, when observed in naturalistic unconstrained activities, infants spend time in different postures, engage with objects 50% of their observation time, play with a wide variety of toys and non-toy items, and take over 2,000 steps per hour, (Adolph et al., 2012; Franchak, 2019; Herzberg et al., 2021; Karasik et al., 2011). Researchers inferred that walking infants accumulate over 14,000 steps per day if they spend about half of their waking day unconstrained and in motion (Adolph et al., 2012).

The goal of the present study is to compare daily use of containments between 12-month-olds in the U.S. and Tajikistan because although infants grow up in radically different geographical locations and cultural communities, caregivers in both cultures deal with practicalities of keeping infants safe and occupied throughout the day. Examining the use of containments in a U.S. sample in relation to a Tajik sample of same-age infants highlights the cultural and physical contexts in which infants' motor skills emerge and offers a glimpse into their everyday experiences practicing manual, postural, and locomotor skills (Franchak, 2019; Karasik et al., 2011). Such knowledge may offer insights on the differences in motor skills reported in cross-cultural work (Adolph et al., 2010; Karasik & Robinson, 2022).

Three research questions guided our study. First, we asked about the type of containments used in the U.S. and Tajikistan and time spent contained from the time they wake up for the day until bedtime. Prior home observations of U.S. infants and mothers suggest U.S. homes have lots of equipment at their disposal (Abbott & Bartlett, 2001; Ammar et al., 2013) and Tajik families have gahvoras but few items of furniture and baby gear (Karasik et al., 2018). At the same time, caregivers in the U.S. oftentimes use many child-proofing strategies (e.g., gates, cabinet locks, outlet protectors, corner bumpers, etc.) to allow infants the freedom to roam and explore while avoiding accidents. Thus, we hypothesized that despite access to containments, caregivers in the U.S. may rely less on them compared to Tajik caregivers, favoring unconstrained movement and activity for their infants. As such, we expected U.S. infants to spend less time contained overall relative to Tajik infants. Tajik caregivers may situate their infants in gahvoras or other devices to restrict movement and exploration in favor of safety in the face of environmental hazards. Thus, we expected Tajik infants to spend more time contained relative to U.S. infants. Relatedly, we wondered whether nighttime containments related to overall time unrestricted. Where infants are placed for the night may vary across families and contexts, and degree of restriction within containment can shape infant opportunities for locomotion while awake. It is possible that U.S. infants who are in cribs at night may spend less time in containments during the day and thus have more time unrestricted, as U.S. caregivers tend to privilege opportunities for movement relative to Tajik caregivers.

Second, we asked about the distribution of time infants spent in containments throughout the day. Are infants spending time in short bursts across a variety of containments or do infants spend extended periods in one or two containments at a stretch? Based on prior work in Tajikistan which showed infants spending extended periods in the gahvora, we hypothesized that Tajik infants may spend longer bouts contained as compared to infants in the U.S.

Third, we asked whether duration in containment devices related to infants' locomotor status. It is possible that since 12-month-olds are newly mobile, caregivers may be more likely to restrict their locomotor exploration in favor of safety. This may be particularly likely for Tajik infants as there are many hazards in the environment (Karasik et al., 2018). Alternatively, caregivers may be likely to encourage infants to practice their newfound abilities, thereby allowing them more time unrestricted than contained. This may be particularly likely for U.S. infants because Western traditions emphasize infants' freedom to move (Adolph et al., 2010; Adolph & Robinson, 2015).

Method

Participants and Procedure

Mothers ($N = 45$) and their 12-month-old (± 1 week) infants (23 girls, 22 boys) participated. We focused on 12-month-olds because typically developing Western infants are either crawling or walking (Martorell et al., 2006). In the U.S., families ($n = 21$; 10 girls and 11 boys) were recruited from a family database in an urban city. In Tajikistan, families ($n = 24$, 13 girls and 11 boys) lived in villages outside of the capital city and were recruited with the help of village clinics serving the local community. All infants were healthy, born at term with no birth complications or medical problems. Mothers from the U.S. spoke English, identified as primary caregivers, and identified as white of European descent. Mothers in Tajikistan spoke Tajik, were the primary caregivers, and all were of Tajik ethnicity. Families received souvenirs for their participation. After obtaining informed consent, mothers were interviewed in person in the lab playroom (in the U.S.) or in their homes (in Tajikistan) and infants were observed in spontaneous activity during interviews.

Time Diary

We used a time-diary approach to capture the duration and distribution of time when infants were in various containments throughout the previous 24-hour day. This methodological approach is widely used across disciplines to track children's daily routines (e.g., Sani et al., 2016; Bartlett & Milligan, 2015; Bauman et al., 2019; Robinson, 2002). Notably, time diaries have been used in both cultural settings in prior studies (Hofferth & Sandberg, 2001; Karasik et al., 2018; Yeung et al., 2001).

A researcher in Tajikistan and a second researcher in the U.S. probed mothers about infants' whereabouts from the prior day when details were still fresh in their minds, in order to diminish recall biases. First, researchers confirmed that the prior day was typical (i.e., infant was not ill, family was not traveling, etc.). Then, researchers noted the time infants awoke for the day and went to sleep for the night and nap times and durations. Next, researchers guided mothers through the 24 hours from 6 a.m. on the prior day until 6 a.m. on the test day, asking about infants' locations and activities throughout the day, prompting mothers with, "What happened next?" or the specific time of a particular activity. The researchers marked mothers' responses on a gridded form, creating a detailed timeline of infants' whereabouts and durations. Accumulated duration in each of the containments or on the floor/ground was calculated by summing across locations experienced during the prior day, between wake time and bedtime.

To confirm that mothers gave accurate accounts of the prior day's timing and locations, the researcher inquired about timekeeping strategies. All U.S. mothers reported having a smartphone, frequently wore a watch, and typically had scheduled activities throughout the day. In Tajikistan, families had a cell phone and recounted that a call-to-prayer happens at particular times throughout the day, which helps mothers keep track of the day and time.

To ensure we were capturing containments accurately, researchers probed for additional details about containments caregivers specified (e.g., what does it look like; is it off the ground). In Tajikistan, the researcher conducted a walk-through the house to confirm infant containments in the household.

Infant Motor Skills

While the researcher interviewed mothers about the previous day, infants were observed in spontaneous activity on the floor and coaxed by the researcher to demonstrate motor skills. All infants were able to sit independently as they engaged with toys. All infants in the U.S. were able to crawl or walk approximately the length of a room to get a toy. Approximately half of Tajik infants (58%) were able to crawl, none could walk independently.

Results

Variety of Containment Devices Across Groups

Figure 1 A–H shows the variety of infants' containments mothers reported using the prior day. Containments ranged in the extent of restriction on infants' body, limbs, and movement. Mothers reported placing infants in *cribs* or in Tajik *gahvora cradles.* The Tajik researcher that conducted walk-throughs around the home did note some typical Western cribs in Tajik homes. However, mothers did not report use during the prior day. Those that did have cribs, noted that they did not use them regularly. Mothers reported having their infants in *arms* either carried or stationary on their laps. Seating containments that limited infants' mobility yet allowed for passive motion included *infant* carriers, belted *car seats*, *strollers* or *seated mechanical baby walkers.* We considered strollers and mechanical baby walkers together because both allow for passive locomotion (in the baby walker, infants are seated with legs dangling on the ground without balance support or weight-bearing). Moreover, both containments are infrequently used in Tajik homes. *Highchairs* limited infants' mobility and infants remained seated while stationary. We included *adult furniture* (parents' bed, couch) as containment as it is typically several feet off the ground, limiting mobility yet allowing infants to generate some movement (rolling, crawling, transition to sit). When not contained, infants were placed on *floor* or *ground,* which offered the least amount of restriction on the body, limbs, and movement.

Time Spent in Containment Devices During the Day

To examine the time infants spent contained during the day, as a first step, we established the length of the day—wake to bedtime—for infants across the two groups. Infants awoke for the day between 6:30 and 7:00 a.m. (M = 6:52 a.m. and 6:31 a.m. for U.S. and Tajik infants respectively). Almost all caregivers in the U.S. put infants down for the night in their cribs (95%, n = 20), alone in a separate room, and noted infants' bedtime to be 8:00 p.m. (M =

7: 58 p.m., *SD* = 0:37; *Med* = 20:00 p.m.). One parent reported co-sleeping with their child; three caregivers noted that during the night, they transitioned their infants into their beds.

Caregivers in Tajikistan put their infants down for the night a full hour later (*M* = 9:07 p.m., *SD* = 1:07; *Med* = 9:15 p.m., $t(42) = 4.01$, $p < .001$) in their gahvoras (62%, $n = 15$) or on "kurpacha" thin mats on the floor near their caregivers (29%, $n = 7$) or on adult beds with their mothers (8%, $n = 2$). The difference in infants' bedtime resulted in an hour and half difference in U.S. and Tajik infants' waking day (*M* = 13.12 hours, *SD* = 0.72 and *M* = 14.45 hours, *SD* = 1.18, respectively), $t(43) = 4.49$, $p < .001$.

Infants' nighttime containments related to infants' accumulated time on the floor or ground during the day. Contrary to our expectation, U.S. infants who were on adult beds or Tajik infants who were on the floor with caregivers at night (Figure 3) accumulated more daytime ground/floor hours (*M* = 7.26 hours, *SD* = 2.39) as compared to infants who were in cribs and gahvoras at night (*M* = 5.32 hours, *SD* = 2.94, $t(43) = 2.12$, $p < .05$).

Cribs and Cradles During Daytime

During daytime hours, caregivers in the U.S placed infants in cribs where they spent *M* = 2.64 hours (*SD* = 1.54) napping. Three infants spent 4+ accumulated hours in their cribs during daytime because they took two 2-hour naps; one infant spent an accumulated 6.75 hours in the crib, staying put and playing in the crib before taken out. In contrast, infants in Tajikistan spend more than double the time in their gahvoras during daytime hours (*M* = 5.33 hours, *SD* = 1.82; $t(43) = 5.31$, $p < .001$), with 75% ($n = 18$) spending 4+ accumulated hours, suggesting that gahvoras were likely used for baby-minding in addition to sleeping.

Unrestrained and Contained During Daytime

Figure 2 shows similarities and differences between the two groups of infants in the amount of time spent during the day on the ground or floor and in various containments in addition to cribs and gahvoras. A mixed measures 2(group) x 8(ground/floor and containments) ANOVA on duration confirmed an interaction between group and unrestrained/contained settings, $F(7, 301) = 12.54$, $p < 001$, and a main effect for setting $F(7, 301) = 98.40$, $p < .001$. Sidak-corrected pairwise comparisons (*t*-tests) confirmed differences between the two groups.

Infants in Tajikistan spent longer accumulated time on the ground or floor as compared to infants in the U.S., but infants in the U.S. spent longer on adult furniture as compared to infants in Tajikistan. Even when combining time spent on ground/floor and adult furniture, infants in Tajikistan still spent more time unrestricted as compared to infants in the U.S.. See Table 1 for means, standard deviations, and tests.

When contained during daytime hours, almost all infants in Tajikistan ($n = 20$) and in the U.S. ($n = 18$) spent comparable time in their caregivers' arms. Although infants in both groups accumulated time in strollers or mechanical baby walkers use was attributed to 17 U.S. infants (81%) and only 5 Tajik infants (21%). When only their time was considered, the 5 infants in Tajikistan spent more accumulated time in baby walkers (*M* = 2.90 hours, *SD* = 1.90) as compared to the 17 infants in the U.S. in their strollers (*M* = 1.04 hours, *SD* = 0.69;

$t(20) = 3.47$, $p < 01$). Given the availability of other containments in U.S. families' homes, infants in the U.S. spent time in infant carriers, car seats, and highchairs. None of the infants in Tajikistan had these devices in their homes (Table 1). Accumulated time in containments was equivalent for U.S. ($M = 8.10$ hours, $SD = 1.91$) and Tajik infants' ($M = 7.36$ hours, $SD = 2.77$), $t(43) = 1.03$, $p > .05$.

Number of Transitions Among Containments

Figure 3 shows timelines for each infant grouped by culture. Blue bars represent times infants were in their cribs or gahvoras; grey bars denote times when infants were unrestricted on the floor or ground; the remaining colors depict 6 other containments infants experienced during the previous day.

Inspection of Figure 3 A shows wider and fewer bars for infants in Tajikistan as compared to many narrower bars for infants in the U.S (Figure 3 B). In fact, Tajik infants amassed $M = 8.17$ transitions ($SD = 2.53$) compared to $M = 22.33$ transitions ($SD = 6.04$) for infants in the U.S., $t(43) = 10.50$, $p < .001$. The expected fewer transitions for Tajik infants imply that single containment bouts and periods on the ground/floor were prolonged. For example, the longest single bout of ground/floor was almost two hours longer for Tajik infants ($M = 3.56$ hours, $SD = 1.85$) as compared to the longest single bouts of ground/floor for U.S. infants ($M = 1.67$ hours, $SD = 0.68$).

By the same token, infants in Tajikistan spent longer bouts in gahvoras and other containments (arms, mechanical walkers, adult furniture) than infants in the U.S. On average, the longest containment bout for Tajik infants was 3.05 hours ($SD = 0.85$). In contrast, the longest containment bouts for U.S. infants were 2.00 hours ($SD = 0.64$), $t(43) = 4.63$, $p < .001$.

Infant Mobility & Containments

All U.S. infants were mobile. To ask whether locomotor ability altered time contained and unrestricted, we compared Tajik infants only: those who were mobile ($n = 14$) and pre-mobile ($n = 10$). A 2(locomotor status) x 2(contained and unrestricted) ANOVA confirmed only a main effect, $F(1, 22) = 23.34$, $p < .001$. During the day when not in gahvoras, Tajik infants spent more time unrestricted ($M = 7.09$, $SD = 3.12$) than in other containments ($M = 2.03$, $SD = 2.01$). There was no significant interaction between containment and locomotor status. But, Tajik infants who were able to crawl, on average spent 15 minutes longer on the ground or floor ($M = 7.11$ hours, $SD = 2.43$) as compared to Tajik infants who were not yet independently mobile ($M = 6.86$ hours, $SD = 3.96$). Tajik infants who were pre-mobile spend 40 minutes longer contained ($M = 2.43$, $SD = 1.90$) as compared to Tajik crawling infants ($M = 1.75$, $SD = 2.11$), but again this difference was not significant.

Discussion

Our cross-cultural approach of using time diaries to document the distribution of time infants spent in different containments offers a window onto the culturally situated practices of containment. The containments caregivers select and how they structure infants' experiences may be reflections of cultural beliefs and practices about childrearing

(Harkness, 2006; Harkness et al., 2009), as well as economic resources of families. Caregivers have implicit and explicit notions about what spaces are appropriate for infants to occupy, where to place infants for the night, and which activities infants can partake and when. Likely given the differences between the U.S. and Tajik samples on economic resources, the U.S. sample possessed a variety of devices relative to the Tajik sample. But, contrary to our expectations, our findings show that during the day, outside of naps, accumulated time contained was similar for the two groups. Containment devices in the U.S. and gahvoras in Tajikistan differ on the quality or type of restriction imposed on infants' bodies and limbs. Interestingly, once out of containment, Tajik infants seemed to have accumulated more time on the ground or floor. Perhaps this is because of their longer day, especially for infants who were put to sleep for the night aside their parents on the floor. Surprisingly, in both groups, crib- and cradle-bound infants at night, spent less time unrestricted as compared to infants who co-slept with caregivers. It is possible that infants in a crib or cradle at nighttime need a caregiver to take them out for the day as compared to infants who may co-sleep with caregivers. Once awake, co-sleeping infants can dart across the room of their own accord. Still unknown is the quality of that unrestricted experience.

Our examination of U.S. and Tajik infants' time spent in various containments suggests that despite differences in cultures and environments, infants in both countries spent a great deal of time in restriction in various locations, albeit the types of containments and distributions of time spent in them varied across groups. Our data supported our expectation that Tajik infants spent longer bouts restricted in gahvoras compared to bouts of containment for U.S. infants. Time contained, however, need not be conceptualized as necessarily bad. Daily experiences in various settings and containments—whether infants are on the floor, strapped to their caregivers, or in a gahvora—afford unique opportunities for infants' development. For instance, infants belted in a highchair cannot dart to a different room, but they can interact with others in the vicinity, pick up food and play with utensils within their reach. Similarly, infants held in arms have a wider vantage point of their environments unavailable to them when they are on the floor, and can gesture, vocalize, and engage in joint attention with those carrying them. In the gahvora, infants visually examine and sometime manually explore small toys or pacifiers caregivers leave dangling from the handle (Karasik et al., 2018). In other words, throughout the day, learning opportunities are dynamic: At one moment, while experiences in one domain (i.e., motor) may be limited, experiences in another domain (i.e., communication) may be bolstered.

Our data revealed a more uniform start and end of U.S. infants' waking days and frequency of transitions among the various containments as compared to infants in Tajikistan. When not in their cribs for naps, U.S. infants were shifted more frequently and across many different types of containments than Tajik infants. The brevity yet variety of containment for the U.S. sample may allow caregivers to tote infants along throughout the day as compared to Tajik caregivers, as they complete daily errands. But, this conjecture requires further examination. Use of various containment devices allows infants to be with caregivers throughout daily activities, perhaps accompanying them on errands. Keeping infants close but restricted could be explained by the prevalence of the nuclear family structure in the U.S., where parents may not have access to extended family members throughout the day to help monitor infants' whereabouts. While infants' locomotor exploration may be restricted

in various devices, containments do allow infants to partake or observe their caregivers' activities. U.S. infants' brief yet frequent bouts in containment were punctuated by brief periods of floor time. U.S. infants accumulated on average about 5 hours of unrestricted floor time. This finding is similar to the estimated 6 unrestricted hours reported in previous work (Adolph et al., 2012).

In contrast, Tajik infants experienced longer bouts of time in their gahvoras, were restricted in fewer containments, and underwent fewer transitions between containments than U.S. infants. Gahvoras are much more restrictive on infants' body and limbs than many of the containments U.S. infants had access to, and Tajik infants spent extended periods in it during the day, possibly beyond naps. Tajik infants' prolonged periods in gahvoras were interrupted by long periods on the ground, accumulating 7 hours, on average. It is possible, then, that Tajik infants may too have bountiful opportunities for movement and exploration. Interestingly, Tajik infants who were not strapped in gahvoras at bedtime and thus awoke near their parents on "kurpachas" on the floor accumulated more ground/floor time during the day as compared to Tajik infants who were slept in gahvoras, meaning infants could have opportunities to move and explore immediately once awake. In contrast, infants who awake in gahvoras would need to wait for their caregivers to take them out.

Limitations

Several noteworthy limitations apply to the present study. Our measure of experience relies on parent reports, not direct observations, and so suffers from memory bias associated with recalling placements and events. To mitigate this problem, we asked caregivers to report about the previous day, when daily events are still fresh in their minds. Moreover, our diary approach of time-stamped activities throughout the day is likely to be more accurate because caregivers were asked about recent activities in a narrower time frame. Despite confirming that the previous day was typical for families, we only captured one day. In future studies, measuring infants' experiences over several days may address questions about variability and consistency in infants' opportunities for movement and exploration (Franchak, 2019).

Although we aimed to measure infants' daily opportunities with movement, we focused on infants' containment, thereby capturing only a portion of infants' experiences. In future work, we will ask about whether infants take advantage of opportunities for locomotion and exploration when out of containments. We will inquire how much movement do infants generate when both U.S. and Tajik infants are out of their respective containments.

Conclusion

In sum, insights from this may challenge common assumptions about movement and restriction. We assume that movement is essential, and so restriction in turn must be harmful. U.S. practitioners, for example, advise parents to place infants prone during play (i.e., "tummy time") to encourage movement, promote upper body strength, and challenge infants by placing toys out of infants' reach to prompt crawling and walking. Would evading these activities lead to crawling and walking delays? The relation between motor opportunities and motor skills may not be linear and their long-term effects not clear. For example, the 1990s the Back to Sleep Campaign recommended parents to lay their infants supine for

sleep but also led parents to avoid prone positions during wakeful play times. Soon after, researchers reported short-term delays in prone skills (Oriel et al., 2006). However, findings on the relation between supine sleeping and delayed motor skills are inconsistent (Carmeli et al., 2009; Darrah & Bartlett, 2013; Salls et al., 2002). And, long-term effects of these delays were undetected; infants still acquired walking at similar ages (Davis et al., 1998; Oriel et al., 2006).

Our findings highlight the similarities and differences in Tajik and U.S. caregivers' practices around infant containment. Examining different support contexts available to infants is necessary for helping to explain differences in variability in infants' motor behaviors and expanding our current developmental theories.

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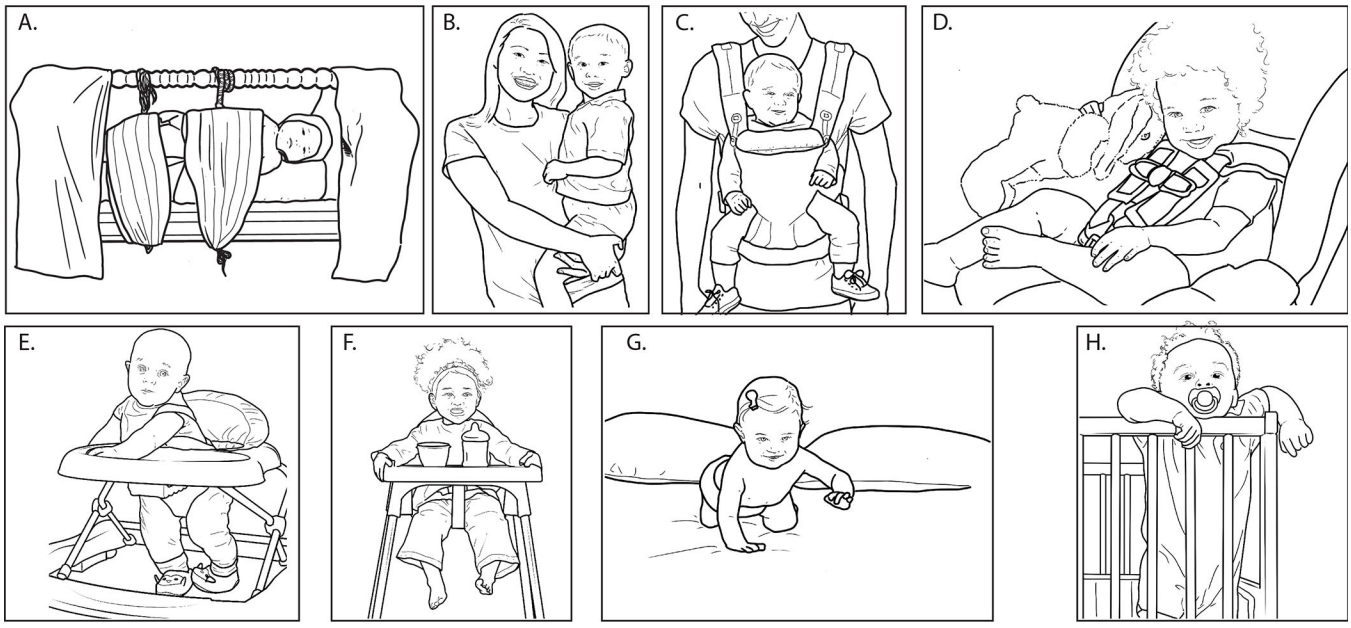

Figure 1.

Line drawings displaying different types of containments. Each representation shows an infant who is (A) swaddled in a gahvora cradle with arms and legs straightened and torso wrapped with wide binds which are secured to the handle; (B) in caregivers' arms with infants' body fully supported; (C) strapped to the caregiver in a carrier with infants' body fully supported; (D) in a belted car seat (or stroller) with limbs unrestricted; (E) in a mechanical baby walker with limbs unrestricted; (F) in a highchair with limbs unrestricted; (G) on adult furniture with posture and limbs unrestricted; (H) in a crib confined to one place with posture and limbs unrestricted.

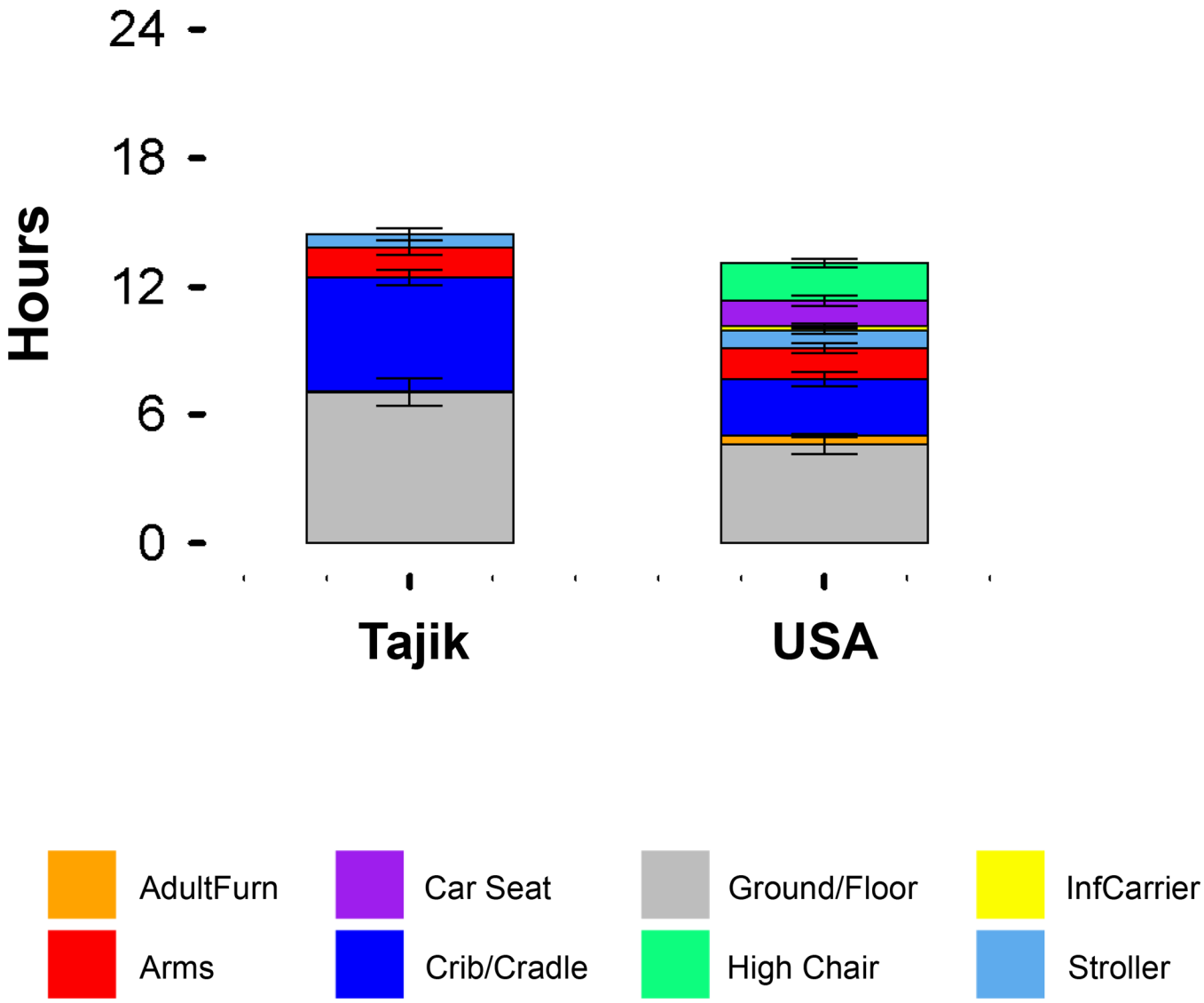

Figure 2.
Average hours infants spent in different containments and on the ground or floor out of each infants' waking day for the two cultures. Error bars denote standard error.

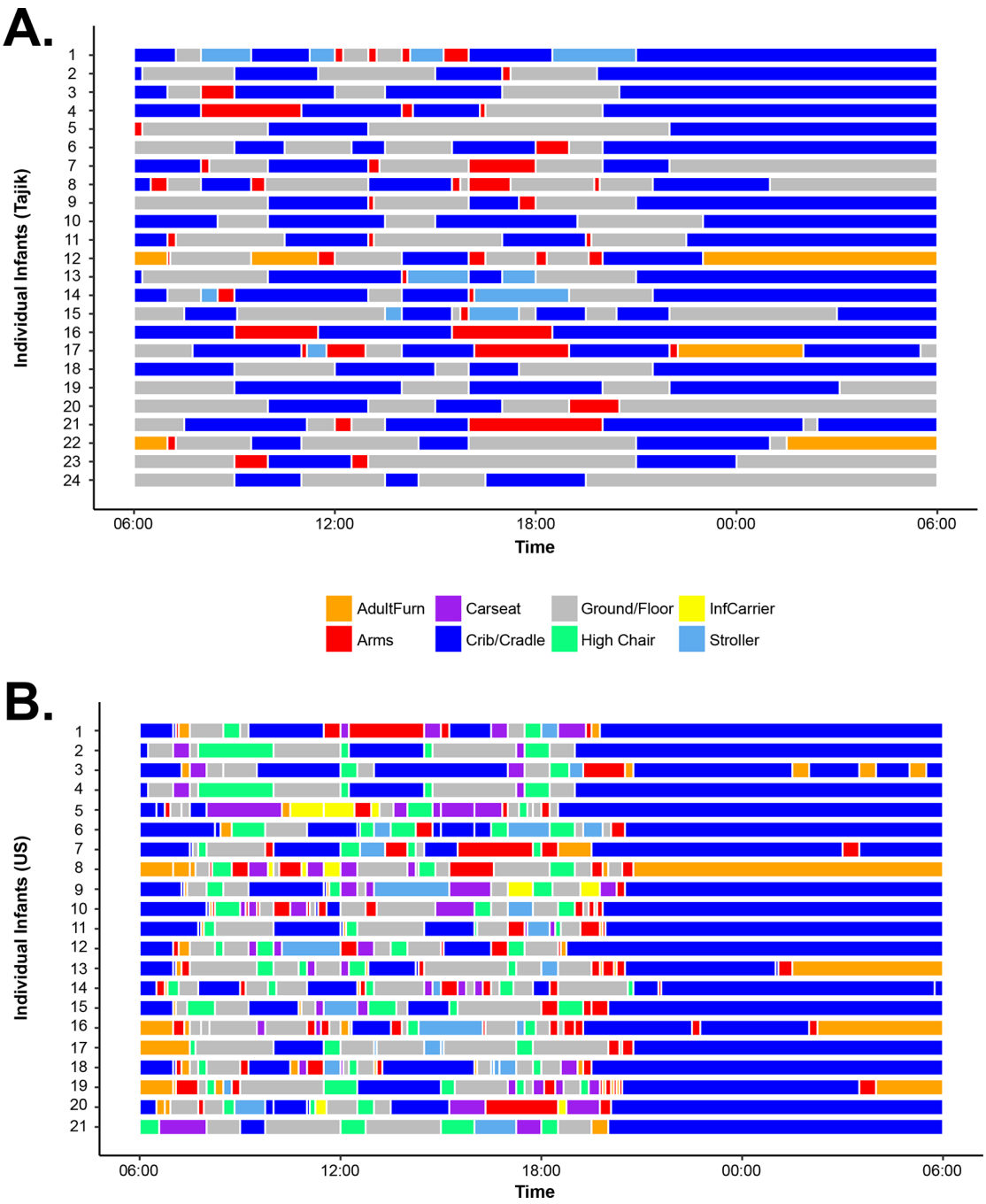

Figure 3.

Timelines for each infant (represented by the horizontal raster bars), from 6 a.m. on the previous day until 6 a.m. on test day, by culture group.

Table 1.

Number of hours infants spent in different containments across settings. Numbers represent means in hours and standard deviations in parentheses. Post-hoc t-tests (Sidak-corrected) test for significant difference between the groups.

Containments	**Tajik**	**US**	***t*-tests, *p*s**
Adult furniture	0.08 (0.41)	0.43 (0.31)	$t(43) = 3.17$, $p < .01$
Arms	1.43 (1.59)	1.43 (1.06)	*ns*
Stroller/walker	0.60 (1.44)	0.84 (0.75)	*ns*
Infant carrier	0 (0)	0.23 (0.56)	$t(43) = 2.04$, $p < .01$
Car seat	0 (0)	1.21 (1.13)	$t(43) = 5.28$, $p < .01$
Highchairs	0 (0)	1.74 (0.92)	$t(43) = 9.24$, $p < .01$
Crib/cradle	5.33 (1.82)	2.64 (1.54)	$t(43) = 5.31$, $p < .01$
Unrestricted			
Ground/floor	7.00 (3.08)	4.59 (2.08)	$t(43) = 3.04$, $p < .01$
Ground/floor + adult furn.	7.09 (3.11)	5.02 (2.05)	$t(43) = 2.60$, $p < .05$