Active Listening Attitude Scale (ALAS): Reliability and Validity in a Nationwide Sample of Greek Educators

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Abstract: The present study examined the Active Listening Attitude Scale (ALAS) validity and reliability in a sample of 3955 Greek educators. The sample was randomly split and an exploratory factor analysis (EFA) was conducted in the even subsample to evaluate the scale's construct validity. A confirmatory factor analysis (CFA) was performed in the odd subsample to confirm the three-factor model identified by the EFA. The chi square test (χ^2) of the model was significant ($p < 0.05$), due to the large sample size. The root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the goodness of fit index (GFI) values were 0.079, 0.969 and 0.960, respectively, further supporting the fit of the three-factor model. Cronbach's alpha coefficient was used to test internal consistency reliability and was satisfactory exceeding 0.72 for ALAS subscales. The intercorrelations of the three subscales were all positive and significant ($p < 0.001$), ranging from 0.20 to 0.42. Student's *t*-tests and the computation of effect sizes revealed that women scored higher on Listening Skill and Conversation Opportunity, while principals and participants trained on mental health promotion scored higher on all three subscales. The analyses confirmed the three-factor model of ALAS and demonstrated its validity and reliability in measuring Greek teachers' active listening attitudes.

Keywords: active listening; Active Listening Attitude Scale; ALAS; teachers/educators; reliability; validity; Greek sample

1. Introduction

The basis of all human relationships is the establishment of good communication among individuals, which can be enhanced by the use of communication skills [1–3]. Communication skills are essential in the workplace, for the effective management of interpersonal relationships in the professional environment [2]. Among all significant communication (and counselling) skills, a leading role is held by the skill of effective listening [1–5].

The inception of active listening can be found in Carl Roger's humanistic theory [6], a theory centered on the person, his/her communication skills and his/her ability to be genuine and make self-disclosures. Active listening in the person-centered approach is grounded in the basic attitudes of the user and means effective and not passive listening to the other person [7]. It has been described as a multi-step process, which includes techniques such as making comments, formulating appropriate questions, paraphrasing and summarizing, in order to express complete understanding and verify

the things said [8,9]. It also includes maintaining eye contact, using encouraging non-verbal gestures such as nodding or smiling, and not interrupting the speaker [3,10].

It should be mentioned though, that active listening, if used just as a technique or as a set of techniques, may not only clash with the user's fundamental attitudes, but it would also seem empty, letting others recognize its inauthentic nature [7]. "The goal in active listening is to develop a clear understanding of the speaker's concern and also to clearly communicate the listener's interest in the speaker's message" ([9], p. 224). An active listener actually collaborates with the speaker and they co-construct shared meaning [11].

Originally, active listening was developed as a counselors' technique for effective listening to their clients, according to the person-centered approach, but later on was also applied in non-therapeutic situations as a tool for better communication [12] in different support and assistance offering professions beyond psychology and counseling, e.g., in medical and nursing staff [13–15] and in business management executives [16,17]. Consequently, as shown by the literature's descriptive and experimental research, the interest in active listening has spanned different fields, from marital relationship interventions [18–20], to counseling [21,22] and mediation [23], doctor-patient relationships [24,25], nurse-patient relationships [26,27] and even crisis management, such as hostage negotiations [28]. A vast majority of publications for more than 50 years has focused on the corporate world [12,29–32] and on the effects of managers' active listening training on workers' mental health [16,17,32,33].

As a result, there have been studies which have focused on the development of scales assessing active listening, mainly in management (e.g., [34]), product sales (e.g., [29]), and medical services (e.g., [13]) contexts.

1.1. Teachers' Listening and Active Listening Skills

In the school setting there have been studies which have focused on improving children's listening and social skills [35–38], since educators have been complaining about their students' inability to listen carefully and pay attention. However, adults' listening skills are often also insufficient and teachers may have higher expectations from children than they do from themselves. Listening quality plays a crucial role in the teacher-pupil communication [39]. As a result, good listening skills would help to develop and maintain positive relationships and emotional well-being of all involved in the educational procedure [40].

Teachers' listening skills are important not only for their interaction with their students and for the learning process (showing that they understand and care about the messages they receive), but are equally significant for a successful communication with their students' parents, through empathetic listening, asking questions, focusing on the issues at hand and finding a first step [29,41]. The use of active listening skills can help build a relationship based on trust, sincere interest and mutual respect between teachers and parents [42].

Teachers' active listening skills have been researched mainly regarding communication with students [43,44] and students' parents [9,42]. However, there seems to be no relevant research regarding Greek educators. There has not been any active listening skills' measure created or adapted for use in the Greek teacher population either. Therefore, the present study aims to translate the Active Listening Attitude Scale (ALAS) [34] and investigate its reliability and validity in Greek teachers, after having taken in consideration that this scale's items investigate the specific attitudes and techniques which not only constitute effective active listening, but can be taught by specialists and practiced by trainees. More specifically, the aim of the presented study is to examine internal consistency reliability and construct validity of the ALAS. Comparisons concerning factors such as sex, age, being a principal and having received mental health promotion training are also examined.

1.2. Active Listening Attitude Scale

The Active Listening Attitude Scale (ALAS) was developed by researchers for measuring the attitudes of people with respect to a 'person centered attitude' and 'active listening' ([34], p. 114). It was intended for application as a useful tool in order to "measure changes in intra-personal listening attitudes after active listening training" ([34], p. 116). Big manufacturing companies with thousands of employees have recognized the importance of interpersonal relationships on workers' job stress and related mental health issues, thus a series of studies have employed the ALAS to evaluate the active listening skills of managers [34,45–47].

The ALAS manufacturers originally conducted an exploratory factor analysis on a 47-item scale, identifying three distinct factors consisting of 31 items, which accounted for the 81.2% of the variance [34]. They then examined the new scale's construct validity by administering it to clinical therapists specializing in psychosomatic medicine and by having their scores compared with those of the workers. Internal consistency was found high for all factors, ranging from $\alpha = 0.74$ to $\alpha = 0.84$, as well as its test–retest reliability, ranging from $r = 0.79$ to $r = 0.83$, $p < 0.001$ [34].

2. Materials and Methods

2.1. Participants

A total number of 3995 educators of 43.3 years (SD = 8.9 years) of mean age, 15.5 (SD = 8.4) mean years of teaching experience and 28% of them being men and 72% being women participated in the study. Sample characteristics are presented in Table 1. A small percentage of the participants were school principals (12.9%) and the mean years of holding that position was 7.2 (SD = 5.6). Additionally, only 20.6% of the teachers had received mental health promotion training.

Table 1. Sample characteristics.

	N (%)
Sex	
Men	1108 (28.0)
Women	2847 (72.0)
Age, mean (SD)	43.3 (8.9)
Years of teaching, mean (SD)	15.5 (8.4)
Principal	
No	3443 (87.1)
Yes	512 (12.9)
Years as principle, mean (SD)	7.2 (5.6)
Mental health promotion training	
No	3141 (79.4)
Yes	814 (20.6)

2.2. Measures

2.2.1. Active Listening

To assess teachers' active listening skills a Greek translation of the Active Listening Attitude Scale (ALAS) was used [34]. The ALAS includes 31 items that are scored on a 4-point Likert scale, with response alternatives being 0 = Disagree, 1 = Rather Disagree, 2 = Rather Agree and 3 = Agree. The ALAS produces three subscales: (a) Listening Attitude (13 items, reverse scoring) which refers to "empathic understanding" or to "unconditional positive regard" (e.g., "I hurry him/her into talking faster"); (b) Listening Skill (11 items) which describes more technical aspects of active listening and secondarily "empathic understanding", "congruence" or the utilization of active listening (e.g., "I pay

attention to his/her unexpressed feelings"); and (c) Conversation Opportunity (7 items) (e.g., "People feel easy to talk to me") which mainly measures the utilization of active listening. Respondents were instructed to choose the answer that best reflected their ordinary style of listening in the workplace (i.e., school). Every respondent received a score for each subscale, which was the sum of his/her responses to the respective items.

2.2.2. Demographic Information

Personal information was collected, such as age, sex, and teaching grade. Job-related data such as the occupation of an administrative position (being a principal), the years of teaching experience, and having received training on mental health promotion were also collected.

2.3. Procedure

The present research took part from December 2015 to the end of January 2016. The study questionnaire was anonymous and it was posted for several days on the official Greek site for schools and educators, www.sch.gr (99.98% of elementary and secondary schools are officially linked to this site), on various official sites of teachers' associations (i.e., www.pekade.gr, www.p-e-f.gr, www.inital. gr,etc.) and on all the important educational sites (i.e., www.specialeducation.gr, www.alfavita.gr, www.esos.gr, www.ipaideia.gr, www.omep.gr,etc.). It would appear after following a link titled "*Are you an educator? Would you like to know your level of active listening skills?*" on a page which described the purpose of the study and informed the educators that after completing the questionnaire, they would receive their scores together with information on active listening skills.

2.4. Translation

The original ALAS was translated into the Greek language, following established translation protocols [48,49]. Two native speakers of the Greek language (i.e., target), who were professional translators, thus fluent in the English language (i.e., source), proceeded with independent forward translations into the target language. The preliminary Greek version that was produced was subsequently translated back into the original language by a third professional translator. The two versions, the back-translation and the original scale, were then compared and adjustments were made in case of discrepancies between the two. An expert committee reviewed the developed scale and gave their feedback. In order to examine the scale items' clarity and comprehension more thoroughly, it was administered to a small group of volunteer teachers, for the cognitive debriefing phase of the present study. After this final process, the Greek version of ALAS described below was created.

3. Statistical Analysis

Continuous variables are presented with mean scores and standard deviation (SD). Qualitative variables are presented with absolute and relative frequencies. The sample was randomly split into two datasets of approximately equal size. Data of the even subsample (n = 1973) were used to carry out an exploratory factor analysis in order to evaluate construct validity of the questionnaire. Principal component analysis (PCA) was chosen as extraction method using Varimax rotation. The cut-off point for factor loadings was 0.40 [50] and for eigenvalues it was 1.00. A confirmatory factor analysis (CFA) with maximum likelihood procedure was performed in the odd subsample (n = 1982) in order to confirm the model identified from the exploratory factor analysis (EFA). The variance of the latent constructs was fixed at one during parameter estimation. The fit of the CFA model was assessed using the chi square (χ^2), the comparative fit index (CFI), the goodness of fit index (GFI) and the root mean square error of approximation (RMSEA) [51]. For the CFI and GFI indices, values close to or greater than 0.95 are taken to reflect a good fit to the data [52]. RMSEA values of less than 0.05 indicate a good fit and values as high as 0.08 indicate a reasonable fit [41]. Also, a non-significant chi square statistic indicates a good fit, but chi square is usually sensitive to sample sizes and usually significant for large sample sizes [51]. The internal consistency of the questionnaire was analyzed with Cronbach's α.

Reliability equal to or greater than 0.70 was considered acceptable [53]. Pearson correlations coefficients were used to explore the association among the three ALAS subscales. Correlation coefficient between 0.1 and 0.3 were considered low, between 0.31 and 0.5 moderate and those over 0.5 were considered high. The ALAS subscales were compared with each other regarding sex, principal position and having received mental health promotion training, using Student's *t*-tests and the computation of effect sizes. Effect sizes of 0.2–0.5 are considered small, between 0.51–0.81 moderate and over 0.8 large [54]. Moreover, Pearson correlations coefficients were computed concerning the association of age with the ALAS subscales. *p* values reported are two-tailed. Statistical significant level was set at 0.05 and analysis was conducted using SPSS and AMOS (SPSS, Chicago, IL, USA) Statistical Software.

4. Results

A principal components analysis was performed in the even subsample. EFA identified three factors (Figure 1) with a Kaiser Meier Olkin (KMO) coefficient equal to 0.88 and a Barlett χ^2 value equal to 11993.9 ($p < 0.001$), while the proportion of total variance explained was 32.5%.
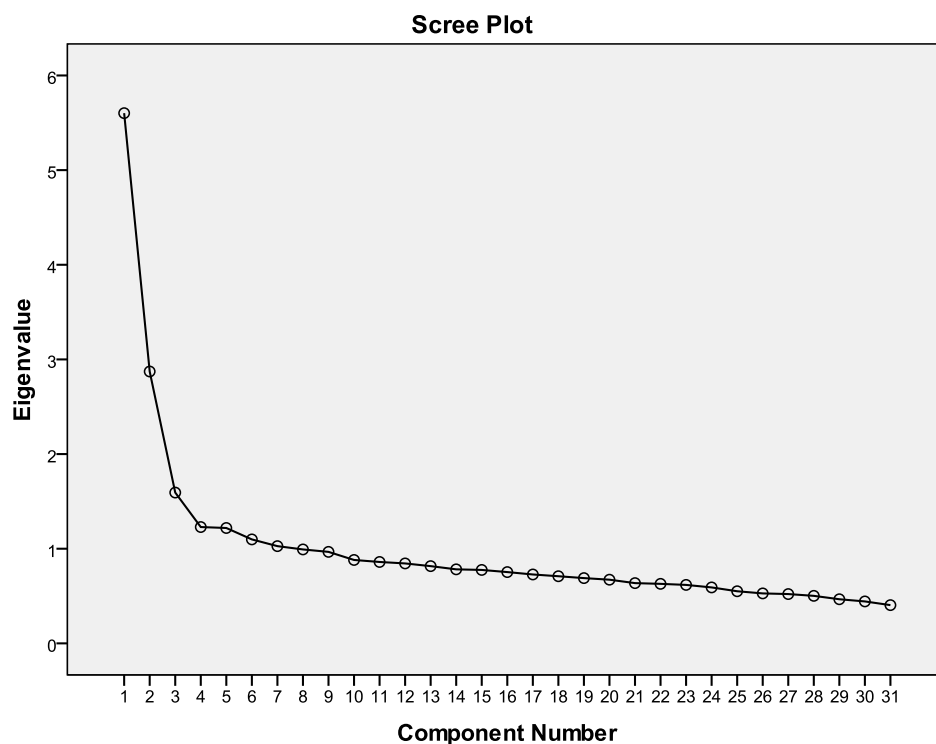

Figure 1. Scree plot from the results of factor analysis for the ALAS.

Items "I'm actually talking longer than the other person in spite of my intention to listen to him/her" and "I can listen to the other person, even if he/she has a different opinion from mine" did not have a factor loading above the criterion of 0.40 and were excluded. Item "I listen to others absent-mindedly" loaded on the factor Listening Attitude instead of the factor Listening Skill. All other items loaded according to the original version of the scale (Table 2). None of the items had secondary loading.

Corrected item-total correlations and Cronbach's α if an item was deleted per factor are presented in Table 3. All corrected item–total correlations were high and internal consistency reliability was satisfactory for the three subscales, with Cronbach's alpha equal to 0.81 for Listening Attitude, 0.72 for Listening Skill and 0.73 for Conversation Opportunity. The mean score value was 23.7 (SD = 5.7) for Listening Attitude, 23.1 (SD = 3.4) for Listening Skill and 14.8 (SD = 2.9) for Conversation Opportunity.

Table 2. Factor loadings from the results of exploratory factor analysis for the ALAS.

Item	Factors		
	1	**2**	**3**
I talk with others personally.	0.01	0.33	**0.41**
I'm asked my advice by other people.	−0.07	0.32	**0.51**
I'm the kind of person whom people feel easy to talk to.	−0.11	0.31	**0.49**
I don't talk with someone else unless I have something I have to talk about.	0.16	0.03	**−0.49**
I'm willing to say something to others usually.	−0.03	0.31	**0.55**
I express my feelings straightforwardly.	0.06	0.36	**0.43**
I can listen to other persons' worries, but I can't confide mine.	0.14	0.04	**−0.57**
I'm actually talking longer than the other person in spite of my intention to listen to him/her.	0.26	−0.04	−0.04
I begin to talk before the other person finishes talking.	**0.60**	−0.22	0.31
I begin arguing with the other person before I know it, while I'm listening to him/her.	**0.57**	−0.09	0.00
While listening, I tend to talk to the other person, sticking to his/her trivial words.	**0.54**	−0.16	0.03
I inadvertently see the other person from a critical viewpoint.	**0.55**	−0.01	−0.21
When I want to say something, I talk about it, even if I interrupt the other person.	**0.67**	−0.10	0.30
I tend to hurry the other person into talking faster.	**0.64**	−0.12	0.04
I can listen to the other person, even if he/she has a different opinion from mine.	−0.33	0.31	0.08
I tend to deny the other person's opinion, when it's different from mine.	**0.57**	−0.18	−0.18
I tend to talk in a directive and persuasive way, while talking with others.	**0.51**	0.14	−0.06
I tend to persist in my opinion, while talking with others.	**0.59**	0.05	−0.15
While listening, I get irritated from not understanding the other person's feelings.	**0.41**	0.17	−0.15
I talk offensively when I'm in a bad mood.	**0.49**	−0.14	−0.13
I listen to the other person calmly, while he/she is speaking.	−0.37	**0.41**	−0.20
I listen to others absent-mindedly.	**0.47**	−0.23	−0.14
I listen to the other person, putting myself in his/her shoes.	−0.11	**0.50**	0.14
I listen to the other person, summarizing in my mind what he/she has said.	−0.07	**0.60**	−0.10
I sometimes give the other person a brief summary of what he/she has said.	0.02	**0.49**	−0.06
I tend to listen to others seriously.	−0.25	**0.47**	0.13
When the other person is hesitating, I give him/her a chance by saying "For example, is it like this?"	−0.15	**0.55**	0.02
I listen to the other person, paying attention to his/her unexpressed feelings.	−0.15	**0.65**	0.09
I listen to the other person, paying more attention to the changes of his/her feelings than to the contents of his/her talk.	0.12	**0.44**	−0.03
I'm aware of my own feelings, while I'm listening to others	−0.17	**0.53**	0.07
I'm pleased that I have given some advice to the other person.	0.02	**0.41**	0.23
Cumulative % variance explained	13.90	**26.20**	32.50

Note: items in italics had reverse coding; loadings over 0.4 are in bold; the three dimensional nature of the scale was confirmed with the exception of the items "I'm actually talking longer than the other person in spite of my intention to listen to him/her", "I can listen to the other person, even if he/she has a different opinion from mine" that were excluded and the item "I listen to others absent-mindedly" that was loaded on the factor Listening Attitude instead of the factor Listening Skill.

<div align="center">**Table 3.** Corrected Item-Total Correlations, internal consistency reliability and mean.</div>

Item	Corrected Item—Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	Mean(SD)
Listening Attitude			0.81	23.7(5.7)
I begin to talk before the other person finishes talking.	0.53	0.79		
I begin arguing with the other person before I know it, while I'm listening to him/her.	0.50	0.79		
While listening, I tend to talk to the other person, sticking to his/her trivial words.	0.47	0.79		
I inadvertently see the other person from a critical viewpoint.	0.47	0.79		
When I want to say something, I talk about it, even if I interrupt the other person.	0.56	0.79		
I tend to hurry the other person into talking faster.	0.53	0.79		
I tend to deny the other person's opinion, when it's different from mine.	0.50	0.79		
I tend to talk in a directive and persuasive way, while talking with others.	0.35	0.81		
I tend to persist in my opinion, while talking with others.	0.47	0.79		
While listening, I get irritated from not understanding the other person's feelings.	0.28	0.81		
I talk offensively when I'm in a bad mood.	0.43	0.80		
I listen to him/her absent-mindedly.	0.41	0.80		
Listening Skill			0.72	23.1(3.4)
I listen to the other person calmly, while he/she is speaking.	0.32	0.71		
I listen to the other person, putting myself in his/her shoes.	0.38	0.70		
I listen to the other person, summarizing in my mind what he/she has said.	0.45	0.69		
I sometimes give the other person a brief summary of what he/she has said.	0.34	0.71		
I tend to listen to others seriously.	0.41	0.70		
When the other person is hesitating, I give him/her a chance by saying "For example, is it like this?"	0.46	0.69		
I listen to the other person, paying attention to his/her unexpressed feelings.	0.56	0.67		
I listen to the other person, paying more attention to the changes of his/her feelings than to the contents of his/her talk.	0.27	0.72		
I'm aware of my own feelings, while I'm listening to others.	0.42	0.70		
I'm pleased that I have given some advice to the other person.	0.29	0.71		
Conversation Opportunity			0.73	14.8(2.9)
I talk with others personally.	0.40	0.71		
I'm asked my advice by other people.	0.43	0.71		
I'm the kind of person whom people feel easy to talk to.	0.50	0.69		
I don't talk with someone else unless I have something I have to talk about.	0.48	0.69		
I'm willing to say something to others usually.	0.46	0.70		
I express my feelings straightforwardly.	0.37	0.72		
I can listen to other persons' worries, but I can't confide mine.	0.49	0.69		

A CFA was conducted in the odd subsample to estimate if the model fitted the data well. The CFA indicated an adequate fit of the three-factor model (RMSEA = 0.079, CFI = 0.969 and GFI = 0.960). None of the item cross loadings exceeded the item loadings on the intended latent construct. The chi-square test of the model was significant as expected ($p < 0.001$).

The intercorrelations of the ALAS subscales were all positive and significant. The correlation coefficient of Listening Attitude with Listening Skill (Figure 2) was equal to 0.33 ($p < 0.001$).

Also, the correlation coefficient of Listening Skill with Conversation Opportunity (Figure 3) was equal to 0.42 ($p < 0.001$), while the correlation coefficient of Listening Attitude with Conversation Opportunity was equal to 0.20 ($p < 0.001$).
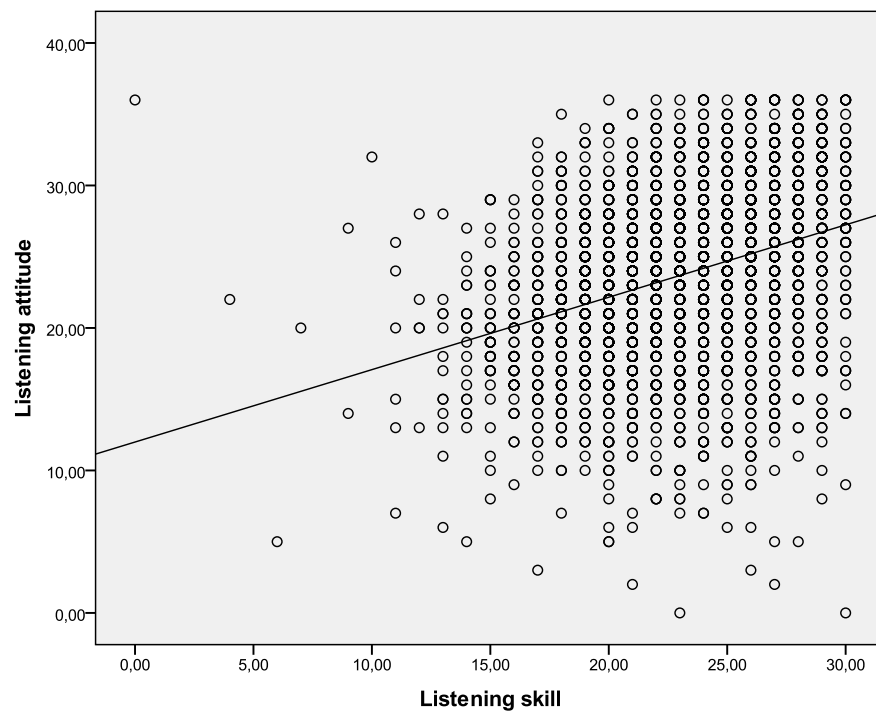
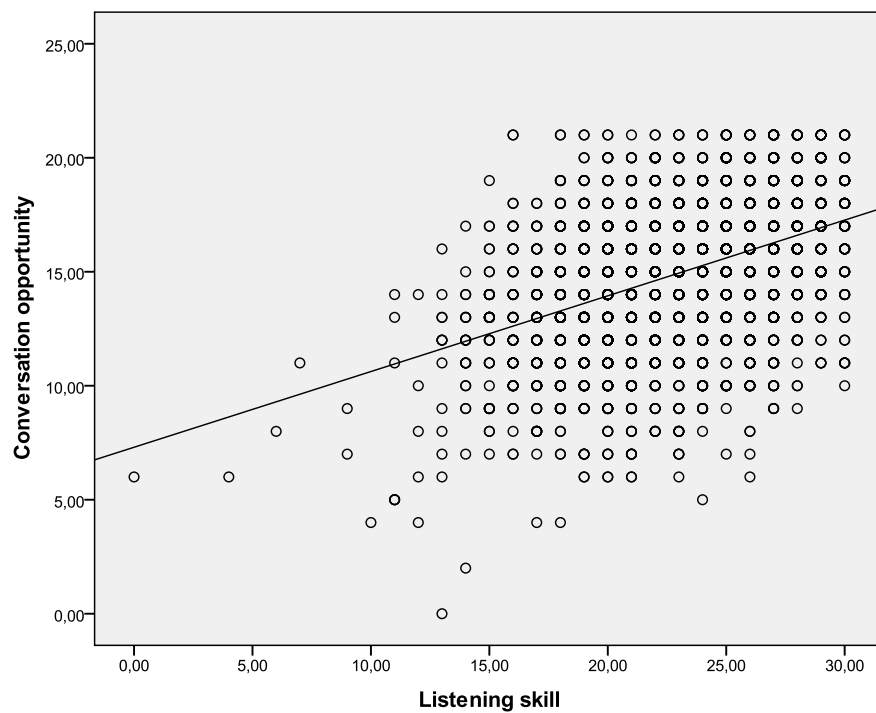**Figure 2.** Scatter plot for the association of Listening Attitude with Listening Skill.

Figure 3. Scatter plot for the association of Listening Skill with Conversation Opportunity.

The relationship of the ALAS subscales with sex, age, being a principal and having received mental health promotion training are presented in Table 4.

Table 4. Association of ALAS subscales with sex, age, being a principal and having received mental health promotion training.

	Listening Attitude		Listening Skill		Conversation Opportunity	
	Mean (SD)	*p*	Mean (SD)	*p*	Mean (SD)	*p*
Sex						
Men	23.5(5.7)	0.061	22.1(3.9)	<0.001	14.5(3.2)	<0.001
Women	23.8(5.7)		23.5(3.5)		15.2(2.7)	
Age, r[+]	0.02	0.145	0.01	0.962	0.02	0.150
Principal						
No	23.7(5.6)	0.018	23(3.7)	0.002	14.9(2.9)	0.001
Yes	24.3(5.9)		23.6(3.8)		15.4(2.8)	
Mental health promotion training						
No	23.5(5.7)	<0.001	22.9(3.7)	<0.001	14.8(2.9)	<0.001
Yes	24.5(5.6)		23.8(3.4)		15.6(2.6)	

Listening Skill and Conversation Opportunity had greater values in women as compared to men, with low effect sizes and equal to 0.38 for Listening Skill, and 0.24 for Conversation Opportunity. In addition, all ALAS subscales had higher values in those occupying a principal's position, with low effect sizes and equal to 0.10 for Listening Attitude, 0.16 for Listening Skill and 0.18 for Conversation Opportunity. Age was not positively correlated with ALAS subscales, while those that had received mental health promotion training had greater values on all subscales (Figure 4), with effect sizes equal to 0.18 for Listening Attitude, 0.25 for Listening Skill and 0.29 for Conversation Opportunity.
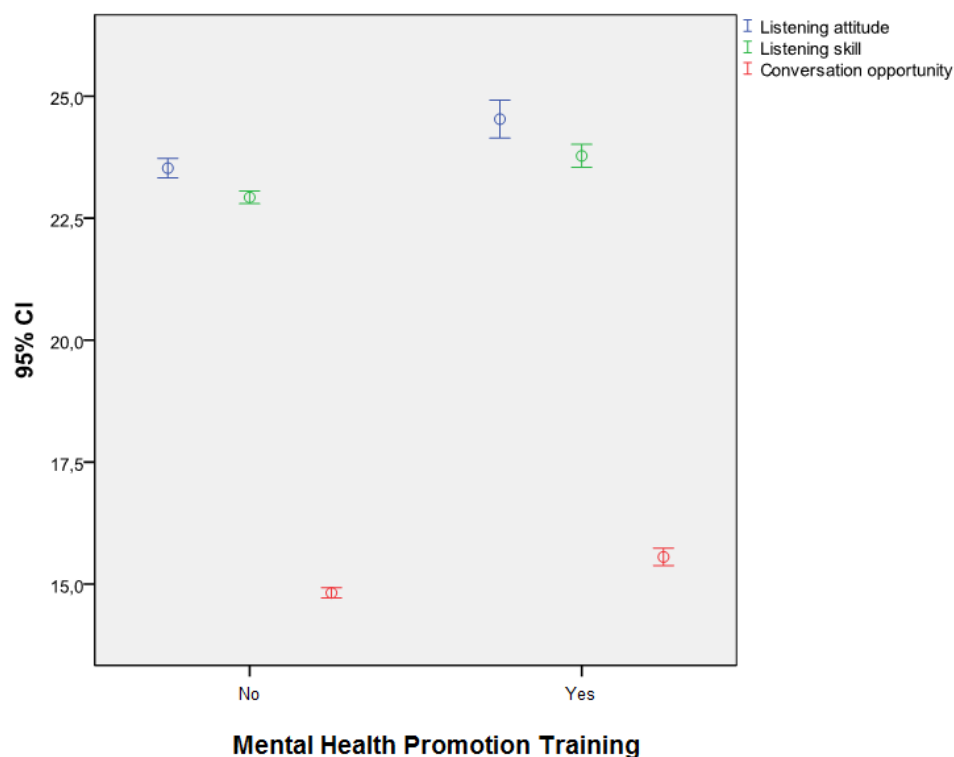
Figure 4. Error bars for ALAS subscales for those that had received mental health promotion training and for those that had not.

5. Discussion

The main purpose of the present study was to successfully translate and examine the psychometric properties of the Greek version of the ALAS in a sample of educators of all teaching grades and specialties. The exploratory factor analysis corroborated the three-factor model by Mishima, Kubota and Nagata [34], explaining 32.5% of total variance. Specifically, items "I'm actually talking longer than the other person in spite of my intention to listen to him/her" and "I can listen to the other person, even if he/she has a different opinion from mine" did not have a factor loading above the set criteria 0.40 and were excluded from further analyses, while item "I listen to others absent-mindedly" loaded on the factor Listening Attitude instead of the factor Listening Skill it was expected to load. The remaining items loaded to each of the three factors as was anticipated, thus the three dimensions of ALAS emerged clearly as three separate factors. The model was also confirmed by the CFA. The RMSEA value was 0.079, whereas the CFI and GFI values were 0.969 and 0.960, respectively. The chi-square test of the model was significant, as was predicted due to our large sample size [51].

The internal consistency reliability of the three ALAS subscales was found to be similar to the one reported by the original inventory's manufacturers [34] and it ranged from 0.81 for Listening Attitude to 0.72 for Listening Skill. Additionally, all the ALAS subscales significantly and positively correlated with each other, although at low levels. Listening Attitude was positively linked to both Listening Skill and lower to Conversation Opportunity, while the correlation between the two latter subscales was the highest of all at 0.42.

Listening Attitude had the highest mean score among all three ALAS subscales, followed by Listening Skill and Conversation Opportunity, which is in accordance with the scale's manufacturers [34]. Women scored higher on Listening Skill and Conversation Opportunity, thus appearing to exhibit better listening attitudes and to be more eager to communicate. It could be hypothesized that female teachers scored higher than their male colleagues on ALAS, due to their tendency to be more empathetic, pay closer attention to the speaker and the things said, and listen more effectively [55–59]. More generally, adults' disparity between the sexes in terms of emotional socialization and their self-determination regarding the role of gender result in similar differences in social-emotional skills (e.g., [60,61]) and thus, consequently, in the communication and active listening skills.

Age did not correlate with any of the three subscales, indicating that active listening dimensions, namely Listening Attitude, Listening Skill and Conversation Opportunity, do not change over the years in Greek educators due to maturity, and they do not get altered by teaching experience, unlike other skills such as problem solving [62] and locus of control [63]. However, all the ALAS subscales revealed differences concerning job position: principals scored higher on all of them than the rest of the educators. This finding indicates that principals have increased active listening skills which, since the training is common for all educators, are probably acquired by managing experience. It also reflects a positive outcome for Greek schools' personnel and students, since many researchers have emphasized the importance of managers' active listening skills on their subordinates' mental well-being [34,45–47]. Lastly, mental health promotion training resulted in higher scores on all subscales. This finding was somewhat expected since active listening is often an important part of such training programs [64,65].

6. Strengths and Limitations

Firstly, we were able to confirm the good fit of the three-factor model of ALAS to a Greek sample. The large sample participating in our study constitutes a major strength, considering its diversity with regard to educators' specialties, their teaching grade, their job position, the years of teaching experience and also the geographical areas in which they worked. Nevertheless, we were not able to examine the ALAS's sensitivity over time or its test–retest reliability, since the design of the study was cross-sectional. Furthermore, the convergent validity of the ALAS was not tested, as another active listening assessment scale (validated for use in Greek adults) was not available, in order to make comparisons.

7. Conclusions

The results of the present study support our hypothesis that the ALAS is a reliable and valid instrument for measuring Greek teachers' active listening. We hope that additional active listening-related research will be conducted in the future in Greece, not only in educators of all teaching grades and specialties, but in more diverse and large populations as well.

Abbreviations

ALAS	Active Listening Attitude Scale;
CFA	Confirmatory Factor Analysis;
CFI	Comparative Fit Index;
EFA	Exploratory Factor Analysis;
GFI	Goodness of Fit Index;
RMSEA	Root Mean Square Error of Approximation;
χ^2	chi square.

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