

The Impact of Podcasts on Students' English Vocabulary Knowledge and Satisfaction: A Quasi-Experimental Study

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ABSTRACT

Background: Using podcasts has long been the source of benefit in education. Podcasts are now used for learning and teaching; however, some aspects are still uncovered. Therefore, this study aimed to determine the effect of using podcasts as instructional tools on English as a Foreign Language (EFL) learners' vocabulary knowledge and satisfaction towards listening to podcasts.

Methods: In this quasi-experimental study, a vocabulary pre-test was given to 60 males intermediate EFL learners from Iran Language Institute (ILI) in Gonbad-e Kavus city, Iran, from October to November, 2017, to check their homogeneity regarding their vocabulary knowledge. Then, they were divided into two experimental and control groups, each with 30 participants. The experimental group was instructed by the use of podcasts, but the control group continued with routine instruction. They were given a post-test to examine their knowledge of vocabulary. Also, to find out the students' satisfactions towards podcasting, a 5-point Likert scale questionnaire with 8 items was given to the participants in the podcasting group. In addition to the Likert-scale questionnaire on their satisfaction, face-to-face interviews using probing questions were conducted with 8 participants. The collected data were analyzed through Statistical Package for Social Science (SPSS) version 20 using t-test. The p-value was considered at 0.05 level of significance.

Results: The results revealed that the podcast group outperformed the control group in the post-test. The mean±SD for the control and experimental groups were 14.10±1.29 and 16.66±0.92, respectively (P=0.001). Then, the thematic analysis revealed four themes: (1) vocabulary achievement, (2) learning by listening, (3) learner choice and flexibility, and (4) podcasts as useful instructional tools.

Conclusions: The findings suggest that podcasts enhance learners' vocabulary learning, thus emphasizing the pedagogical merits of podcasts in the enrichment of EFL classes. The results may provide implications for curriculum development and second language vocabulary teaching and learning.

Keywords: Learning, Education, Distance, Research, Information Technology, Vocabulary, Satisfaction

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Please cite this paper as:

Amiri M, Rastegar H,
Shomoossi N, Ghoorchai B.
The Impact of Podcasts on
Students' English Vocabulary
Knowledge and Satisfaction:
A Quasi-Experimental
Study. *Interdiscip J
Virtual Learn Med Sci.*
2023;14(2):120-129.doi:10.30476/
IJVLM.2023.96032.1170.

Received: 01-06-2023

Revised: 01-26-2023

Accepted: 02-12-2023

Introduction

During the past two decades, the term 'podcasting' has come into vogue on the stage of mass media and was noted as the 'word of the year 2005' by the New Oxford American Dictionary. Probably, Hammersley coined the term "podcasting" for the first time to denote both "iPod" and "broadcasting" (1). In fact, podcasting refers to a web-based audio content delivery approach (2). Tending to be played on any digital audio player, podcasts are one of the newest trends in online instruction and co-occurs with other routes of instruction such as e-learning, mobile learning, and web-based learning technologies and also in medical education (3). Now, they can be automatically downloaded via a subscription feed (an automatic downloading process) (4). A simple web search will render a long list of podcasts with a wide range of topics for young and adult learners, elementary or advanced learners, and so on. These days, the popularity of podcasting has enormously increased.

Historically, it is known that human beings were accustomed to listening as a primary source of learning for thousands of years. Besides, as Cebeci and Tekdal (1) stated, learning by listening to authentic speech holds one of the most effective pedagogic advantages offered in podcasting (5). Therefore, listening appears more attractive and less boring than merely reading; it can also motivate students who do not like reading. Such unique features are appropriately integrated into 'podcasting', i.e. instruction by 'talk' rather than 'text'. ELT podcasts are particularly suggested for 'extensive listening' (6), where motivating students in listening activities and providing them with exposure to native speech are the focus and priority.

According to students' and teachers' perceptions, the use of '*audiovisual resources and new technologies*' was one of the 19 motivational strategies Madrid (7) explored. In this regard, podcasting as a preferable technology in computer-assisted language learning (CALL) and mobile-assisted language learning (MALL) is a promising

tool, particularly for EFL contexts, where poor exposure to authentic and native communication may hamper learners from achieving higher levels of motivation and proficiency (3). Also, Ajabshir and Sadeghi (8) have held that CALL can be relied on as a scaffolding technology to increase vocabulary knowledge by L2 teachers, practitioners, and course designers.

The application of podcasts in learning and teaching has its pros and cons. Some scholars are doubtful about its advantages. For example, Cann (9), using quantitative and qualitative analyses, reported that audio podcasts were not popular with students; and even there have been doubts that podcasting might not significantly affect learning outcomes. On the contrary, other researchers considered podcasting a success. For instance, Kurtz, Fenwick, and Ellsworth (10) reported remarkable gains in students' final project grades; Evans (10) claimed that university students were more receptive to podcast-based learning materials than to traditional lectures or textbooks; students also found podcasts to be more effective revision tools than textbooks, and considered them more efficient than personal lecture notes.

Still, other scholars attribute further potential to podcasts (2, 11, 12), stating that podcasting brings flexibility to school and university learning; listening to recorded lectures, in particular, allows students to access and review lectures offline at convenient times. Also, the use of podcasts is suggested to supplement traditional textbooks by adding authentic listening materials (2, 12). In EFL contexts, learners may also find useful communicative aspects of the language in a podcast, e.g. idioms, phrasal verbs, grammatical structures, etc. (13). Other advantages include one's exposure to a range of different voices, accents, and social and academic situations. Podcast-based activities may successfully cater to two varieties of English (i.e. formal and informal English), which is a highly neglected aspect in EFL contexts.

Currently, there are few published reports

of EFL classes using and integrating this technology into their instructional materials. Therefore, the present study aimed to investigate the impact of using podcasts as instructional tools on Iranian EFL learners' vocabulary learning and to evaluate their satisfaction towards listening to podcasts. Accordingly, the following research questions were shaped whether listening to podcasts affects the participants' vocabulary learning and what are the participants' satisfactions and viewpoints toward listening to podcasts?

Methods

Trial Design

Both quantitative and qualitative methods were used to answer the research questions and further explore the students' satisfactions and viewpoints about podcast-based vocabulary expansion. Quantitatively, the pretest-posttest quasi-experimental design was used to examine the impact of podcasting on Iranian EFL learners' vocabulary knowledge and learning. Also, to triangulate the data, we elicited the students' satisfaction towards the effect of the program on their vocabulary learning using a 5-point Likert- questionnaire with 8 items. Moreover, qualitatively, the participants' viewpoints about podcasting were elicited via semi-structured interviews with eight participants from the experimental group.

Participants and Setting

The participants of the study were selected using convenient sampling; we had only two groups which were randomly assigned as experimental and control ones. Using a vocabulary pre-test, we randomly divided the participants into two classes: class A as the experimental group (n=30) and class B as the control group (n=30) because the groups' performance regarding their vocabulary knowledge was not significantly different at the beginning of the course. They were 60 male intermediate EFL learners whose demographic data (i.e. age, and past learning experiences) were collected through a questionnaire at the beginning of the semester

in October, 2017. Their age ranged from 16 to 22 years old; none of the participants had experience with podcast-based vocabulary expansion; in addition, they needed to be willing to participate to be included in the study. They had all practiced vocabulary using traditional methods in previous classes. They were learning English at a well-reputed Iranian language institute, i.e., Iran Language Institute (ILI), in Gonbad-e Kavus, Iran. ILI is a network of language institutes in most cities of Iran with predetermined syllabi for various levels of learners. The participants' level of English was not determined by proficiency tests; rather, based on the ILI placement test, intermediate-level learners were included in the study. Also, the participants were excluded from the study if they did not fill out the study questionnaire or did not attend the interviews.

Data Collection Tools

To obtain the desired data quantitatively, we used the following tools: (1) a 20-item researcher-made vocabulary test (used as both a pre-test and post-test), the vocabulary test enjoyed a reliability 0.85 (using Cronbach alpha coefficient) and a validity of 0.80 as estimated by the researchers, and (2) an 8-item Likert scale questionnaire was conducted solely for the experimental group to elicit the participants' satisfactions, with enough space for comments if they wished. The Cronbach alpha coefficient reliability of this questionnaire was 0.84, and the questionnaire had an acceptable validity index of 0.88, too. Finally, to discover the participants' perceptions of the impact of podcasting on learning vocabulary, eight students from the experimental group were interviewed after the course.

Intervention

Knowledge Assessment

The vocabulary pre-test was administered to both groups in the first session at the beginning of the course and before the intervention to determine their vocabulary knowledge as the starting point, and the

vocabulary post-test was performed at the end of the course after the intervention.

The experimental group was instructed by listening to podcasts. For this group, the classes were held twice a week for 90 minutes, and the course continued for five weeks from October to December, 2017. In ten successive sessions, podcast-based materials were introduced and taught to participants in the experimental group. The podcasts were played and intensively practiced in the classroom, mostly to make sure that participants had listened to the materials at least once. Listening to each podcast took about 15 minutes each session, followed by vocabulary exercises practiced for about 10 minutes on average. Then, they were encouraged to carefully listen to podcasts several times at home.

In the control group, however, vocabulary was taught by routine instructional methods without podcasts, and the course included two 90-minute sessions each week for five weeks similar to the experimental group, as practiced by the institute throughout the years. Meanwhile, the control group was taught by the ILI routine techniques of teaching vocabulary, which is mostly considered to be a modified version of audiolingual methodology with a considerable focus on grammar and drills for teaching dialogs with meager intensive work on vocabulary expansion.

Participants' Viewpoints

Following the data collection quantitatively, individual semi-structured interviews which totally lasted about two weeks were conducted to explore the experimental group participants' satisfactions and viewpoints about the podcasting module. The interview session for each participant lasted about one hour. The interview questions were shaped by a review of the related literature and the expert opinions of some colleagues. The participants were requested to choose to answer the questions either in English or Farsi (their mother tongue or L1). For the interviews, eight students (four students with higher vocabulary

scores and four with lower vocabulary scores) with varying vocabulary abilities from the experimental group participated to cater for varying opinions. In the semi-structured interview, we started with a general question: "What is your viewpoint about using this podcast?" and then continued with the probing questions including challenges, the strengths, and weak points.

The interviews stopped at the point of data saturation as the interviewer felt that the participants' answers to the interview questions were nearly similar. Then, the interviews were transcribed, and inductive thematic analysis was utilized; the reported themes emerged from the data. In other words, the validity of the data was determined by transcribing and analysing them by the authors and a panel of experts in the field where some themes emerged. The themes were discussed, and the final ones were accepted by the authors and the expert opinion of some colleagues.

Data Analysis

The data were analyzed using SPSS version 20 through the following statistical methods: (1) a one-sample Kolmogorov-Smirnov test to ascertain the normal distribution of the data, (2) independent sample t-test to compare the mean performance of the control and experimental groups before and after the intervention for the vocabulary knowledge, (3) descriptive analysis (percentage) for the satisfaction questionnaire and content analysis of the participants' answers to the satisfaction questionnaire, and (4) the content analysis for analysing the result of the open questions of the semi-structured interviews.

Results

First, to ascertain the normality of the distribution of the data, a one-sample Kolmogorov-Smirnov test was run. The p values for the pretest scores of the control and experimental groups were 0.33 and 0.24, respectively. Since the P-values were above 0.05, a parametric test was used.

Vocabulary Knowledge

The independent t-test was run to see whether the experimental group performed better than the control group in the vocabulary pre-test. Based on the independent t-test analysis, the pretest scores of the two groups were not significantly different (P=0.85). In other words, the groups were homogeneous in terms of their vocabulary ability at the beginning of the study, and the mean scores of the control and experimental groups were 12.13 and 12.07, respectively. In the post-test, the independent samples t-test showed that the mean score of the experimental group (16.66) was greater than that of the control group (14.10) (Table 1). That is, the mean±SD for the control and experimental groups were 14.10±1.29 and 16.66±0.92, respectively (P=0.001). Moreover, the table indicates that the p-value of 0.001 is much lower than 0.05, implying that the difference between the obtained means is statistically significant. Therefore, the null hypothesis which stated that “using podcasts does not significantly affect students' vocabulary learning” is

rejected. In other words, podcasts affected the participants' vocabulary learning.

As shown in Table 1, the mean score of vocabulary knowledge increased in both group after the intervention, but this increase was more effective in the podcast group.

The Likert Scale Questionnaire

The participants' satisfaction level towards podcast-based vocabulary expansion was elicited via a researcher-made 8-item questionnaire. When the instruction was over, 30 participants in the experimental group were given the questionnaire and asked to tick the Likert choices; they expressed their satisfactions as follows: *strongly agree, agree, no idea, disagree, or strongly disagree*. In addition to Likert scale statements, the questionnaire allowed some space for respondents to provide open-ended comments if they wished to add any comments. They were also assured of the confidentiality of their views and personal information. The responses were entered into Excel for analysis and reporting of the percentage. The analysis

Table 1: Comparison of the podcast and control group in terms of vocabulary knowledge

	Group	N	Mean±SD	Std. Error Mean	P value
Pre-test scores	Control	30	12.13±1.35	0.24790	0.85
	Experimental	30	12.07±1.36	0.24883	
Post-test scores	Control	30	14.10±1.29	0.23659	0.001
	Experimental	30	16.66±0.92	0.16838	

Table 2: The participants' satisfaction towards podcast-based vocabulary expansion

Item No	Statement	Strongly Agree/Agree	No idea	Strongly Disagree/Disagree
1	I often feel bored when listening to podcasts.	6.67%	26.67%	66.67%
2	I like to learn English listening comprehension mainly through podcasts because listening is very important.	60.00%	16.67%	23.33%
3	I feel that I can learn through podcasts.	86.67%	6.67%	6.67%
4	I would like teachers to use podcasts in my classes.	70.00%	16.67%	13.33%
5	I like listening to podcasts.	70.00%	16.67%	13.33%
6	To improve my English vocabulary comprehension, I will spend much of my studying time listening to podcasts.	36.67%	16.67%	46.67%
7	I often feel nervous and uncomfortable when listening to podcasts.	16.67%	20.00%	63.33%
8	I am sometimes unable to focus on and understand the content of the materials when listening to podcasts.	50.00%	26.67%	23.33%

of the eight items is presented in Table 2, and the comment or the content analysis regarding each item follows the table.

Content Analysis

Item 1: Three students commented that at first, listening to podcasts seemed to be tiresome, but gradually they really enjoyed listening to them, especially when they discovered new spoken idioms and expressions in the content of podcasts. One of them commented, *"I sometimes came up with expressions I was long looking for; it was just what I wanted in these years."* Another participant commented, *"Podcasts are interesting because it discusses the most important subjects and gives information about different cultures."* A student, however, commented that he felt bored because he could not focus on the content.

Item 2: There were two comments about this question. One learner said that *"Vocabulary is an important ability, but podcasting is only one way; I found other ways for improving my vocabulary."* The other participant said, *"My vocabulary isn't good. I like to be better, so I will listen to everything which helps me. And listening to podcasts is so cool."*

Item 3: There was only one comment on this question. One participant said, *"Speakers of this podcast file were so great. They were like classroom teachers. I sometimes feel they are in the classroom teaching me. But I could not just ask them questions."*

Item 4: One student commented, *"Podcasts are so funny and they teach me interesting and useful things. I thank my teacher to use them in the classroom."* Two other students believed that *"podcasts are new and different from what they had already learned in previous classes."*

Item 5: To this item, three students put their written comments. Two of them agreed with the idea that podcasts had motivated them to listen more. However, one student did not like the idea of listening to podcasts. He stated: *"They are so boring, so I don't like listening to them. They are so easy, too. Honestly*

speaking, it was a waste of time for me."

Item 6: Some students noted that there were other aspects of language which they needed to spend more time on. One student said he had a little problem with vocabulary; therefore, he needed to spend most of his time practicing other skills. One student commented that the course was useful in integrating podcasts, and from then on, he started listening more to podcasts to practice vocabulary in the future.

Item 7: Six students commented on this statement. While, one of them wrote: *"I started well first, but after just two minutes I couldn't focus on the content. It's so hard to understand everything"*, some others believed that they had no or few problems when listening to podcasts.

Item 8: There were six short comments on this statement. All of them implied that they sometimes had problems understanding the content of the materials.

The Verbal Interview Analysis

To explore the participants' real perceptions of the impact of podcasting on Iranian EFL learners, we interviewed four students with low vocabulary scores and four with high vocabulary scores from the experimental group after the course. The interviews continued to the saturation point, where the interviewer came to the understanding that the interviewees' answers were being similar and repeated. The length of the interviews varied between thirty and fifty minutes depending on the interviewees' willingness and eagerness to talk, and the interviews altogether took about two weeks to complete. The interviews were transcribed verbatim and analyzed thematically; the following themes emerged from the data: (1) *vocabulary achievement*, (2) *learning by listening*, (3) *learner choice and flexibility*, and (4) *podcast as a useful instructional tool*, which will be explained below.

Theme One: Vocabulary Achievement

In the interviews, the students expressed their ideas about their improvement in

vocabulary expansion. Unanimously, they reported higher gains in vocabulary scores. They also believed that they had been empowered in learning new vocabulary items more effectively and had developed sharp ears for spoken language; one said, *"I am sure from now on I would have no problem listening to different listening materials if they are not much above my level, knowing the vocabulary and expressions."*

Some of them stressed that they had gained more confidence in listening to longer stretches of speech such as stories or lectures. One student said, *"The podcasting program helped me to willingly listen more by giving me more confidence and motivation in comprehending and by forcing me to do a lot of listening practice to improve my vocabulary."* Although almost all participants felt that the podcasting experience helped them improve their vocabulary comprehension, they believed that they still needed more practice to achieve real proficiency.

Theme Two: Learning by Listening

Some interviewees believed that the process of 'learning by listening' was an advantage compared to reading textbooks. In this regard, one of them said, *"To sit down and to read is very challenging; you have to be stuck in one place for a long time. But audio materials are not like that. It is easier to learn when we listen, especially when you understand everything."* Another participant said, *"I think it is the best way to improve our pronunciation. We can listen to words and we can check the pronunciation of all words; in this way, I can check or learn pronunciations of a lot of words because everything is so fast and I don't need to check them in my dictionary."*

Another participant focused on the fact that listening to podcasts gave them an effortless and relaxed option to access ample information in general – all they had to do was to listen; he further added, *"It was so great that how easy it was for me to access information on various topics; just listen to it and learn a lot of cultural notes and*

different hints on English usage. Actually no pain, all the gain!" As previously mentioned in section 3.1, none of the participants had the experience of using podcasts for learning. However, they agreed that podcasting was such a new phenomenon for them. One of the interviewees pointed out that learning with podcasts represented a new and attractive experience, *"That is a very fresh experience. In fact, I'd never heard of a podcast before this class; I didn't even know what podcast was."*

Theme Three: Learner Choice and Flexibility

Many interviewees expressed that podcasts were flexible and convenient because the learners could listen to them at a convenient place, time, and pace of their choice. The following comment reflects the potentiality of podcasts on different occasions, *"It looked for me as if I was listening to music. Listening to music is my favourite hobby. I have a lot of small free time which I can't do anything else, so I used to listen to music. But now I can also like to listen to podcasts."* A similar idea came from another participant, *"I sometimes listened to podcasts when working with my computer."* Similarly, a participant added, *"I can listen to podcasts every time I like or I am free such as when I am on the bus or in the car and I can't do anything else. Thus it is very good to learn English at such times because I have to learn English very soon."*

Theme Four: Podcasts as Useful Instructional Tools

The last major theme emerging from the data was the participants' opinion about the auxiliary contribution of podcasts as instructional tools for extra-curricular learning. One of them said, *"Podcasting provides me additional exposure to learning English. I think I need to practice more and more."* Another learner added, *"There are a lot of vocabularies and I should do a lot of listening to become better in vocabulary comprehension. By using podcasts, I can practice vocabulary at home."* Having experienced the podcasting project, the

learners were aware of its advantages and disadvantages. As for the advantages of the program, one of the students commented that podcasts had made him somehow independent in terms of listening and vocabulary learning. Some of them found podcasting useful for speaking ability too because they were able to pause after each sentence and repeat the same as a model. Interestingly, they preferred using new technology to traditional methods of vocabulary since in this type of learning they could feel the presence of an amazing educational technology; one said, *"I am tired of using my cell phone for just messaging and listening to music. Now, I have another application for it. I am happy to use it for my English learning."*

However, some participants preferred to point to disadvantages, too. Almost half of the interviewees said that some podcasts were lengthy and not interesting enough. Even one participant regarded 'making students listen to podcasts more than once as a useless activity. One of the participants said, *"They (14) were so easy, so it was a very boring job to listen to them more than once. I think they are useless when they are very easy"*. Another disadvantage they highlighted was the lack of pictures and videos to accompany the audio files. One learner rightly criticized that podcasts were just one-way learning objects with no interactional possibilities, and added, *"We cannot interact with files; we must just listen to them and when we have questions, we cannot ask them. But, when we listened to them in class, that was no problem."*

Discussion

The present study was conducted to investigate the impact of using podcasts as instructional tools on EFL learners' vocabulary learning and to evaluate their satisfaction towards listening to podcasts. The results showed that 'listening to podcasts' improved the learners' vocabulary scores in the experimental group. Therefore, podcasts could be used in language classes, on the one hand, to help teachers and learners with

improving auditory skills and vocabulary expansion (15), and on the other hand, to boost students' classroom motivation (3, 11). In fact, the present study demonstrated the potentiality of using podcasts to foster EFL learners' English vocabulary learning and expansion, which is in line with the findings of the earlier studies (15, 16).

The results of the qualitative analysis showed that podcasts can be considered supplementary instructional tools to improve the students' overall vocabulary scores. These findings are in line with those of the previous studies (12, 15) since the participants reflected positive perceptions due to the ease and convenience of using podcasts; or because they gained motivation to practice more listening materials (11), which are really rich with new vocabulary items in context (17, 18), or because they encouraged 'active learning and listening' (14).

Also, in response to the Likert scale questionnaire, the majority of the participants decided to continue to practice listening to podcasts in the future. Based on this survey, 88% of the participants 'felt that they can learn through podcasts'. Furthermore, 70.59% liked the podcasting experience. To enrich the study findings, we conducted semi-structured interviews, and relevant themes appeared as (1) *vocabulary achievement*, (2) *learning by listening*, (3) *learner choice and flexibility*, and (4) *podcast as useful instructional tools*. Their positive satisfaction and viewpoints are also in line with those of the earlier studies (1, 6, 14, 15); they also found that podcasts could be used in educational settings in general and language teaching in particular to motivate students. Moreover, the point that podcasts can further motivate learners is frequently mentioned in the literature (11, 17, 18). However, our results contradict some earlier studies. For example, contrary to Cann and Kelly et al. (9), the participants of the present study welcomed podcasts in their classes and stated that podcasts were beneficial learning tools for them, and they were enabled to learn through listening to podcasts. Another possibility of podcast usage is for teachers to

adopt them as means of communicating with students (12).

The role of podcasting which is regarded as a useful technology in computer-assisted language learning (CALL), and mobile-assisted language learning (MALL) is of utmost importance, especially as a promising tool, a finding which is supported by the results of the present study. This is true of the EFL contexts, where poor exposure to authentic and native communication may hinder the learners from achieving higher levels of motivation and proficiency in their attempts to learn a language (12). Moreover, the findings pointed out that the learners positively perceived podcasts in listening and vocabulary learning, a finding which corresponds with those of the studies conducted by Asyifah and Indriani, and Saeedakhtar, Haqju, and Rouhi (12).

Limitations and Suggestions

This study bears implications for teaching and curriculum development in EFL contexts. First, podcasts should be given due attention because of their auditory advantages, specifically learning vocabulary by listening practice. Second, EFL teachers are recommended to integrate podcasting exercises in their classes. Third, EFL learners might find a chance to practice becoming more responsible and autonomous in improving their vocabulary. However, the limitations of podcasting for learners who do not feel at home with it should be re-considered before its integration into the course syllabus. Forth, the other limitation of the study is the recruitment of only male students in the study. Finally, a larger sample size in future studies, with a wider scope of gender and proficiency levels may help clarify the points we have not been able to consider.

Conclusion

Based on the results, 'listening to podcasts' can improve EFL learners' vocabulary scores; the use of podcasts in language classes helps teachers with improving auditory skills and vocabulary instruction and leads to higher

vocabulary scores and positive satisfactions. However, the retention of vocabulary gain is an aspect raised by researchers (12) which requires special attention. Also, benefiting from the interactive advantages of the new technologies (19), most EFL learners may start practicing with podcasting experience due to positive feelings, satisfactions, and viewpoints.

Acknowledgments

The authors would like to thank all the participants for their kind cooperation in the interviews.

Authors' Contribution

BG and HR devised the study concept, designed the study, supervised data collection and analysis, and critically revised the manuscript. HR, MA, and NS collected the data, ran the study intervention, participated in the study concept, performed the analyses, and revised the manuscript. HR conducted the interviews. BG, NS, and MA contributed to the design and analysis of the study data and drafted the manuscript. All authors contributed to the draft and approved the final manuscript.

Conflict of Interest: None declared.

Ethical Considerations and Participants Consent

This study was conducted as a master's thesis in humanities, at Science and Research Islamic Azad University, Golestan Branch, for which a confirmation code was obtained, but we did not apply for the ethics code at that time nor was it mandatory for the studies in the humanities fields. The approval code for the master's thesis is 67920312922024.

Funding/Support

This research did not receive any outside funding or support.

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