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SUBJECTIVE APPROACH TOWARDS THE WELFARE UNDERSTANDING IN THE DOLPHIN ASSISTED THERAPY: EXPERIENCES OF FAMILIES IN PILOT RESEARCH

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Abstract

The article deals with a subjective approach towards the welfare of humans and dolphins perceived in the dolphin assisted therapy. Dolphin assisted therapy (DAT) is a therapy based on both-sided collaborative communication between child and dolphin. A pilot research of subjective welfare understanding is presented in the article. Eight families raising children with disabilities (one family with a child with cerebral palsy, two families with children with Down syndrome, and five families with children with autism spectrum disorder) took part in the dolphin-human welfare research. The research was carried out using a research strategy of triangulation applying different methods. The research was carried out using Portable Eye tracking system (SMI REDnScientific), Facial expression recognition software (Noldus Facereader 6.1), Event logging software for observational data collection, analysis and presentation with physiological data synchronization capabilities (Noldus Observer XT 12.5), qualitative telephone interview a week before the session of dolphin assisted therapy, open form for evaluation of the results of dolphin assisted therapy in a child one month later after the participation in DAT. The results brought to the light that the families were mostly happy when watching their children; families raising children with severe disability were most satisfied with the dolphin assisted therapy; the subjectively perceived welfare of dolphins was understood as a possibility to choose a child for communication; also, if the therapy goals were measurable, the more satisfying results were reflected by parents after a month after the dolphin assisted therapy program.

Keywords: *dolphin assisted therapy, welfare of humans, welfare of dolphins, disability.*

Introduction

Welfare is not an easy concept to define. The term is used in common language with an assumption that everybody knows what it means. Often welfare is understood as a general

understanding about individual or group status from the social, psychological, economical, medical, spiritual or other position. Usually positive feelings are associated with positive cases as well as negative feelings with negative cases. And how to define welfare perceived by families participating in the dolphin assisted program? In general, it could be stated that animal assisted therapies are oriented towards human wellness (Parish-Plass, 2013). The concept of welfare is broader than wellbeing and can be understood from many different positions, however, in this article as a working concept welfare is regarded as *'perspective of happiness and wellbeing of'* (Greve, 2008, p. 52) the family which is in a problematic situation. In this way, it is possible to approach subjective family understanding about the welfare in particular situation – program of dolphin assisted therapy.

Analyzing context of families they are perceived as functioning systems moved from their balance and stability because of occurred disability (Kandel, Morad, Vardi, & Merrick, 2005). Disability or health issues of one family member affect the welfare of all the family. Usually one family member cannot make work plans especially in child's chronic ill situation (Smith et al., 2002). Recent research (Kandel et al., 2005; Kandel & Merrick, 2007;Vandermindeln, 2010; Waldman, Perlman, & Rader, 2010; Ravindran & Myers, 2012) highlights that a strive of families for balance and their life cycle is perceived as difficult existential experience despite the severity of disability as parents always are the addressed link in care, supervision, and education. Burnouts because of longitudinal stress and expenditures on mental and physical health reduce family's resources; also, reactions of family are different depending on the type of diagnosis, such as acceptance process for parents of a child with physical disability is easier in comparison to mental disabilities (Kendel & Merrick, 2007; Reichman, Corman, & Noonan, 2008). Dolphin assisted therapy in Lithuania belongs to the branch of complementary and alternative medicine (CAM) (SAMa, SAMb, 2015). Even though there are not so many systemic statistical data about the families using (Vaičekauskaitė, Kreivinienė, & Tilvikas, 2014) complementary and alternative services, the research (see Hanson et al., 2007; Ravindran & Myers, 2012) shows that more than a half of the families raising children with disabilities have tried at least one CAM method. The research shows that CAM is searched when: families believe that it is a safe method of wellness (Committee on Children with Disabilities, 2001), traditional methods are not helping (Levy & Hyman, 2005) or in chronic disability cases (Carlson & Krahn, 2006; Smith et al., 2002) when families are in a discomfort, chronic pain, depression, tiredness situation. Most often CAM is searched and tried in Down syndrome, autism spectrum disorder, and cerebral palsy cases (Hyman, Levy, 2005). Speaking about the benefits reached in CAM, most often parents refer to satisfaction in emotional, psychological, high-quality service (Committee on Children with Disabilities, 2001; Wong & Smith, 2006; Friend, Summers, & Turnbull, 2009), and outcome for a child (Friend et al., 2009).

As far there is a lack of research in subjective analyses of family situation before, at the moment of using, and after using additional therapies, this article focuses on families raising children with Down syndrome, autism spectrum disorder, and cerebral palsy in order to reveal the subjective welfare (happiness and wellbeing) understanding in the process of dolphin assisted therapy.

The **aim** of this study is to disclose welfare understanding of participating parties – humans and dolphins – in dolphin assisted therapy through the subjective parental approach.

Research objectives:

1. To analyze the subjective welfare understanding of family in a disability situation and dolphins while participating in DAT program.
2. To reveal subjective emotional status of parents whose children participate in dolphin assisted therapy of both-sided welfare model while participating in the therapeutic sessions.
3. To bring to the light subjective evaluation of efficiency of dolphin assisted therapy program by families.

Research subject:

Welfare subjective understanding of participating parties: humans and dolphins in dolphin assisted therapy through the subjective approach.

Methodology

Research participants. Eight families raising children with disabilities (one family with a child with cerebral palsy; two families with children having Down syndrome; five families with children with autism spectrum disorder) took part in dolphin-human welfare research. Families were selected randomly from general list of participants because of geographical criteria and diagnostic criteria – Down syndrome, autism spectrum disorder, and cerebral palsy. This selection was made because: 1) families raising children with Down syndrome, autism spectrum, and cerebral palsy are amongst the most common CAM service users; 2) children with these diagnosis are most often clients of DAT program. All the families participated free of charge, being informed about the possibility to terminate their participation in the research at any time (see Table 1). Families came from the biggest cities of Lithuania. Research was carried out from November, 2016 to March, 2017. Families participated in a holistic dolphin assisted therapy for two weeks. Each child participated in 10 therapeutic sessions with dolphins and additional methods, addressing individual needs, such as: Sherborn movement therapy, TEACCH structured learning, arts educational session, physiotherapy, music educational session, and sensory integration were applied. Families participated in individual consultations. Ten therapeutic sessions with dolphins, eight additional educational or therapeutic activities for a participating child, and at least three extended consultations were organized for each of the families in a two-week research program.

Table 1. Information about the participants of the research

Case No.	City	Family members	Gender, age of child	Diagnosis
11	Klaipėda	4	Boy, 7 yrs.	Down syndrome
14	Šiauliai	5	Girl, 7 yrs.	Autism spectrum disorder
21	Šiauliai	4	Girl, 11 yrs.	Down syndrome
22	Kaunas	4	Girl, 9 yrs.	Autism spectrum disorder
23	Kaunas	4	Girl, 8 yrs.	Autism spectrum disorder
24	Vilnius	4	Girl, 4 yrs.	Autism spectrum disorder
25	Širvintos district	3	Boy, 5 yrs.	Autism spectrum disorder
26	Vilnius district	4	Boy, 9 yrs.	Cerebral palsy

Methods. A method of triangulation (Foss & Ellefsen, 2002) was used in order to apply multiple ways exploring subjective situational understanding of welfare of family having a child with disability before/at the moment of/and after participation in the dolphin assisted therapy (see Figure 1).

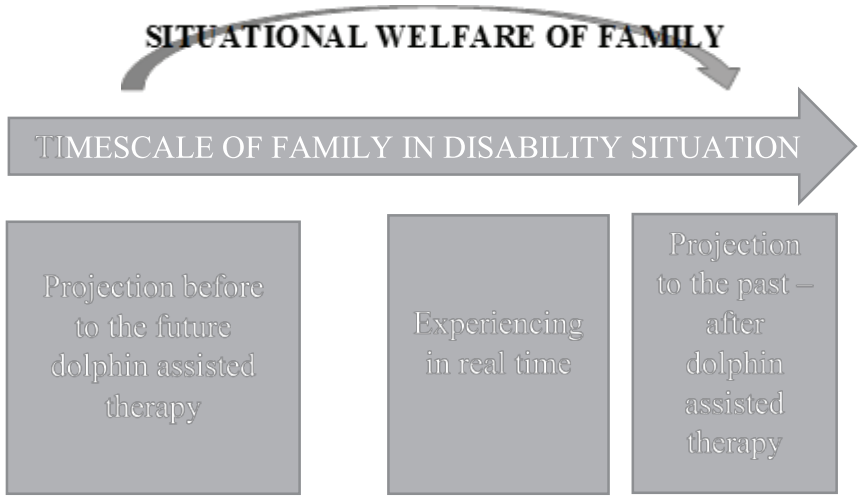

Fig. 1. Projection to the future before A model of "3-EX" for exploring subjective understanding of situational welfare of family

Family expectations were explored using extended telephone interviews with the psychologist. Families were asked about their current situation, expectations towards the therapeutic program, how they imagine the dolphin assisted therapy, what the biggest fears are, how they see a dolphin in the process, etc. In addition, they were asked to share their understandings about the welfare aspects of the dolphins under human care. A month after the dolphin assisted therapy, the families were asked to fill in the extended open-question form about meeting their expectations in dolphin-assisted therapy, how they saw the result and to share their expositions. It was decided to collect different materials – expectations, experiences (emotional context), and expositions to the past for having situational realities created by participating families.

It is important to note that the analyzed phenomenon does not support *generalization*, as concluded by Mayring (2007) stating that the *only generalization is that there is no generalization* when we speak of such sensitive research. Content analysis (Pidgeon & Henwood, 1994) was applied for text analysis. Open coding (Elo & Kyngäs, 2008) was used for qualitative telephone interview data and open form data in order not to miss some important data. Some of the textual contexts were left wider than traditionally in content analysis (Denzin & Lincoln, 2003). This kind of strategy can be applied when the main idea is not to leave the uncolored content analysis with naked words but draw the whole picture of experienced phenomena (Angelique & Culley, 2000; Brabant & Mooney, 1999; Riessman & Quinney, 2005) – perception of situational welfare reality before, during, and after the dolphin assisted therapy. Research results are displayed with wider authentic citations increasing trustworthiness of the research and indicate from what kinds of original data the categories were formulated (Elo & Kyngäs 2008).

Experiences were collected at the center of Dolphin Assisted Therapy of the Lithuanian Sea Museum: one of the family members (randomly selected mother or father) was asked to observe the first and the last dolphin assisted therapy session with their child. Videos were recorded and analyzed with face reader program. The research was carried out using Portable Eye tracking system (SMI REDnScientific), Facial expression recognition software (Noldus Facereader 6.1), Event logging software for observational data collection, analysis and presentation with physiological data synchronization capabilities (Noldus Observer XT 12.5), qualitative telephone interview a week before the dolphin assisted therapy, open form for evaluation of the dolphin assisted therapy results in their child one month later the participation in DAT. Eye tracking data were collected with SMI REDn Scientific (SensoMotoric Instruments GmbH) hardware and SMI Experiment Center 3.6 (SensoMotoric Instruments GmbH) software at 30 samples per second on a DELL Precision 4800 laptop while parents were watching videos of Dolphin therapy (mean duration 30 min 46 sec, standard deviation 2 min 6 sec) at a resolution of 1920×1080, on a 15.6" wide laptop screen from a distance of 50-70 cm. Eye tracking data analysis software SMI BeGaze 2 version 3.6 (SensoMotoric Instruments GmbH) was used for exporting dolphin assisted therapy videos overlaid with gaze markers (a moving bright-red circle) in MP4 file format. These videos were subsequently imported into Observer XT 12.5 (Noldus Information Technology, Wageningen, the Netherlands) program in order to manually score parents' gaze direction (towards their child or in another direction) and child's visibility. During video playback, facial expressions of parents were simultaneously filmed using a Logitech HD Pro Webcam C920 camera, mounted on the laptop lid facing the research participants. The same SMI Experiment Center 3.6 (SensoMotoric Instruments GmbH) software was used for synchronous recording of videos at 30 frames per second. FaceReader 6.1 (Noldus Information Technology, Wageningen, the Netherlands) was used in this study for offline frame-by-frame facial expression analysis of video recordings. The software works in three steps:

1) Detects the position of the face in an image using a Viola–Jones cascaded classifier algorithm (Viola & Jones, 2004);
2) Renders the face using an Active Appearance Model (Cootes, Edwards, & Taylor, 2001) to synthesize an artificial face model, which describes the location of 500 key points in the face and the facial texture of the area delineated by these points;
3) Observed facial expressions are then classified into six basic emotion patterns ('angry', 'happy', 'disgusted', 'sad', 'scared', 'surprised') and a 'neutral' state, and scaling these facial expressions from 0 (emotion is not visible at all) to 1 (maximum intensity), with 0.2 as slightly visible and 0.5 as clearly visible expression (Kuilenburg, Wiering, & Uyl, 2005).

To achieve maximum accuracy of facial expression identification, FaceReader's number of model-fit iterations was changed to maximum (i.e. 20), while default configuration values were used for other parameters (e.g. General61 face expressions modelling algorithm, analyzing every frame of the video, smoothen classification values, without continuous calibration). The models for FaceReader's facial expressions are improved with every version: General61 model reduces the software's bias towards negative expressions.

Valence indicates whether the emotional status of a subject is positive or negative. Valence is calculated by subtracting the intensity of 'Happy' from the intensity of the negative emotion which is the most expressed. For instance, if the intensity of 'Happy' is 0.8 and the intensities of 'Sad', 'Angry', 'Scared' and 'Disgusted' are 0.1; 0.0; 0.05 and 0.05, respectively,

then valence is 0.8-0.1=0.7.Arousal indicates whether the test participant is active (+1) or not active (0). Arousal is based on the activation of 20 Action Units (AUs) of the Facial Action Coding System (FACS). For statistical analyses, maximum values of facial expression patterns ('angry', 'disgusted', 'happy', 'neutral', 'sad', 'scared', 'surprised') of the respective section (looking at the child or not) were used.

Research results

The main research results of the telephone interview and open form are displayed in Table 2. The research results allowed to divide data into three categories: expectation (subcategories: psychoemotional expectations, physical expectations, and sensory expectations) and exposition (subcategories: psychoemotional shift, physical shift, sensory shift). The third category representing the dolphin (subcategories: role in DAT, temper of dolphins, and welfare aspects).

Table 2. Main research results of content analysis: Expectation vs Exposition

Categories	Expectation (before DAT)	Exposition (after DAT)
Subcategories:		
Psychoemotional issues/shift	*too sensitive (8), low confidence (3), to relax (8), 'open' emotions (5), no social skills (5), behavioral problems (3)*	*much more stable in emotions (8), less negative (4), less opposing (5), increased speech understanding (7), better attention span (8), accepting new situations much more easily (5)*
Physical issues/shift	*decreased epilepsy strokes (1), small step towards independence – body control and coordination (2)*	*epilepsy disappeared, or decreased up to 2 times a day (1), much more motivated in movements (2), exploring the environment (2), started visually follow family members (1), better head control and coordination (1)*
Sensory issues/shift	*no social interaction (8), emotional and behavioral problems (5)*	*emotions more stable (5), has ideas what to do at home (4), significant improvement in speech (2), increased creativity (5), rides bicycle (1), better in motor planning activities (5)*

Parental expectation and exposition reveals three-dimensional willingness of change in dolphin assisted therapy. Each counted subcategory value reveals important context to the family. Analyzing psychoemotional context, parents (23) had more expectations for child's status hoping that '*she will be much more cheerful, and finally will be able to relax, as she often is so tensed*'. Mother (25) of a boy with autism spectrum said that '*emotions are the most important for us as far as they can break his autistic nature… and language, of course. I would like him to get much more social skills and communication*'. Expressing expectations, families (11, 14, 21) stated that their attitude towards the therapeutic program was realistic, however they evaluated even the slightest change: '*for us at least a slight step forward is a great deal*'; '*we hope to make at least a smallest step towards self-dependence'*, '*we hope she will start using at least gestures and in this way start to communicate*'. Same results were found in other research studies (Vaičekauskaitė & Kreivinienė, 2011; Breitenbach, Stumpf, Fersen, & Ebert, 2009; Kreivinienė & Perttula, 2012) about the tiredness of the families in a disability situation. The described research (ibid) revealed that the most important aspects in dolphin

assisted therapy for the families are: finding emotional support, improvement in inner sense of coherence, and emotional stability of family life and functioning.

One month later after the dolphin assisted therapy, the families, evaluating welfare aspects of the child and family, concentrated on the main changes in the child. All the parents mentioned increased attention span, such as (22): *'for her it was very complicated to get concentrated on any activity for particular (certain) time, now she is able not only to keep attention for some time and activities but also she has improved in creativity – now she invents ideas for her activities at home'*. Speaking about being less negative, all the parents mentioned that their children were happy together with dolphins. Children started sharing their emotions with dolphins, such as (23): *'she was especially reserved, shy and unsociable, even during participation in the dolphin assisted therapy we noticed her fascination about the sessions with dolphins… and she was willing to share her experience. Still now we see this progress: she speaks much more, shares her experiences at home, and we observe less negativity and opposing'*. Change of children when they accept new situations (5) is much easier perceived as a change for the whole family (24): *'for our whole family it was a fantastic program because our child changed significantly. Now she is much more stable in emotions and easier accepting situational changes, she is not having tantrums any longer because of not being able to predict'*. Improvements in cognitive, emotional, physical and social spheres were documented by many authors investigating dolphin assisted therapy (such as Humphries, 2003; Nathanson, 2007; Rugevičius et al., 2016). A recent study (Rugevičius et al., 2016) evaluating the effectiveness of dolphin assisted therapy for autism spectrum disorder from long-term approach revealed that positive changes in behavior, sensory and cognitive spheres occurred in 60 percent of the children. Kreivinienė & Perttula (2014) conceptualized dolphin assisted therapy as an innovative method for learning where different learning contexts may be applied in support of dolphins.

Analyzing physical issues and a change a month later after the dolphin assisted therapy program, parents spoke about uncontrolled epilepsy stroke (26) situations: *'his epilepsy is absolutely uncontrolled by any drugs, sometimes we have up to 4-6 breakdowns a day, this makes all the family members really tired.'* Analyzing the situation a month later after the dolphin assisted therapy program, parents mentioned positive physical shift forward (26): *'for us this is a miracle that the epilepsy strokes disappeared after so many years and now when they came back after a month they were less and weaker – we have up to 2 breaks a day. For us this is a vast step forward.'* After a month, parents reported more physical changes, such as (24; 26): *'when we came our problem was that she was not moving at all, now the 'problem' is that she moves too much'; 'we notice that he is much more motivated to act self-sufficiently, <…> we see that his movement around the space got much more flexible, <…> he has better trunk control and he even learned to change his position from lying to sitting without support. What is absolutely new to him, he started to follow family members with his eyes, previously he was just dizzy or sleepy.'* The same research results were brought to the light in Kreivinienė & Perttula (2012) research revealing the meaningfulness of dolphin assisted therapy not only for a child but for the whole family system when raising a child with complex disability. The severe life situation in longitudinal stress revealed a need of search for the rest and harmony. Therefore, the main expectations were linked with *'natural'* therapy for improving physical status of the child (ibid).

Analyzing the subcategories of sensory issues and sensory shifts (shifts in emotions), all the families as the biggest (the most worrying) issues mentioned the children's unwillingness

to interact with other children/ to show some interest towards other children or experienced social interaction issues, such as (11; 14; 23; 25): *'it is really hard to interact in everyday situations as she is very negative'; 'he is not independent as he does not understand the social world, the social rules we live in'; 'he does not have any social skills at all, he has very serious emotional and behavioral problems <...> does not imitate others'; 'we do not know if she is happy, I show her PECS communicative pictures but she does not react'*. Half of the families mentioned that praxis ideation (knowing what to do, Bundy, Lane, & Murray, 2002) function got better (14; 21): *'she always wanted us to entertain her at home and was not able to invent anything; now after coming back home from school, she goes playing social games'; 'before she did not know what to do, just was lying on the sofa, now she is much more interested in the objects of the environment and she started exploring how to use them'*.

Families (5) mentioned that emotional stability and motor planning abilities increased, as well as activity level, such as (22, 24, 26): *'he is much more active in his vocalizations, reacting to sound, view, etc.'; 'she learned to jump <...> now can climb on slides and Swedish wall <...> she learned to fasten buttons of sweater and ride balance bicycle <...> she learned to stop after running, can stand in a horizontal position'; 'still she is full of positive emotions'*. It could be analyzed from the sensory integration perspective that when the brain has an idea of intended act, the child can conceptualize the goal. Ideation (knowing what to do) is a function of cognitive processes; it contributes to the human ability to be creative and playful when interacting with the environment. For children's ideation it is important to play scenarios (Bundy et al., 2002). The same sensory important research results were documented in the long-term-effect evaluation for autism spectrum disorder (see Rugevičius et al., 2016).

Analyzing the representation of dolphin in the therapeutic process, three subcategories were defined: role in DAT, temper of dolphins, and welfare components. These research results are very important in seeing the both-sided vision of therapeutic process. When speaking of the dolphin role in the therapeutic process, all the families reported subjectively positively perceived roles implemented by the dolphin: attaching (will not leave a friend in misfortune) (1), collaborating (1), captain (2), leader (2), team member (8). The temper of the dolphins was defined as: curious (1), understanding children's moods, needs, issues (1), affectionate (1), happy (2), lively (2). The majority of families named dolphins as sociable (6) animals, very intelligent (8), and all the parents thought that dolphins enjoyed (8) the dolphin assisted therapy. The similar results were presented in Nerves & Giger (2017) quantitative research on representation towards dolphins which revealed that 'warm and competent' features were addressed to those animals.

Speaking about the welfare of dolphins, all of the families named key components for the dolphins: normal rhythm of the day (daily routine) (8) and being able to choose a child in the therapeutic process (8). Social needs of dolphins – belonging and being loved (7), receiving positive reactions from the participant and trainers (6) were said to be of the same importance. Majority of the families participated in the research also named happiness (5) as one of the welfare components. The least important factors for the welfare of dolphins were named physical needs (3) and veterinary care (3). There are different points and discussions about the understanding of dolphins' welfare. The study of Baumgartner (2016) suggests a perception of animal welfare at re-thinking Maslow 'Hierarchy of needs pyramid' where welfare is graded from physiological, veterinary care, safety, social needs, mental stimulation, to the choice. It is interesting that the families noted the same aspects during the therapy process, however, considering the most essential welfare aspects, they orientate towards two

aspects addressing to the highest welfare – choice and social needs. Subjectively perceived basic animal needs were named by families: physical, positive training, veterinary care and safety, were understood as conventional and meeting elementary needs.

Data of experience collected from video analyses represented in Figures 2 and 3 revealed that generally it was not possible to say which video was observed more accurately: the first or the tenth. Parents (codes 21, 23, 26) spent more time on observing the last session with their children. Time spent watching the child does not have any importance on diagnosis, as the last session was mostly observed by all the parents of all the represented groups of disability (Down syndrome, cerebral palsy, and autism spectrum disorder). The emotion of 'happiness' was experienced almost by all the parents most of the time when they observed the child. Only one participant (observing child with autism spectrum disorder) experienced low happiness moments. The other parents were detected experiencing at least 60 percent of time feeling happiness while observing their child in therapeutic activities with dolphins. Even more, participants (see Figure 3, codes 11, 14, 26) observing the last dolphin assisted therapy session with their own child were happier than watching the first session with dolphins. Such emotional status can state about changing emotional status for both: the child and the parents. The same was proved by Breitenbach et al., (2009) when research in DAT with children having severe disability revealed that even if educators did not notice big change in a child's status, there was an obvious change in parent-child interactions. The child had much better communicative abilities and social-emotional behavior. However, a study (see Friend, et al., 2009) on various family-centered and child-centered interventions proved that reducing parental stress and sustaining emotional well-being for parents are the most efficient models for family support. This study (ibid, 2009) brought to the light that all the parents evaluated the quality of intervention due to the factors such as: positive life domains of family interaction, emotional support, and child's with disability outcome. The same results were documented in Kreivinienė & Perttula (2012), Kreivinienė & Vaičekauskaitė (2014) studies when expectations for dolphin assisted therapy mostly addressed to emotional support and outcomes for physical status of children.

Fig. 2. Time span when parents watched their child

Fig. 3. Level of parent's happiness when watching their child

Interesting and controversial results are displayed on Figures 4 and 5. Half of the parents observing their children were more surprised of the last session in comparison to the first (Figure 4, codes 11, 21, 22, 26). Figure 5 displays experienced disgust when observing the child. In all the cases, a feeling of disgust was the least expressed while watching the tenth session.

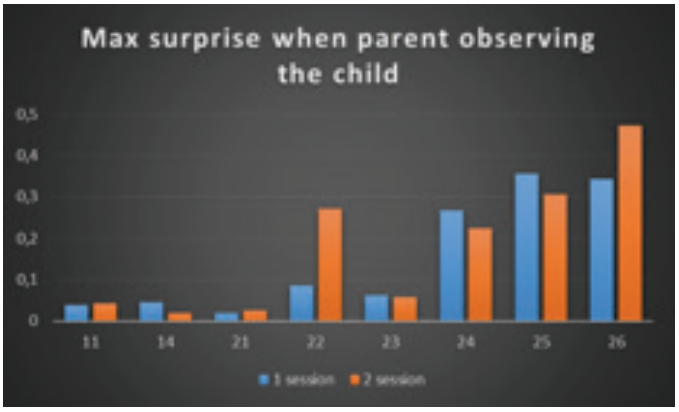

Fig. 4. Maximum of surprise when parent observes the child

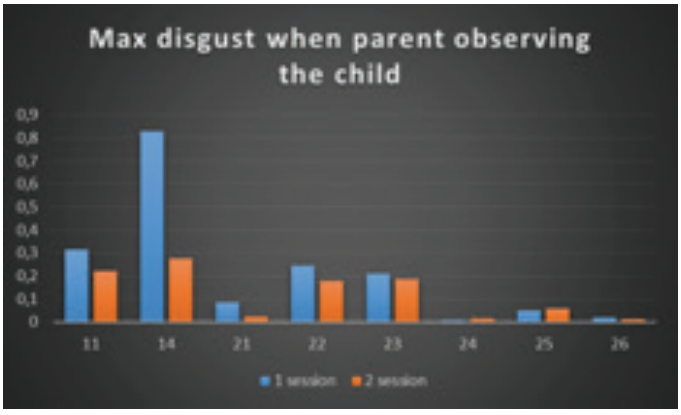

Fig. 5. Maximum of disgust when parent observes the child

A psychiatric study of disgust (see Nadeau et al., 2016) psychometric evaluation showed that the degree of experienced disgust may vary in the presence of aversive stimuli and is associated with experiencing anxiety. Therefore, it can be stated that Figure 5 pictures decrease of the parental stress when they observed the first and the tenth session. These statements could be supported by qualitative interview data collected on telephone before the dolphin assisted therapy, when the families said that they were worrying of many things related to the therapeutic process, such as: '*what if the child will not get into contact with dolphin*', or '*dolphins will not be willing to communicate with the child*'. The same fear of rejection was documented in another study on dolphin assisted therapy (see Kreivinienė, 2012) when the families in a disability situation shared their experience about social support system and common situational reality – feeling of rejection, therefore, one of most positive aspects named by families was a feeling of '*acceptance'*, and that they are '*needed'*.

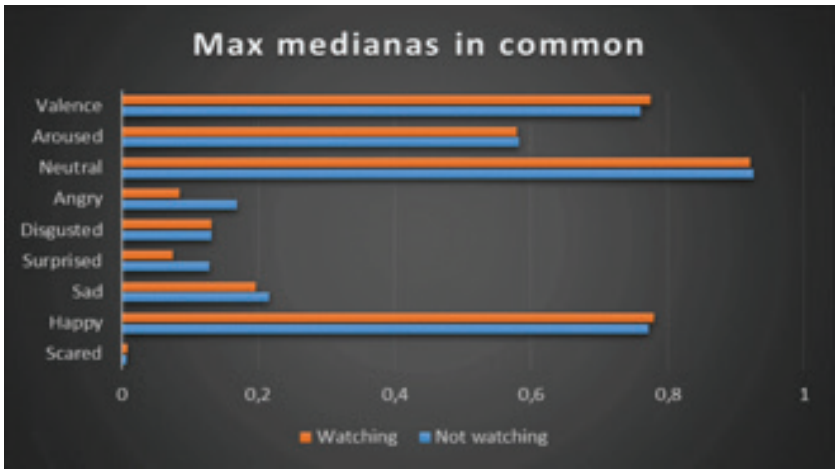

Fig. 6. Maximum medians in common

Figure 6 shows maximum medians in common. It is seen that most of the time the parents watching their children were neutral, happy, and aroused. Negative emotions, such as 'disgusted', 'angry', or 'sad' were less detected in comparison to positive emotions.

Discussion about the results

A number of studies including animals in therapeutic activities (Kreivinienė & Vaičekauskaitė, 2014; Davis et al., 2015; Esposito et al., 2011; Kreivinienė, Perttula, 2014; Rugevičius et al., 2016) suggest that human-animal interaction impacts on the welfare of a child and the family in disability situation. Kreivinienė & Vaičekauskaitė (2010) conceptualize that dolphin assisted therapy can be viewed from the systemic perspective, when improvement in dimensions of one family member influences the improvement in inner sense of coherence of all the family system. From another point of view, some analytical reviews (such as Marino & Lillienfeld, 2007a; 2007b) report the flaws of the methods in such kind of studies. The main objective issues for all the centers of dolphin assisted therapy are very high costs of research, when it is almost impossible to avoid side factors, or when some instruments are not sensitive enough to measure subjective experience. The same can be stated about this pilot research as it also has limitations. However, the study of subjective welfare understanding derives from

the presented evaluations of families, time and context specific (Mayring, 2007), which is allowed for phenomena analysis. The research of qualitative approach also allows to create the strategy of constructed credibility (Kimberlin & Winterstein, 2008) when representatives of the universe are selected (Elo & Kyngäs, 2008) as it was done in this research selecting three groups of families out of CAM users.

The research results brought to the light the significant aspects of situational welfare before/during and after the dolphin assisted therapy. The expectations of all the families were related to health situation and wellbeing of the child. The families expected to achieve results in psychoemotional, sensory, and physical status of the child. The exposition measuring change in health status a month later after the dolphin assisted therapy program revealed that most of the expectations were realistic, and families clearly described the achievement. The same results were proved by other studies when evaluation of the dolphin assisted therapy was done a month after the therapy or even later (Kreivinienė & Vaičekauskaitė 2010; Rugevičius et al., 2016). The study also revealed that evaluating the research results greater changes and more positive aspects were named by the families in a complex disability situation, the number of improvements in all three spheres: sensory, psychoemotional, and physical. Same results were found in the long-term effectiveness study (Rugevičius et al., 2016) – when the correlation meaning was measured between the severity of symptoms in autism and effectiveness of dolphin assisted therapy.

The spectrum of emotions detected during the ongoing dolphin assisted therapy program proved close relationship of all the family members and common understanding of welfare. The study results do not allow drawing diagnostic-specific conclusions as far as the subjectivity and individual sensitivity was detected. Figures 2-6 demonstrated spectrum of emotions covered by families during the participation in the dolphin assisted therapy. Figure 5 allowed to state that the anxiety experienced by families decreases considerably at the last session of the therapeutic program. The results also contradicted earlier findings of Kreivinienė & Vaičekauskaitė (2010) that dolphin assisted therapy was especially emotionally supportive in complex disability case as far as the biggest anxiety-like changes were detected in both groups: complex disability and autism spectrum disorder with expressive verbal language. Additionally, very important findings for all the animal assisted therapy programs – the more precisely therapeutic program is discussed with clearly formulated goals, the more easily for families to set measures for evaluation.

Conclusions

- The research on subjective welfare understanding revealed that orientation of the child wellbeing and happiness for families was the most important. Satisfaction with therapeutic program depended on the severity of disability – the greater symptoms were named and the greater spectrum of expectations was named, the more subjective satisfaction was detected. Also, the more precisely goals were formulated the more families were satisfied with the result.
- Speaking about the welfare aspects of dolphins, families subjectively perceived the key welfare aspects of dolphins as choice (being able to choose a child) and normal rhythm of the day. The other listed aspects of welfare were related to social behavior and positive emotions, such as being loved, feeling belonging to somebody, positively reinforced, and happy. Physical aspects, such as veterinary care and physiological needs, were named as the least important, because families perceived them as already fulfilled in European dolphinariums.

- The research results allowed to collect important subjective understanding on welfare of the families participating in the dolphin assisted therapy program. Despite a small group of respondents, the research itself was important for further collecting of more reliable research data: the mentioned expositions refer to the importance of collecting wider evidence-based research via psychoemotional, physical rehabilitation and sensory integration possibilities. This research allowed to state that emotional status of the family evaluating the change from the beginning to the end of the therapeutic program is more filled with positive emotions, the anxiety decreased considerably and most of time families experienced happiness.

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SUBJECTIVE APPROACH TOWARDS THE WELFARE UNDERSTANDING IN THE DOLPHIN ASSISTED THERAPY: EXPERIENCES OF FAMILIES IN PILOT RESEARCH

Summary

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The article deals with a subjective approach towards the welfare of humans and dolphins perceived in the dolphin assisted therapy. Dolphin assisted therapy (DAT) is a therapy based on both-sided collaborative communication between child and dolphin. A pilot research of subjective welfare understanding is presented in the article. Eight families raising children with disabilities (one family with a child with cerebral palsy, two families with children with Down syndrome, and five families with children with autism spectrum disorder) took part in the dolphin-human welfare research. The research was carried out using a research strategy of triangulation applying different methods. The research was carried out using Portable Eye tracking system (SMI REDnScientific), Facial expression recognition software (Noldus Facereader 6.1), Event logging software for observational data collection, analysis and presentation with physiological data synchronization capabilities (Noldus Observer XT 12.5), qualitative telephone interview a week before the session of dolphin assisted therapy, open form for evaluation of the results of dolphin assisted therapy in a child one month later after the participation in DAT. The results brought to the light that the families were mostly happy when watching their children; families raising children with severe disability were most satisfied with the dolphin assisted therapy; the subjectively perceived welfare of dolphins was understood as a possibility to choose a child for

communication; also, if the therapy goals were measurable, the more satisfying results were reflected by parents after a month after the dolphin assisted therapy program. Speaking about the welfare aspects of dolphins, families subjectively perceived the key welfare aspects of dolphins as choice (being able to choose a child) and normal rhythm of the day. The other listed aspects of welfare were related to social behavior and positive emotions, such as: being loved, feeling belonging to somebody, positively reinforced, and happy. Physical aspects, such as veterinary care and physiological needs, were named as the least important, because families perceived them as already fulfilled in European dolphinariums. The research results allowed to collect important subjective understanding on welfare of the families participating in the dolphin assisted therapy program. Despite small group of respondents, the research itself was important for further collecting of more reliable research data: the mentioned expositions refer to the importance of collecting wider evidence-based research via psychoemotional, physical rehabilitation and sensory integration possibilities. This research allowed to state that emotional status of the family evaluating the change from the beginning to the end of the therapeutic program is more filled with positive emotions, the anxiety decreased considerably and most of time families experienced happiness.

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