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SECTION A: PROPOSAL SUMMARY

Project Title:	Reaching Their Potential: Screening Young Children for Developmental Delays			
Principal Investigator (PI):	Name:	Sandra Willis	College/Dept:	College of Education
	Title:	Assistant Professor	Highest Degree:	Doctorate
	Tel:	00971 50 5976545	Year Awarded:	
	Email:	Sandra.willis@zu.ac.ae		

List all Co-Investigators below, including those from other institutions:			
Name	Email	Highest Degree	University/ College
Asma Maladwala	asma@inspireallchildren.com	M.A.	Columbia University
Lydia Barza	Lydia.barza@zu.ac.ae	Doctorate	University of Miami
Nancy Karaan	Nancy.karaan@cda.gove.ae	M.S.	Lebanese University

1. Abstract - Please provide a concise summary of the proposed research in plain language (max. 150 words).

Every day is an opportunity lost to make a significant difference in children's lives by identifying children with developmental delays and providing them with early intervention services. The situation is especially dire in the Gulf region given the estimated high prevalence of children with disabilities. The proposed project aims to conduct Developmental Screenings for the early identification of developmental delays in young children in the UAE adopting the Ages & Stages Questionnaires (ASQ-3) in Early Childhood Learning Centers (ECLCs). The first phase of the project will provide baseline data in Dubai and Abu Dhabi while Phase 2 will include the remaining Emirates. It is proposed that the research be longitudinal over a 3-year period thereby monitoring the children's progress. Collaboration with the the regularory agency for ECLCs (Ministry of Social Affairs), early learning centres (ZU ECLC and Inspire Children's Nursery) and an early intervention center (Dubai Early Childhood Development Center) will facilitate the increase of participation of agencies in both sectors.

2. Time Period – are you requesting a one-year or two-year grant?

one-year grant two-year grant

3. Students – Does the project contribute to student research training?

Yes, describe briefly
 No

4. Budget - What is the total budget requested for this proposal over the entire research period?

5. Facilities and Equipment - Are you requesting space for a research assistant(s) and/or special equipment? If so, please describe briefly:

Office space will be required for the research assistant.

6. Ethical Clearance - Does this proposed research involve human or animal subjects?

Yes – you will be required to apply for ethical clearance through the Research Ethics Committee if your proposal is successful
 No

SECTION B: DESCRIPTION OF RESEARCH PROJECT

Please provide a detailed project description using the six (6) section headings below.
Please write in plain language, limiting the use of jargon and acronyms.

1. Statement of the research problem(s)

(maximum 400 words)

Every child in the UAE should have the opportunity to thrive and grow in an environment that values children and their families, that provides conditions for an enriched, safe and secure environment, and that respects diversity. Because ALL children, irrespective of nationality, race, religion, or ability, are both the present and the future of every society, they have needs, rights, and intrinsic worth that must be recognized and supported. In all environments, children must receive appropriate nurturance and education from birth onward if they are to develop optimally. Attention to the health, nutrition, education, and psychosocial development of children during their early years is essential for the future well-being of nations and the global community.

Developmental screening is a process designed to deepen understanding of a child's competencies and resources, and of the caregiving and learning environments most likely to help a child make fullest use of his or her developmental potential. It promotes evaluating children on their capabilities, not deficits, and understanding how children manage life in relation to their family, community and culture. It is defined as “the

application of a simple, accurate method for determining which children in the population are likely to be in need of special services in order to develop optimally." Dumar, Duran-Flores, Foster, & Stills (1987).

It is currently universally accepted, based on overwhelming evidence that the earlier children are identified, the more likely the delay will be ameliorated and in some cases completely averted via early intervention practices. When a reliable developmental screening tool is adopted, families can connect children identified with developmental delay/s with intervention services as quickly as possible thereby ensuring that every child reaches his/her full potential and enters school ready for social and academic success (Majnemer, 1998). Early identification is essential given the evidence that early intervention can: (1) ameliorate or prevent developmental problems; (2) increase the number of children included in mainstream education and decrease those retained or dropping out of school; (3) reduce educational and social benefits costs; and (4) improve the quality of parent, child, and family relationships.

Parents, early childhood professionals, special needs practitioners concern themselves with the developmental progress of young children. Screening, assessment, and diagnosis allow professionals and family members to work together to determine the nature of any delays and need for services. These processes are closely linked to intervention strategies that support a child's growth and development.

2. Literature review – a concise and current review of scholarly research or important information relating to your research topic
(maximum 600 words)

Parents, family members, teachers, and other carers of young children often question whether the development of the young children in their lives is appropriate. It is standard practice for pediatricians to routinely document the developmental status of large numbers of young children during the brief well-child visits, however, it is often those who spend more time with the children in their natural settings (home, nursery, school) such as the parents and early childhood educators that may suspect developmental problems but not be able to provide specific descriptions, interpretations or predictions. Screening assessments are recommended as an initial examination of a child's learning or development, to document typical development and attainment of developmental milestones in addition to the identification of young children who might be delayed in academic or developmental areas.

According to the Guide to Assessment in Early Childhood: Infancy to Age Eight (Washington State Office of Superintendent of Public Instruction, 2008), screening is a very general type of assessment that addresses common questions that parents and professionals may have about the development of young children. Screening assessments are designed to efficiently identify those youngsters who need more thorough and detailed assessment. Such screening is ideally brief and cost-effective so that large numbers of children can be assessed in a relatively short period of time. The administration of screening assessments does not require specialized training and can be completed in various languages quickly and easily.

Given that comprehensive, in-depth diagnostic assessments are generally expensive, time-intensive and require specialists to administer, rapid assessment using developmental screening tools of large groups of young children to identify those who need more in-depth assessment of special needs is preferred. In fact, it is well documented in educational and medical professional literature that developmental outcomes for young children with delays and disabilities are improved with early identification and intervention (Squires, Nickel, & Eisert, 1996; Shonkoff & Meisels, 2000). Screening permits a quick assessment of many children, and systematically limits more extensive and expensive assessment to those few who are likely to need it most (Meisels & Fenichel, 1996).

The reality of today's society, of which UAE is no exception, is that any child, on a given day, may be a child with special needs. The question remains to the estimated prevalence of people with special needs in the UAE. In the absence of reliable prevalence or incidence statistics, many researchers and policy makers resort to international estimates such as the United Nations Statistics Division's international database which reports an average prevalence of disability of 4.1% based on a range of reported prevalence between 0.2% and 33% (unstats.un.org). The World Health Organization (www.who.int/disabilities/), however, indicates a prevalence estimate of 10% of the population. One can estimate therefore generate a conservative prevalence statistic of 921,000 based on an estimated UAE population of 9.21 million.

The March of Dimes Global Report on Birth Defects (2006) ranked the UAE 6th in the world with 75.6 per 1,000 births manifesting a birth defect or congenital anomaly. The UAE began monitoring births in 1994 with coverage of approximately 8,000 births/year in Al Ain. A neonatologist identified abnormalities at birth while clinical diagnoses were made by clinical geneticists and pediatricians. The findings to date revealed that approximately 16% of all children under five have a developmental delay ranging from very mild to severe (e.g., speech, language, cognition, social-communication) with

approximately 25% of these children have been identified prior to five years of age (Al Ghazali, 2005). The National Congenital Anomalies Register in the UAE estimated a total prevalence of congenital abnormalities in the UAE for 1999–2001 as 7.89/1000, 10.95/1000 and 7.92/1000 for live births, stillbirths and total births respectively (Hosani, Salah, Abu-Zeid, Farag & Saade, 2005). These data are extremely alarming and reflect a much higher estimation of the disability prevalence than those reported by the UN and WHO.

3. Goals of the research – anticipated outcomes including potential problem solutions, or contribution to knowledge or understanding of issues
(maximum 400 words)

Conducting developmental screenings for the early identification of developmental delays in infants and young children in the UAE is essential and long overdue. The proposed project aims to conduct the first Developmental Screening initiative in the UAE to be piloted in Dubai and, in the future, expanded to the other Emirates in the UAE. It is proposed that partnership with key UAE licensed early learning centres/nurseries be the means to conducting the developmental screenings.

Early identification of children with developmental delays or disabilities can lead to treatment of, or intervention for, a disability and lessen its impact on the functioning of the child and family. Because developmental screening is a process that selects children who will receive more intensive evaluation or treatment, all infants and children should be screened for developmental delays. Developmental surveillance is an important method of detecting delays.

Moreover, the use of standardized developmental screening tools at periodic intervals will increase accuracy. Educators in early childhood learning centers should consider using standardized developmental screening tools that are practical and easy to use. Successful early identification of developmental disabilities requires the educators of young children to facilitate the screening process, actively seek parental concerns about development, and create links with available resources and referral pathways in the community.

Parents of young children should also become involved in monitoring their child's development and reporting concerns via the use of parent reporting screening tools, such as the ASQ –III. This will not only enhance the partnership between parents and professionals, it will furthermore increase parental involvement in the development of the child (White, Taylor, & Moss, 1992).

The goals of the research are multifold:

1. Estimate the prevalence rates of developmental delays in children under the age of 5 years, leading to more information and the development of better systems and policies for their support and protection

2. Determine whether prevalence rates differ between the various ethno and cultural groups, leading to possibilities for further research into causal factors.
3. Provision of referral pathways to the families of children with identified developmental delays.
4. Monitoring the progress of identified children with developmental delays; determining whether the child was able to receive adequate assessment and early intervention services; determine whether the child was able to gain access to mainstream child care and education; and determine if this leads to improved outcomes later in development.

4. Research methodology – anticipated methods to be used in your research process, including main research questions, data gathering, documentation or analysis planned
(maximum 400 words)

The science of developmental testing has improved in the last 10 years, making it easier to accurately and efficiently screen development. This has led to the development of parental report instruments that have been well tested in economically and culturally diverse populations and provide accurate information about development. In fact, parental concerns about language, fine motor, cognitive, and emotional-behavioral development are highly predictive of true problems.

The majority of developmental screening tools are generally simple, quick to administer and cost effective. In addition to engaging parents, they have high accuracy (sensitive, specific, clearly defined criteria) based on comprehensive measures of physical, cognitive, sensory, communication, social, and behavioral development. Parent report instruments have excellent psychometric properties and the advantage of requiring much less time. The tool most widely recommended by researchers and practitioners alike is the Ages & Stages Questionnaires Third Edition (ASQ-3) by Paul H. Brookes Publishing Co., Inc. It is a low-cost, reliable tool for screening infants and young children for developmental delays during the crucial first 5 years of life. The questionnaires take 10–15 minutes for parents or caregivers to complete. Scoring takes about 2–3 minutes and can be conducted by professionals, paraprofessionals, or program staff. The screening tool addresses five developmental areas: communication, gross motor, fine motor, problem solving, and personal-social. It includes 21 questionnaires covering 1 month through 5 years of age with the following intervals: 2, 4, 6, 8, 9, 10, 12, 14, 16, 18, 20, 22, 24, 27, 30, 33, 36, 42, 48, 54, and 60 months of age.

Parents or caregivers complete the ASQ-3 questionnaires independently, or, if necessary, with the assistance of a staff member. ASQ-3 can be adapted to a variety of settings, including home, primary care clinics, and child care settings. This means children can be tested in their usual environment and at the parents' convenience. In addition, the ASQ-3 has been recently translated and normed to be available in the next few months. Extensive and continuing testing has shown that ASQ has high rates of reliability, validity, and accuracy

The following procedures will be adopted when screening with ASQ-3:

1. Consent form and a confidentiality statement will be presented to the parents prior.
2. The questionnaire that matches the child's age will be selected and will be filled out by the parents at home or at the Early Learning Centers, should they require assistance.
3. With the support of the researcher, the parent will answer the questions with the possible responses: yes, sometimes, or not yet. This process takes about 10–15 minutes.
4. Once the parent completes the questionnaire, the answers will be transferred to the scoring sheet for evaluation, taking about 2 minutes.
5. The child's scores in each of the areas (five in ASQ-3) will then be compared to the cutoff points listed on the scoring sheet. Scores below the cutoff points will indicate a need for further assessment; scores near the cutoff points call for discussion and monitoring; and scores above the cutoff suggest the child is on track developmentally.
6. The final step will be to communicate the screening results that are below the cutoff to the child's parents, and suggest resources for follow-up or further assessment if needed.

5. Research schedule and deliverables – what are the major phases of your research anticipated, and what do you realistically plan to accomplish at what stage

Phase 1 in the first year of the research project (January 2014-January 2015) of the project will include disseminating and collecting screening questionnaires from 5 early childhood learning centers in Dubai with an aim of collecting 300 completed ASQ-3 questionnaires and 3 early childhood learning centers in Abu Dhabi with an aim of collecting 200 completed ASQ-3 questionnaires. Phase 2 in the second year of the research project (January 2015-January 2016) will aim to increase the number of assessed children to a total of 1000 questionnaires in addition to efforts in re-assessing the children from the Phase 1 to re-evaluate and monitor the children's developmental progress.

Phase 2 in the second year of the research project (January 2015-January 2016) will aim to re-assess the children from the same 10 early learning centers in Dubai and Abu Dhabi to re-evaluate and monitor the children's progress.

Assessors and Supervisors

With academic and professional backgrounds in psychology, education, special education, and speech and language therapy, the investigators of the proposed research project are professionals affiliated with an academic institution (Sandra Willis and Lydia Barza from Zayed University), an early intervention center (Nancy Karaan from the Community Development Authority's Dubai Early Childhood Development Center located on the ZU Dubai campus) and an early learning center (Asma Maladwala from Inspire Children's Nursery) [CVs available]. The assessors will be recruited from a

pool of practicing psychologists/therapists in the community, Zayed University and Early Learning Center Staff from the community. The assessors have already undergone a 4 hour training conducted by Brooks Publishing.

6. Budget narrative – describe and justify your main budget items. An itemized budget spreadsheet will also be attached to this proposal

The budget has provision for mainly a research assistant, resource material cost for the screening tools themselves along with supporting print and DVD material from Brooks Publishing, and some travel funding between Dubai and Abu Dhabi for a total finding request of AED 124,250/- for 2 years.

- i. 2 Bilingual Arabic/English-speaking research assistants (ideally a recent ZU graduate) will be part of the team to assist with communication and coordination with the centers and to assist with entry, coding and analysis of data. This will contribute to capacity building for emerging Emirati researchers.
- ii. The 2 RAs will require 2 laptops to code, enter and analyze data along with a budget for telephone communications to coordinate with the centers.
- iii. Procurement of print and DVD resource material along with the starter kit for the ASQ-3 screening questionnaires. On-line ASQ Enterprise Annual Subscriptions will also be required for the 2 year duration of the project.

SECTION C: RIF BUDGET SPREADSHEET

Please attach your completed RIF Budget Spreadsheet.

Please use the naming convention 'your surname'_RIF_budget.xlsx eg Martin_RIF_budget.xlsx

SECTION D: SEDONA CV

Please attach your updated SEDONA CV

Please use the naming convention 'your surname'_SEDONA_CV.doc eg Martin_SEDONA_CV.doc

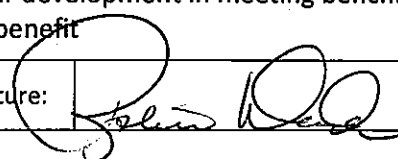
SECTION E: DEAN'S EVALUATION

You must obtain the physical signature of your Dean before submitting this application form. Applications without signatures will not be accepted.

If you do not have access to digital signatures, it is recommended to:

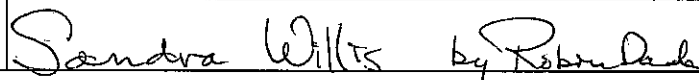
- print the completed form
- obtain the Dean's signature
- sign the application yourself
- scan and email to research@zu.ac.ae **Please note:** When saving this application form, please use the naming convention, 'your surname'_RIF_2011_proposal.doc eg Martin_RIF_2011_proposal.doc

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Dean's Name:	Click here to enter text.	College/Department	
I endorse that this project is appropriate for the unit to undertake as part of its educational, service or research programs; that appropriate and sufficient staff are available and willing to supervise; and that adequate space and facilities are available.			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
I approve the request for facilities and equipment. (Arrangements will be made directly with the Principal Investigator)			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Comments: The education of young children is emerging as a subject of interest in the UAE. In understanding the impact of early learning experiences in young children's success in the future, coupled with the economic return for money invested, the attention to the early learning of young children is now being understood for the importance of this developmental time. This research focuses on the test of an instrument that has the potential to identify learning issues among young children at the earliest ages to allow interventions to begin to support their development in meeting benchmarks. This is an important study that will demonstrate immediate benefit			
Dean's Signature:			Date: 11/26/2013

I certify that all information provided is true and correct at the time of submission.

Submit to research@zu.ac.ae

PI's Signature:		Date: 11/26/2013
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