

# 1. Introduction

## 1.1. History of the AQR Tool

The music therapist Karin Schumacher has been working since 1984 with children with severe developmental disorders who are suffering from an impairment in social, interactive and communicative abilities. The work with these children led her to look for the origins of the ability to develop interpersonal relationships. The realization that the ability for organised perception is the basis for all further development of the ability for relationships, and that this “organisation” is missing in children with severe developmental disturbances led to intensive work on prenatal sensory development. In music therapy practice, games with music, movement and speech, which are developed from observing the child, create a so-called “co-ordinated stimulation” (Schumacher, 2017, 1<sup>st</sup> edition 1994) and help to integrate the individual sensory impressions. At the same time proprioception has a special significance. Through the child’s own body weight, the therapist is able to help the child by means of physical, vocal and musical interventions to experience contact to his own body and to connect sensory perceptions. Based on this, it is to be assumed that rocking and carrying as well as early mother-child games are prerequisites for the development of the ability to develop interpersonal relationships (Schumacher in Decker-Voigt et al. 2009, 1<sup>st</sup> edition 1996).

In 1990 the collaboration began with the developmental psychologist Claudine Calvet who, in her research, had specialized in aspects of early childhood, especially early interaction disturbances in mother-child relationships in children with trisomy 21 (Down Syndrome) (Rauh, et al. 1999; Rauh & Calvet, 2004; Calvet-Kruppa et al., 2005). Video sequences from Karin Schumacher’s music therapeutic work have been systematically analysed by both researchers. Their focus was at first on therapy moments in which progress in the development of the child was evident.

In her publication “Musiktherapie und Säuglingsforschung” (1999) [Music Therapy and Infant Research], Karin Schumacher scrutinizes the self-concept of the infant researcher, Daniel Stern. This led to her looking at the clinical picture of autism from a developmental psychology point of view. Experience from practical music therapy work showed that basic abilities such as meaningful processing of stimuli and the early ability for affect regulation can develop later through music therapy. Through the collaboration with Calvet, this view was complemented by results from attachment research (Bowlby, 1969, 1998; Ainsworth al. 1978) and, later, brain research (Hüther, 2003, 2004).

The AQR Tool was developed over ten years in the search for evidence of the effectivity of music therapy interventions. At first, the handling of music instruments and the child’s instrumental expression were focussed on, which led to the development of the scale for instrumental quality of relationship (IQR) (Schu-

macher, 1999). Examination of vocal pre-speech expression followed, which led to the development of the scale for vocal quality of relationship (VQR) (Schumacher & Calvet-Kruppa, 1999). For the assessment of the ability for relationship in children who could neither express themselves instrumentally nor vocally, the scale for assessment of physical-emotional quality of relationship (PEQR) was developed (Schumacher & Calvet-Kruppa, 2001). The scale for assessment of therapeutic quality of relationship (TQR), which focusses on the therapist and her intervention technique, was developed in order to assess the child's ability for relationship, also in the context of therapeutic interventions (Schumacher & Calvet-Kruppa, 2005).

A reliability analysis followed for which over 80 raters, experienced colleagues and students from Germany, Austria and Sweden, at first were trained in the application of the assessment scales to assess the presented video sequences using each scale. The agreement with the assessment as well as with each other was illustrated statistically. The reliability of the AQR Tool could therefore be proved (Schumacher, Calvet & Stallmann, 2005).

The DVD "Synchronisation" shows five films with relevant moments of music therapy work with children on the autistic spectrum (Schumacher & Calvet, 2008). Here the focus is on the awareness that synchronous moments especially improve the ability for relationship.

## 1.2. Latest revision and further development of the AQR Tool

Silke Reimer, an instrumental teacher who received her diploma in music therapy in 1999 at the Berlin University of the Arts (UdK) Berlin, carried out research into "Kurzzeitige Wechsel von Beziehungsqualitäten in der Musiktherapie" (Reimer, 2004) ["Short-term changes in quality of relationships in music therapy"]. In preparing for the publication of the AQR Scales, she analysed the results of the reliability analysis, especially the raters' comments on the scenes that were difficult to assess. These data form the basis of this publication. Supervision and training led to a deeper understanding of frequently asked questions.

The book "The interpersonal world of the infant" (Stern, 1985), upon which the previous work on the AQR Tool is based, was revised in 2000 with a new introduction. This critical revision of selected aspects of the self-concept have practically no influence on the AQR Tool. However, the question is raised of whether the observations and knowledge that form the foundation of the AQR Tool are in line with the latest infant research. This question concerning Stern's self-concept is addressed in the chapter about the developmental psychological basis of the AQR Tool.

### 1.3. Training

Further training in which the theory-based application of the AQR Tool is taught has been offered since 2005/2006. Thorough training is a prerequisite for qualified application of the AQR Scales as an analysis of video sequences by means of the scales without knowledge of the theoretical foundation and without practising the application frequently leads to a superficial or even incorrect assessment.

In the certification courses offered at the University of the Arts Berlin, for example, the developmental foundations of each of the four scales of the AQR Tool and their practical application are imparted and are practised by assessing video examples. The first module in these courses contains Stern's model of development and the synactive model of neonatal behavioural organization (Als, 1986) as theoretical foundations. A general introduction to the development of the AQR Tool is followed by the TQR Scale with the assessment of video sequences. In the second module, ways of visualising AQR analyses are presented. The main topics are the developmental psychological foundations of emotion regulation and the development of attachment, and the introduction of the PEQR Scale. The participants are asked to bring examples from their own work on each of these topics to practise the application of the scales. The topic of the third module is the development of the vocal pre-speech expression. The main topic of the fourth module is the scale for instrumental expression. Here questions are explored concerning how and when an object, here a musical instrument, can be meaningfully handled, which movement is "easy" and which needs further development. These play a big part not only in the assessment but also in the choice of the therapeutic method. For example, beating and shaking are, from a developmental psychological point of view, earlier movements than holding a mallet and directing it to a sounding instrument and the more sophisticated fine motor skills needed for string playing.

The certification course concludes with an exam. Each participant at first assesses in writing an example from their own work with an analysis of his/her music-therapeutical interventions and then presents this assessment to the other participants using film examples. Participants should describe their experience of using the AQR Tool in their own work. Successful completion of the course confirms that the participant is able to apply the AQR Tool independently and effectively.

The course graduates meet once a year to ensure quality in the application of the AQR Tool and to further developments in the AQR Scales in various fields of indication (see "Zertifikatskurs EBQ-Instrument" at [www.udk-berlin.de/musiktherapie](http://www.udk-berlin.de/musiktherapie)). This forum offers opportunities for discussion on relevant topics such as the AQR Tool for diagnostics, for documentation as well as for reviewing intervention techniques. Music therapists from the same field of work come together in networks to exchange ideas over and above the yearly meeting.

#### 1.4. Transference to further fields of application

Various publications in German show attempts to transfer the application of the AQR Tool to other areas (Körber, 2009; Warme in: Muthesius et al., 2010; Salmon, 2010; Reimer, 2010, 2016). Comparison with other German diagnostic tools (OPD-2: Körber, 2009; OPD-KJ: Burghardt-Distl, 2009) had already been suggested in 2005 by Frohne-Hagemann and Pleß-Adamczyk.

It is evident that a one-to-one transference is not meaningful, as the interpretation of physical-emotional phenomena of expression must always be based on the clinical picture and its specific characteristics. In order to transfer the application of the AQR Scales to other areas, the clinical characteristics of physical-emotional, vocal pre-speech and instrumental development as well as speech development are at first studied and differentiated. A reliability analysis must take place again whereby trained raters reassess the assessments with the help of numerous video examples. Before publication, it is necessary to consult the authors of this book in order to protect the AQR Tool from superficial use and to ensure it is applied in a reliable way.

