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DEVELOPMENT OF NECESSARY PROFESSIONAL COMPETENCIES AMONG STUDENTS IN A KINDERGARTEN TEACHER TRAINING PROGRAM

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Abstract

This article addresses preliminary findings based on a mixed methods study, using questionnaire, examining future orientation, sense of coherence, and self-efficacy and changes in these competencies of students in a kindergarten teacher training (KTE) program. 40 students, with different seniority, enrolled in the program, constituted the research population. Research tools included a questionnaire regarding the way they imagined their future as teachers. Open qualitative answers were recorded into ordinal scales and analysed. A set of factors was built across background categories, e.g., gender and age, academic background and experience. More personal sections included open self-reported hopes and fears - hopes for professional promotion, personal achievements, academic successes, and income increase; and fears regarding financial stability, employment success, personal goals and graduation from the program. These binary items were used to map respondents on two unsupervised dimensions within a multidimensional scaling (MDS) framework. The findings showed various combinations of hopes accompanied by fears. Interestingly, the only difference was that older students reported more professional promotion than academic graduation expectations compared to younger students. The research may contribute to changes KTE programs, allowing students to present their perceptions regarding their professional future, and the findings can help adapt training programs around the world.

1. Introduction

This study addresses kindergarten teacher-assistants with no academic education and their ability to cope with an academic training program while integrating full-time work and managing their own household. Future orientation is addressed in this context because it influences the perception of individuals' self-efficacy and sense of coherence and their translation into behaviours that promote these goals consistently and continuously. To date, these competencies have been explored among teachers, principals, and but not among kindergarten teacher-assistants.

In many countries (Chile, Denmark, Germany, Iceland, Israel, Japan, Korea, Norway and Turkey), kindergarten teacher-assistants employed in early childhood education have no formal training at all (Bigras et al., 2010; Coley et al., 2016; Fuligni et al., 2009; Groeneveld et al., 2010; Ishimine & Tayler, 2012).

Furthermore, consistent findings also show that work experience does not contribute to the quality of interaction, but undergraduate training prior to starting work was found to correlate to the quality of interaction in Denmark, Portugal and the United States (Barros & Leal, 2011; Guo et al., 2010; Pianta et al., 2005).

These days, education systems are required to prepare for a different school year. Time spent within educational frameworks will be differential and the need to provide a professional response to changing needs requires training and responsiveness while 'on the move'. The importance of developing supportive relationships is emphasized with the increased and acute need for continuity of education frameworks and response to children throughout the educational continuum (Reich & Mehta, 2020).

2. Problem Statement

General aim: to examine the effectiveness of a new training program in the design of and readiness for a future career.

To examine academic self-efficacy, sense of coherence and future orientation of assistants and auxiliary personnel intending to be kindergarten teachers during their training.

To examine formulation and consolidation of their sense of academic self-efficacy, sense of coherence and future orientation during their training program, at the start, during and after, when students are integrated into work.

3. Research Questions

How does the training program affect development of its students' academic self-efficacy, sense of coherence and future orientation?

4. Purpose of the Study

In 2015, Oranim College in Israel, launched a training program, adapted to experienced kindergarten teacher-assistants without formal academic training, suited to for their work in the field of early childhood. In this program, assistants continue working and receive training and instruction in their workplace by a pedagogical instructor from the College.

This study seeks to examines how this unique training program influences' future orientation, self-efficacy, sense of coherence in learning situations of teacher-assistants participating in the program.

5.   Research Methods

The empirical study was based on a sample of students who started a training program to become kindergarten teachers in the future, many of whom were teaching assistants to kindergarten teachers in their first career. The sample comprised of 40 students who responded to a survey of mixed qualitative and quantitative questions. We used a mix of statistical techniques to assess various aspects of the students' perceptions of their second career. For quantitative data, we composed several research indicators, each constructed as a representative scale for a unique and distinct aspect of the second career. We then analysed these indicators according to our theoretical expectations. The qualitative answers were reviewed and evaluated on ordinal mainly binary scales according to the context of these answers. These ordinal scales were used to build a proximity mapping within a multi-dimensional scaling framework. Some conclusive remarks concluded the empirical section with a discussion on their implementation and limitations of the study.

6.   Findings

6.1. Samples

The sample for this study was drawn from a group of 40 students that decided to undertake a second career in kindergarten teaching. Out of these 40 students, only one was male and the others were females, see Table 1. Over 60% of the students were older than 30. The students' background education of 50% of students as 12 years and less), whereas the other 50% reported up to 16 years of education (42.5%) and more (7.5%). The current job status was distributed between full time job (50%) and partial time job (45%), while only %5 were unemployed at the time of answering the questionnaire. Many students had seven or more years of experience in preschool assistance (80%) and only 20% had less than seven years of experience. Their prior job distribution was divided between two major categories: assistance (37.5%) and kindergarten teaching in practice (47.5%), while other categories were minor (15%). Finally, these students were at various stages in their studies, e.g., first (22.5%) to fifth (37.5%) year.

6.2. Indicators

Table 2 presents research indicators as constructed according to the survey instruments. In this table we provide the label of each indicator and the label of the items that comprising it. An internal consistency index for scale reliability (Cronbach's alpha; Cronbach 1951) presented for each indicator is shown in the next column. Internal consistency is a correlation-based index that represents the level of common variance across the items in the indicator and supports the construction of an index (Beliese, 2000). Higher reliability index value (α>.70) indicates a stronger common context across items. All reliability index values exceeded the common threshold for acceptance. Except the coherence indicator (alpha=.75), other indicators were above .80, e.g., the self-efficacy indicator (alpha=.88), or the future apprehension indicator (alpha=.87).

Although, preliminary exploratory or confirmatory analyses were not performed due to the small sample size, the reliability results provided support to the chosen composition of research indicators. Another information is provided at the high and highest agreement percent. In some items, we found that the distribution was limited, and high percent of the answers checked the highest levels of agreement, that is, 80% and above. This in-part could explain the high internal consistencies of the research indicators. Single items complemented the research indicators as they were not part of a broader survey instrument: my work in the future - cognitive, my work in the future – expectations and my work in the future – motivation. The range of answers to the first and the last items was low (80% and 95% agreement, respectively). We complemented Table 2 with a comparison between background characteristics across research indicators, see Table 3. We used the two-independent sample t-test to determine differences between levels of years of studies (categories 1, 2 versus categories 3, 4, 5), age group (25-30 versus 31-51), education (non-academic versus academic), job scope (full versus partial position), seniority (4-8 years versus 9-20 years) and pre-study position (teacher versus assistant). We found that respondents who studied more years scored their commitment higher than those who had lesser number of studied years ($t=-2.75$, $p<.01$) but had lower expectations ($t=2.22$, $p<.05$). Older respondents reported less fear in comparison to younger respondents ($t=2.04$, $p<.05$). Coherence was found higher among those whose position was full in comparison to those who had part-time position ($t=-2.50$, $p<.05$) and a similar difference was found in the cognitive perception of future career ($t=-2.30$, $p<.05$). All other comparisons resulted in no significant difference between one category and its complementary category. Table 4 of the correlations between the research indicators shows that coherence was negatively correlated with self-efficacy ($r=-0.62$, $p<.001$), that is, higher coherence values were correlated with lower self-efficacy. Higher level of self-efficacy was positively correlated with motivation ($r=0.49$, $p<.001$) and motivation was also positively correlated with coherence and commitment, but in contrast, motivation was negatively correlated with career expectation. We found expectations to negatively correlate with career search and positively with cognition.

Table 1. Sample and personal characteristics, frequencies for item categories

		Count	Percent	Means	SD
Reka1	Gender				
	Male	1	2.5		
	Female	39	97.5		
Reka2	Age			34.15	6.42
	25-30	15	37.5		
	31-40	18	45.0		
	41-51	7	17.5		
Reka3	Years of Education			13.32	3.39
	12 and below	20	50.0		
	13-16	17	42.5		
	17-18	3	7.5		
Reka5	Job Scope				
	Full	20	50.0		
	Partial	18	45.0		
	Do not work	2	5.0		
Reka6	Years in preschool			9.40	3.49
	4-6	8	20.0		

	7-10	21	52.5	
	11+	11	27.5	
Reka7	Job			
	Kindergartner Teacher	19	47.5	
	Assistant	15	37.5	
	Educator agent birth to three	2	5.0	
	Other	4	10.0	
Shana	Year of Study			
	Year 1	9	22.5	
	Year 2	3	7.5	
	Year 3	8	20.0	
	Year 4	5	12.5	
	Year 5	15	37.5	

Table 2. Descriptive statistics for all research indicators and their items

	Items	α	Means	SD	% Agree or Highly Agree
Sca1	**Self-Efficacy**	.88	4.15	0.50	85.4
A1	I believe I can be efficient in various teaching roles		4.00	0.75	77.5
A2	I can achieve most goals I set for myself in teaching		3.97	0.62	80.0
A3	It is possible if I really try		4.25	0.54	95.0
A4	When I am faced with difficult tasks, I feel I can perform them		3.93	0.80	70.0
A5	In general, I think I can achieve what is important to me		4.23	0.62	90.0
A6	I can succeed on a task when I am determined		4.40	0.59	95.0
A7	I try to meet challenges successfully		4.30	0.65	90.0
Sca2	**Coherence**	.75	4.93	0.56	80.8
B1	I am making efforts so that what happens in class will have a follow-up		5.23	0.70	95.0
B2	I know how to react to a pupil who does not participate in the lesson		4.43	1.04	67.5
B3	Even if pupils disrupt, I will keep trying to teach		4.10	1.24	52.5
B4	When a pupil is angry and shouts, I know how to approach him/her		4.60	0.98	75.0
B5	What happens in class is important to me		5.78	0.42	100
B6	When a child bursts out in the lesson, I manage to calm him or her down		4.97	0.86	87.5
B7	It is important to me that my pupils behave well, and not only in my lessons		5.38	1.15	85.0
B8	When I need help, I feel there is someone to help me		4.55	1.22	70.0
B9	It is important for me to invest in my pupils beyond the time of the lesson		5.40	0.84	95.0

	Items	α	Means	SD	% Agree or Highly Agree
Sca3_1	**Future Work & Career: Behavior related to commitment**	.85	3.86	0.80	67.5
D1	Looking into several career options I am now focusing on one		3.40	1.19	50.0
D2	I have made up my mind concerning my career.		3.45	1.22	47.5
G1	I am making serious preparations to enter a specific career		4.40	0.74	85.0
G2	I have clear plans concerning my career		4.03	0.89	77.5
G3	I think I know which career I will choose		4.02	0.97	77.5
Sca3_2	**Future Work & Career: Behavior related search**	.85	2.55	0.90	16.3
E1	Have you been seeking information about different careers? How often do you try to get this information?		2.50	0.99	15.0
F1	How often do you find yourself thinking about your career?		2.60	0.96	17.5
Sca3_3	**My Future Work & Career: Cognitive**		3.92	0.80	80.0
Sca3_4	**My Future Work & Career: Expectation**		2.45	1.24	22.5
Sca3_5	**My Future Work & Career: Motivation via control**		4.43	0.59	95.0
Sca5	**My future - Hopes**	.81	3.79	0.58	65.38
N1	My studies after graduation		3.37	1.15	45.0
N2	The profession at which I will work		3.85	0.95	62.5
N3	My job		4.20	0.82	87.5
N4	My partner		4.05	1.26	74.36
N5	The family I will have (Children)		4.20	1.07	80.0
N6	My economic situation (my money)		4.22	0.89	87.5
N7	What will happen to me generally		4.10	0.98	77.5
N8	The state's and the world's fate		3.18	0.84	35.0
N9	My close friends		3.40	0.84	47.5
N10	My future place of work		3.58	1.04	60.0
N11	The family cell I will establish		3.80	1.38	72.5
N12	The area I will teach		3.50	0.91	55.0
Sca6	**My Future - Fears**	.87	3.17	0.75	43.13
O1	My studies after graduation		2.72	1.04	22.5
O2	The profession at which I will work		3.15	1.12	42.5
O3	My job		3.33	1.07	50.0
O4	My partner		3.15	1.33	50.0
O5	The family I will have (Children)		3.25	1.41	50.0
O6	My economic situation (my money)		3.73	1.13	62.5
O7	What will happen to me generally		3.45	1.22	55.0
O8	The state's and the world's fate		2.98	1.00	32.5
O9	My close friends		2.90	0.93	22.5
O10	My future place of work		3.43	1.11	52.5
O11	The family cell I will establish		3.20	1.49	52.5
O12	The area I will teach		2.73	1.15	25.0

Table 3. A comparative analysis of research indicators by various background factors

		Means	SD	Means	SD	df	t
	Year of Study	1,2 (n=12)		3,4,5 (n=28)			
Sca1	Self-Efficacy	4.08	0.53	4.18	0.49	38	-0.58
Sca2	Coherence	4.78	0.64	5.00	0.52	38	-1.17
Sca3_1	Future Work & Career: Behavioral related to commitment	3.37	0.73	4.07	0.75	38	-2.75**
Sca3_2	Future Work & Career: Behavioral related search	2.54	0.78	2.55	0.97	38	-0.04
Sca3_3	My Future Work & Career: Cognitive	4.00	0.43	3.89	0.92	37.61	0.50
Sca3_4	My Future Work & Career: Expectation	3.08	1.31	2.18	1.12	38	2.22*
Sca3_5	My Future Work & Career: Motivation via control	4.25	0.62	4.50	0.58	38	-1.23
Sca5	My future - Hopes	3.79	0.58	3.79	0.59	38	-0.004
Sca6	My Future - Fears	2.83	0.88	3.31	0.65	16.43	-1.73
	Age group	25-30 (n=15)		31-51 (n=25)			
Sca1	Self-Efficacy	4.15	0.44	4.15	0.54	38	-0.01
Sca2	Coherence	4.81	0.54	5.01	0.57	38	-1.06
Sca3_1	Future Work & Career: Behavioral related to commitment	3.73	0.91	3.94	0.75	38	-0.77
Sca3_2	Future Work & Career: Behavioral related search	2.40	0.99	2.64	0.86	38	-0.81
Sca3_3	My Future Work & Career: Cognitive	3.87	0.92	3.96	0.73	38	-0.36
Sca3_4	My Future Work & Career: Expectation	2.40	1.35	2.48	1.19	38	-0.20
Sca3_5	My Future Work & Career: Motivation via control	4.47	0.52	4.40	0.65	38	0.34
Sca5	My future - Hopes	3.93	0.49	3.70	0.62	38	1.21
Sca6	My Future - Fears	3.47	0.74	2.99	0.70	38	2.04*
	Years of education	12 or less (n=20)		13-18 (n=20)			
Sca1	Self-Efficacy	4.19	0.55	4.11	0.45	38	0.49
Sca2	Coherence	4.96	0.67	4.92	0.44	38	0.22
Sca3_1	Future Work & Career: Behavioral related to commitment	3.91	0.87	3.81	0.75	38	0.39
Sca3_2	Future Work & Career: Behavioral related search	2.40	0.93	2.70	0.88	38	-1.05
Sca3_3	My Future Work & Career: Cognitive	3.80	0.70	4.05	0.89	38	-0.99
Sca3_4	My Future Work & Career: Expectation	2.55	1.32	2.35	1.18	38	0.51
Sca3_5	My Future Work & Career: Motivation via control	4.40	0.60	4.45	0.60	38	-0.26
Sca5	My future - Hopes	3.82	0.60	3.75	0.57	38	0.37
Sca6	My Future - Fears	3.13	0.81	3.20	0.70	38	-0.28
	Job Scope	Partial (n=20)		Full (n=20)			
Sca1	Self-Efficacy	4.12	0.58	4.19	0.41	38	-0.40
Sca2	Coherence	4.73	0.63	5.14	0.40	32.02	-2.50*
Sca3_1	Future Work & Career: Behavioral related to commitment	3.76	0.92	3.96	0.68	38	-0.78
Sca3_2	Future Work & Career: Behavioral related search	2.43	0.77	2.68	1.03	38	-0.87
Sca3_3	My Future Work & Career: Cognitive	3.65	0.88	4.20	0.62	38	-2.30*
Sca3_4	My Future Work & Career: Expectation	2.40	1.31	2.50	1.19	38	-0.25

		Means	SD	Means	SD	df	t
Sca3_5	My Future Work & Career: Motivation via control	4.45	0.69	4.40	0.50	38	0.26
Sca5	My future - Hopes	3.80	0.61	3.78	0.57	38	0.15
Sca6	My Future - Fears	3.34	0.70	2.99	0.77	38	1.50
	Seniority in preschool	4-8 (n=19)		9-20(n=21)			
Sca1	Self-Efficacy	4.08	0.55	4.22	0.45	38	-0.85
Sca2	Coherence	4.81	0.60	5.05	0.51	38	-1.40
Sca3_1	Future Work & Career: Behavioral related to commitment	3.77	0.92	3.94	0.69	38	-0.68
Sca3_2	Future Work & Career: Behavioral related search	2.63	0.91	2.48	0.91	38	0.54
Sca3_3	My Future Work & Career: Cognitive	3.84	0.83	4.00	0.77	38	-0.62
Sca3_4	My Future Work & Career: Expectation	2.68	1.42	2.24	1.04	38	1.14
Sca3_5	My Future Work & Career: Motivation via control	4.37	0.68	4.48	0.51	38	-0.57
Sca5	My future - Hopes	3.76	0.55	3.82	0.62	38	-0.33
Sca6	My Future - Fears	3.24	0.78	3.10	0.73	38	0.56
	Job	Kindergarten Teacher (n=19)		Assistant (n=15)			
Sca1	Self-Efficacy	4.01	0.42	4.10	0.50	32	-0.56
Sca2	Coherence	4.86	0.49	4.83	0.62	32	0.16
Sca3_1	Future Work & Career: Behavioral related to commitment	3.83	0.73	3.95	0.86	32	-0.42
Sca3_2	Future Work & Career: Behavioral related search	2.71	0.85	2.17	0.94	32	1.76~
Sca3_3	My Future Work & Career: Cognitive	3.95	0.85	3.87	0.92	32	0.27
Sca3_4	My Future Work & Career: Expectation	2.63	1.16	1.93	1.22	32	1.70~
Sca3_5	My Future Work & Career: Motivation via control	4.32	0.58	4.47	0.64	32	-0.72
Sca5	My future - Hopes	3.89	0.46	3.78	0.66	32	0.56
Sca6	My Future - Fears	3.37	0.51	2.98	0.95	20.35	1.45

Table 4. Correlations between research indicators

		Self-Efficacy	Coherence	Behavioral related to commitment	Behavioral related search	Cognitive	Expectation
Sca1	Self-Efficacy	-					
Sca2	Coherence	.62***	-				
Sca3_1	Future Work & Career: Behavioral related to commitment	.16	.14	-			
Sca3_2	Future Work & Career: Behavioral related search	.06	.11	-.27~	-		
Sca3_3	My Future Work & Career: Cognitive	.14	.28~	-.01	.27~	-	
SCa3_4	My Future Work & Career: Expectation	-.07	-.18	-.55***	.32*	.19	-
Sca3_5	My Future Work & Career: Motivation via control	.49**	.43**	.45**	.01	.29~	-.44**

6.3. The Qualitative Study

As part of the research regarding the development of professional competencies for second career kindergarten teachers, based on the 40 survey respondents, I developed a methodology to handle open questions, that is, questions that left an open space for respondents to fill in qualitative responses. The current survey included two open questions based on Seginer's hopes and fears scales (1998). Participants read the following questionnaire statement: "people often fear for their future. Most people describe their future thoughts through hopes and fears". Following this statement, participants were asked to write in detail their future hopes and to reflect about the age they would hope to meet these expectations. Participants were then asked to reflect about their fears of the future and write them down while mentioning the age that related to their fears.

The two open questions enabled a better understanding of the possible future participants faced. A content analysis was performed. we compiled the corpus by using search terms pertaining to specific categories. The following list shows content analysis results. In this list, different identified aspects of the two dimensions of the future, hope and fear, are presented where a positive response was coded as one in a zero or one dichotomous scale. In other words, if one aspect of fear, for example, was present in a respondent's answer, the response was coded as one, and if not, the non-response was coded as zero.

A. Hope survey:

Four categories were identified: 1. professional success; 2. Personal success (family, home); 3. Academic education; and 4. income.

Text examples for hope categories

1. **Professional success:**
   a. Student number 8: "I hope to open a clinic in the next few years."
   b. Student number 33: "My hopes are for professional development, stability at work, better income, inner peace and tranquillity."

2. **Personal success (family, home)**
   a. Student number 1: "to succeed in my work as a kindergarten teacher and succeed in my personal life – have a family and partnership."
   b. Student number 16: "to build a family, find my professional way and stay curios."

3. **Academic education**
   a. Student number 15: "I hope by age 30 to succeed in realizing my future dream, get a degree and work in the field."
   b. Student number 12: "hope by age 35 to study for a master's degree."

4. **Income**
   a. Student number 6: "hope in the future to have the financial ability to invest my time in raising my children, and then to become a kindergarten manager."
   b. Student number 4: "finish a third degree."

B. <u>Fear survey</u>

Four categories were identified: 1. financial fear; 2. job fulfilment/professional success/making an influence/failure; 3. personal fears/health/balancing family and work, not getting higher degree

1. **Financial fear**
    a. Student number 4: "fearing financial situation and failure at any age."
    b. Student number 14: "financial debts because of the studies."
2. **Job fulfilment/professional success/Making an influence/failure**
    a. Student number 16: "will I succeed in doing what I have to do as a kindergarten teacher?"
    b. Student number 21: "my fears are that I won't succeed or will not be able to achieve my goals."
3. **Personal fears/health/balancing family and work**
    a. Student number 6: "I'm afraid I don't have an option to balance between having a family and my internship, so I'll have to wait."
    b. Student number 22: "a great fear of mine is my health and the health of my family."
4. **Not getting higher degree**
    a. Student number 10: "age 40 bothers me – I'm afraid for my job, where will I be in 10 years and will I be able to study for the second degree."
    b. Student number 13: "I'm afraid I won't be able to continue to the second degree."

Participants' hopes for the future referred to the following issues: (1) professional success; (2) personal success (family, home); (3) academic education and (4) income. Twenty-nine participants (72.5%) mentioned professional success as part of their future hopes.

Table 5 provides all aggregated values for each respondent on the hope and fear scales, where aggregation means the sum across the four dimensions of each scale. On average, a respondent emphasized 1.48 items out of the four possible hope dimensions and 1.18 items out of the four possible fear dimensions. An illustration of these two-dimensional values is presented in Figure 1. In this figure we plotted the aggregated values of fears and hopes and divided the chart by four quarters: (from left to right clockwise) fearful and hopeless; fearful and hopeful; fearless and hopeful and fearless and hopeless. Among all respondents across all observed combinations, we could not point out a more frequent type of combination over another and no fearful and hopeless (3,0) respondents were found. Our test of different distribution of background categories and the binary assessed fears and hopes did not result in any significant row-column dependency, see Table 6 for χ^2 test results, except when age groups were crossed correlated by hope for professional success ($\chi^2_{(1)}=4.42$, p<.05) and hope for academic education ($\chi^2_{(1)}=4.22$, p<.05). Note that percentages in each category were for those who marked a positive answer ("yes"=1) and were complemented by percentages of those who did not ("no"=0). The correlation between the aggregated fears and hopes was low and insignificant (Spearman's categorical correlation = .241, p=.091), although the two scales for hope and fears were found to be correlated (r=.51, p<.01).

These binary values of fears and hopes were then used to map respondents within a multi-dimensional framework (Guttman 1968; Giguere 2006), as shown in figure 2. The set of procedures labelled

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multidimensional scaling methods are concerned with constructing a configuration of 'n' points, usually in Euclidean space, from information about the pairwise 'distances' also labelled as 'proximities' among a set of 'n' individuals (Mead 1992). The goal of Multidimensional Scaling (MDS) is to detect meaningful underlying dimensions that allow the researcher to explain observed similarities or dissimilarities (distances) between the investigated objects (Multidimensional Scaling), yet within a limited information about the objects or subjects in question. Specifically, in our case, the respondents' binary responses are the only information we have. The interpretation of dimensions usually represents the final step of analysis where the actual orientations of the axes from the MDS analysis are arbitrary and can be rotated in any direction. The advantage of MDS procedures is that the researcher may analyse any kind of distance or similarity matrix. In general, MDS methods allow the researcher to ask relatively unobtrusive questions for which the answers are relational rather than absolute (Mead 1992). Table 5 includes coordinates for two dimensions (DIM 1 and DIM 2), which resulted from our MDS analysis. In Figure 1, we present the multidimensional scaling outcome based on individuals' proximities. As correlations between fears and hope were not high ($r=.230$, $p>.10$), the diamond shape that surrounds the points means that when one dimension was low for a respondents, the other was high and the vice versa, but no extreme values were found on both dimensions simultaneously. We cannot argue according to these results and based on correlations, that hopes came with fears and the vice versa. Instead, we may argue that those who developed more hopes are not fearless and those who were fearless are not hopeless.

Table 5. The aggregated binary results for the content analysis of hopes and fears

ID	HOPES	FEARS	BOTH	DIM 1	DIM 2
RESPONDENT 1	2	1	3	1.04	0.98
RESPONDENT 2	3	0	3	-0.44	-1.1
RESPONDENT 3	2	2	4	1.67	0.56
RESPONDENT 4	3	1	4	1.33	1.01
RESPONDENT 5	3	1	4	-2.17	0.21
RESPONDENT 6	1	1	2	0.1	1.38
RESPONDENT 7	1	3	4	2.79	-0.23
RESPONDENT 8	1	0	1	-0.18	0.62
RESPONDENT 9	2	1	3	-1.74	-0.13
RESPONDENT 10	3	3	6	-0.9	-0.35
RESPONDENT 11	2	3	5	-0.13	1.69
RESPONDENT 12	2	1	3	1.02	0.97
RESPONDENT 13	2	2	4	-1.27	-0.51
RESPONDENT 14	1	0	1	0.95	-0.79
RESPONDENT 15	1	2	3	0.9	-1.35
RESPONDENT 16	0	0	0	0.18	-0.18
RESPONDENT 17	1	0	1	-0.18	0.61
RESPONDENT 18	1	1	2	0.16	-1.26
RESPONDENT 19	0	1	1	1.11	-0.5
RESPONDENT 20	1	0	1	-0.18	0.61
RESPONDENT 21	2	2	4	0.57	-0.59
RESPONDENT 22	1	0	1	-0.18	0.6
RESPONDENT 23	1	1	2	-1	0.23
RESPONDENT 24	1	1	2	0.11	1.37
RESPONDENT 25	1	1	2	-1	0.23
RESPONDENT 26	1	1	2	1.74	-0.73
RESPONDENT 27	1	1	2	-0.99	0.23

RESPONDENT 28	1	1	2	-0.99	0.23
RESPONDENT 29	1	1	2	-0.99	0.23
RESPONDENT 30	2	1	3	-0.56	-0.04
RESPONDENT 31	1	2	3	0.99	1.41
RESPONDENT 32	2	1	3	1.07	-1.78
RESPONDENT 33	2	2	4	1.76	0.1
RESPONDENT 34	1	3	4	1.58	-0.96
RESPONDENT 35	1	1	2	-0.95	0.23
RESPONDENT 36	2	1	3	-0.53	-0.06
RESPONDENT 37	2	1	3	-0.53	-0.06
RESPONDENT 38	1	1	2	-1.23	-1.35
RESPONDENT 39	1	1	2	-1.23	-1.35
RESPONDENT 40	2	1	3	-1.69	-0.16
Mean	1.48	1.18	2.65		
Standard Deviation	0.74	0.83	1.24		

Table 6. Hope and fear items by background characteristic comparisons

	Hope				Fear			
Year of Study	Professional success	Personal success	Academic education	Income	financial fear	Job fulfillment	Personal fears	not getting high education
1,2	75.0	66.7	8.3	16.7	33.3	50.0	41.7	0.0
3,4,5	71.4	35.7	28.6	3.6	21.4	53.6	28.6	10.7
χ^2	0.05	3.25~	1.97	2.08	0.64	0.04	0.66	1.39
Age group								
25-30	53.3	53.3	40.0	6.7	33.3	53.3	26.7	13.3
31-51	84.0	40.0	12.0	8.0	20.0	52.0	36.0	4.0
χ^2	4.42*	0.67	4.22*	0.02	0.89	0.01	0.37	1.18
Years of education								
12 or less	70.0	45.0	25.0	10.0	20.0	55.0	40.0	0.0
13-18	75.0	45.0	20.0	5.0	30.0	50.0	25.0	15.0
χ^2	0.13	0.00	0.14	0.36	0.53	0.10	1.03	3.24~
Job Scope								
Partial	65.0	50.0	30.0	10.0	20.0	65.0	35.0	15.0
Full	80.0	40.0	15.0	5.0	30.0	40.0	30.0	0.0
χ^2	1.13	0.40	1.29	0.36	0.53	2.51	0.11	3.24~
Seniority in preschool								
4-8	68.4	31.6	26.3	10.5	21.1	42.1	31.6	0.0
9-20	76.2	57.1	19.0	4.8	28.6	61.9	33.3	14.3
χ^2	0.30	2.63	0.30	0.48	0.30	1.57	0.01	2.93~
Job								
Kindergarten Teacher	73.7	47.4	15.8	5.3	26.3	52.6	42.1	10.5
Assistant	60.0	46.7	26.7	13.3	26.7	46.7	33.3	0.0
χ^2	0.72	0.002	0.61	0.68	0.001	0.12	0.27	1.68
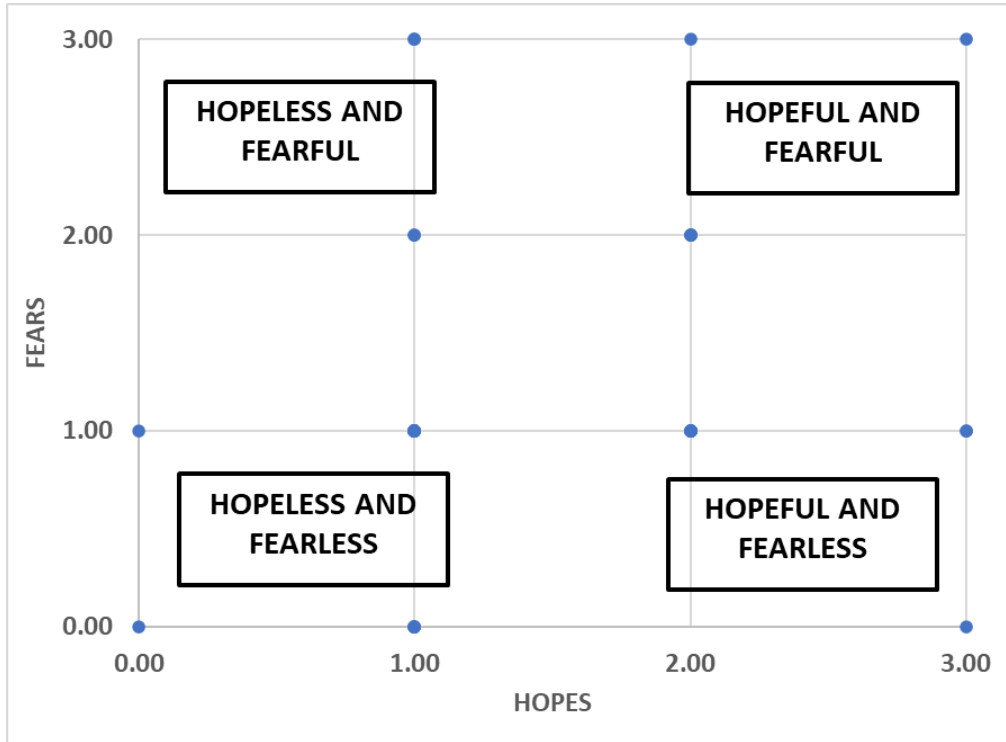
Figure 1. Scatter plot of actual levels of fears and hopes
(Note: Blue dots for observed scores of hopes and fears)
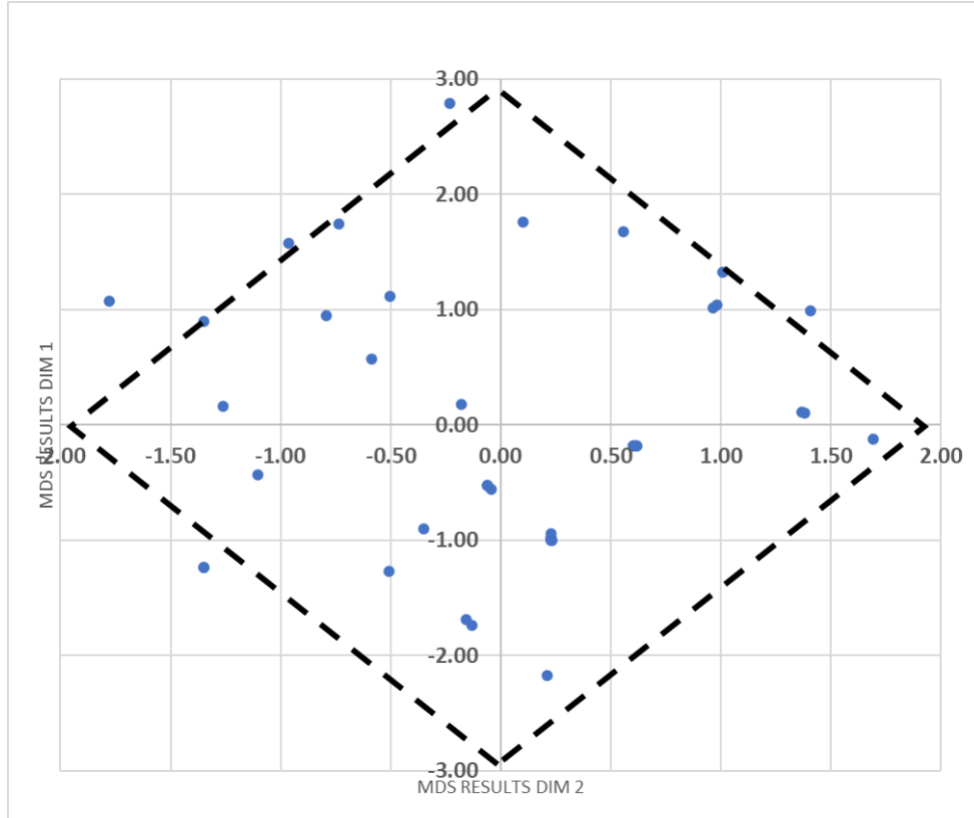
Figure 2. Mapping respondents on two unsupervised dimensions based on fears and hopes
(Note. Blue dots for observed scores of hopes and fears)

7. Conclusion

Respondents who studied more years scored their commitment higher than those who had lesser number of studied years, but had lower expectations

Older respondents reported less fear in comparison to younger respondents

Coherence was found higher among those whose position was full in comparison to those who had part-time position and a similar difference was found in the cognitive perception of future career

Respondents who developed more hopes are not fearless and those who were fearless are not hopeless.

Those findings were collected in a first of three surveys. Those results should be examined again in the end of the study.

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