

Brief information about the project

Name of the project	AP09261155 “Psychophysiological study of susceptibility to radicalist sentiments using a polygraph and primary prevention of radicalization of students”
Relevance	The processes of the spread of radicalism in the Republic of Kazakhstan are latent in nature, which does not always make it possible to diagnose and localize them in a timely manner. As a result, research is being updated today, the focus of which is the diagnosis of radicalist sentiments, especially among young people. As part of this project, a fundamentally new approach was developed to identify the susceptibility of student youth to radicalist sentiments. A model program for psychophysiological measurement of susceptibility to radicalist sentiments using a polygraph was proposed and tested, which today is an effective psychodiagnostic tool based on identifying the relationship between the functions of the body and the human psyche.
Purpose	The goal of the project is to conduct applied psychophysiological research using a polygraph to identify students’ susceptibility to radicalist sentiments and conduct primary prevention of radicalism.
Objectives	<p>The general objective is to develop a model for organizing and conducting a psychophysiological study (PPS) of susceptibility to radicalist sentiments using a polygraph, which will allow diagnosing and monitoring the real state of religious behavior of young people and organizing work on the primary prevention of radicalism.</p> <p>To achieve the set goal and solve the general objective, the following tasks have been identified:</p> <ol style="list-style-type: none"> 1. Conduct a theoretical and methodological analysis of the problem of PPS using a polygraph to identify students’ susceptibility to radicalist sentiments. <ol style="list-style-type: none"> 1.1 Define the features of psychophysiological research (PPS). 1.2 Consider the evolution of approaches to study polygraph as one of the PPS tools. 1.3 Clarify the concepts - radicalism, radicalist sentiments, determine the features of their manifestation, influence on the individual and their interpersonal relationships. 1.4 Conduct a systematic analysis of foreign and domestic PPS methods using a polygraph to study negative moods among young people. <p>The theoretical and methodological analysis of the problem showed that radicalism in Kazakhstan today has become an important component of the development of society. Analysis of scientific literature made it possible to clarify the concepts - radicalism, political radicalism, youth radicalism, radicalist sentiments from the point of view of the current situation in the development of society. In the context of studying the influence of radicalist sentiments on the individual and their interpersonal relationships, an applied empirical study was carried out on the characteristics of the manifestation of tolerance/intolerance of the individual as an expression of predisposition to radicalist</p>

sentiments; foreign and domestic experience in studying negative trends among young people using the PPS method is summarized; a systematization map has been compiled on the experience of countries in the field of studying phenomena using the PPS method.

2. Theoretically substantiate the procedure and design of PPS using a polygraph to identify radicalist sentiments of students.

2.1 Based on the analysis of existing PPS programs using a polygraph, develop a fundamentally new approach to the PFI procedure using a polygraph to identify students' susceptibility to radicalist sentiments.

2.2 Design an applied study based on recording several parallel physiological processes and reactions.

To solve these problems, a design and program for applied testing of radicalist sentiments of students using a polygraph were developed; a model of a universal questionnaire, a battery of tests and a scheme for conducting a polygraph examination have been developed.

3. Conduct an applied experimental PPS using a polygraph to identify radicalist sentiments among students of al-Farabi KazNU.

3.1 Conduct an applied PPS of students' radicalist sentiments using a computer polygraph "Diana-07" based on the created universal questionnaire.

3.2 Conduct verification of the obtained results of the conducted PPS using mathematical processing methods.

To solve these problems, an applied PPS of students' radicalist sentiments was carried out using a computer polygraph "Diana-07", which allows taking readings online for 3 indications; a tested model of a universal questionnaire, a compiled battery of tests, and the use of the ChanceCalce mathematical data processing algorithm made it possible to obtain over 580 polygrams, during the processing of which a universal 3-point and 3-level numerical assessment of the ESO was used. Statistical data was obtained, which made it possible to obtain differentiated information regarding the risk group.

4. To introduce the created model of PPS exposure to radicalist sentiments using a polygraph into the educational process of al-Farabi KazNU carry out primary prevention of youth radicalization.

4.1 Organize master classes and advanced training courses for specialists in the primary prevention of youth radicalization.

To solve these problems, a work program for advanced training of specialists was developed "Psychophysiological study of exposure to radicalist sentiments using a polygraph and their primary prevention" (48 hours), approved by the leadership of the IQC and subsidiaries of KazNU; at a number of faculties of al-Farabi KazNU, Abai KazNPU, Kainar and Turan universities, the "Training program for the prevention of radicalization of student youth in the educational process" was introduced; master classes on the primary prevention of youth radicalization were held for curators of a number of faculties; On the basis of the established

	<p>laboratory of psychophysiological and printing research, training was organized for students during their research practice.</p>
<p>Expected and achieved results</p>	<p>In this project, a fundamentally new psychophysiological approach has been developed to identify the susceptibility of student youth to radicalist sentiments.</p> <p>Options for practical work to prevent radicalist sentiments among young people are proposed. Reliance on measures, programs and models for the prevention of radicalist sentiments among young people in different countries has made it possible to identify approaches to the prevention of radicalist sentiments among young people.</p> <p>For the first time based on the Department of General and Applied Psychology of al-Farabi KazNU created a laboratory for psychophysiological and polygraph research.</p> <p>A model of a program for measuring susceptibility to radicalist sentiments using a polygraph was proposed and tested.</p> <p>Based on the author's program for measuring exposure to radicalist sentiments using a polygraph, an experimental study was conducted on a sample of 306 students at al-Farabi Kazakh National University.</p> <p>1. Verification of the results showed the success of the developed model of a universal questionnaire for conducting psychophysiological research. The order of actions of a polygraph examiner in the event of receiving a significant psychophysiological reaction to the stimulus of interest to us in the person being examined was reflected in the form of a flow diagram. When processing polygrams, a universal 3-point and 3-level numerical assessment of ESO was used, and the capabilities of the Diana polygraph machine and the Chance Calce mathematical data processing algorithm were actively used.</p> <p>2. A series of psychophysiological individual studies of susceptibility to radicalist sentiments among students were conducted:</p> <ul style="list-style-type: none"> - according to questionnaire No. 1 Multi-topic screening (ART); - according to questionnaire No. 2 Multi-topic screening (ART); - according to questionnaire No. 3 Single topic screening DLST. <p>3. In the process of analyzing polygrams obtained at two stages of the experimental study (general and testing), no obvious signs of the presence of radicalist sentiments and susceptibility to radicalism were identified among the respondents.).</p> <p>4. At the stage of the post-test conversation with the respondents, the polygraph examiner became aware that some individuals have an expressed interest in a deep knowledge of religious issues; the desire to replenish your knowledge in the field of religion and fill existing gaps; the presence of communication with people who are deeply versed in religious issues.</p> <p>The reliability of the information received was double-checked and confirmed during the testing process.</p> <p>As part of the primary prevention of radicalization of students, the following were developed and conducted at all faculties of al-Farabi Kazakh National University: a training program for the prevention of radicalization of students in the educational process</p>

	<p>(consisting of mini-lectures, discussions, game exercises, etc.), master classes for curators/advisers and teaching staff on conducting a training program for the prevention of radicalization of students.</p> <p>The presentation of the monograph and methodological recommendations on the prevention of radicalization of youth with the participation of the Academy of the National Security Committee of the Republic of Kazakhstan, vice-rectors for educational work of the Kazakh-British University, MUIT, University of International Business, representatives of the akimat, curators, students (bachelors' students, masters' students, doctoral students) demonstrated the relevance and significance of the project to prevent young people from becoming attracted to the ideas of radicalist and extremist organizations.</p> <p>The reliability of the study is confirmed by a global theoretical review of scientific and applied literature on the research problem, the use of the developed Model of a universal polygraph questionnaire for conducting psychophysical research in laboratory conditions at al-Farabi KazNU, Algorithm of actions of a polygraph specialist in the event of detection of a "risk factor" in a subject, systematic and step-by-step work, implementation of the main provisions of the study into the practice of the laboratory of psychophysiological and polygraphic research.</p>
<p>Research team members with their identifiers (Scopus Author ID, Researcher ID, ORCID, if available) and links to relevant profiles</p>	<ol style="list-style-type: none"> 1. Aimaganbetova Olga Khabizhanovna - Doctor of Psychology, Professor. Hirsch Index – 2, Researcher ID: O-2129-2014, ORCID: 0000-0003-2076-4422, Scopus author ID: 57200080884. 2. Madaliyeva Zabira Bekeshovna - Doctor of Psychological Sciences, Professor. Hirsch Index – 2, Researcher ID: IMC-4398-2023, ORCID: 0000-0002-0820-0387, Scopus author ID: 57189508588. 3. Kassen Gulmira Amankyzy – candidate of pedagogical sciences, associate professor. Hirsch Index – 2, Researcher ID: JZD-8361-2024, ORCID: 0000-0002-7047-2199, Scopus author ID: 57163662000. 4. Baimoldina Laura Orazbekovna – PhD, senior lecturer. Hirsch Index – 1, Researcher ID: ABE-9648-2021, ORCID: 0000-0001-6097-9028, Scopus author ID: 57216619877. 5. Zakaryanova Shynar Nurbekovna – candidate of psychological sciences, senior lecturer. Hirsch Index – 1, ORCID: 0000-0002-9230-8381, Scopus author ID: 57216611568. 6. Sadvakasova Zukhra Maratovna - candidate of pedagogical sciences, associate professor. Hirsch Index – 1, Researcher ID: A-3531-2015, ORCID: 0000-0002-1380-0985, Scopus author ID: 56366558900. 7. Kazikhanov Berik Mendybaevich – Colonel, Academy of the National Security Committee of the Republic of Kazakhstan, ORCID: 0009-0004-0099-0427. 8. Adilova Elnur Temirkanovna – PhD, and about. associate professor. Hirsch Index – 2, Researcher ID: EJP-5245-2022, ORCID: 0000-0001-7242-5225, Scopus author ID: 56366687900.

<p>List of publications with links to them</p>	<ol style="list-style-type: none"> 1. Aimaganbetova O.Kh., Kasen G.A., Madalieva Z.B. [and others]. The main directions of the paradigm of radicalism. Features of psychophysiological research using a polygraph: monograph. – Almaty: Kazakh university, 2021. – 153 p. <i>ISBN 978-601-04-5673-0</i>. 2. Aimaganbetova O.Kh., Kazikhanov B.M., Madalieva Z.B. [and others]. Psychophysiological study of students' susceptibility to radicalist sentiments using a polygraph: monograph. – Almaty: Kazakh university, 2023. – 213 p. <i>ISBN 978-601-04-6337-0</i>. 3. Methodological recommendations for the prevention of radicalization of youth / Compiled by: O.Kh. Aimaganbetova, Z.B. Madalieva, G.A. Kasen, E.T. Adilova. – Almaty: Kazakh university, 2023. – 52 c. <i>ISBN 978-601-04-6496-4</i>. 4. Aimaganbetova, O., Lashkova, Y., Madaliyeva, Z., Zakaryanova, S., Sadvakassova, Z., & Kassen, G. (2023). Youth's Disposition of Radicalism in a Poly-Ethnic and Poly-Confessional Society from the Perspective of Tolerance/Intolerance. <i>Journal of Ethnic and Cultural Studies</i>, 2023. 10(1), 141–164. https://doi.org/10.29333/ejecs/1155 (Q1, percentile - Cultural Studies - 95, percentile - Sociology and Political Science - 80; SJR 2022 – 0.39) 5. Aimaganbetova O.Kh., Kasen G.A., Madalieva Z.B., Sadvakasova Z.M. Youth radicalism: theoretical analysis // <i>Bulletin of KazNPU named after. Abaya. Series Psychology</i>. – 2021. - № 3. (68). – P.13-22. https://doi.org/10.51889/2021-3.1728-7847.02 6. Nurmukhanbetov A.L., Zakaryanova Sh.N., Karaulova A.M., Adilova E.T. On the issue of prospects for the use of polygraph in Kazakhstan // <i>Bulletin of L.N. Gumilyov Eurasian National University. Pedagogy. Psychology. Sociology Series</i>. – 2021. - № 2(135). - P. 300-307. DOI: https://doi.org/10.32523/2616-6895-2021-135-2-300-307. 7. Madaliyeva Z.B., Kassen G.A., Zhubanazarova N.S., Baimoldina L.O. Theoretical overview of the experience of the countries of the world on the use of the polygraph in psychophysiological research // <i>Bulletin of L.N. Gumilyov Eurasian National University. Pedagogy. Psychology. Sociology Series</i>. – 2021. - №4 (137) - P. 378-392. DOI:https://doi.org/10.32523/2616-6895-2021-137-4-378-392 8. Aimaganbetova O.Kh., Lashkova E., Adilova E.T., Sadvakasova Z.M., Sadykova N.M. The phenomenon of tolerance/intolerance as a reflection of radicalist tendencies in the conditions of Kazakh society // <i>Vestnik KazNU. Series psychology and sociology</i>. - 2022. - № 3(82). – P. 13-27. DOI: https://doi.org/10.26577/JPoS.2022.v82.i3.02 9. Baimoldina L.O., Zakaryanova Sh.N., Aimaganbetova O.Kh., Madalieva Z.B., Adilova E.T., Sadvakasova Z.M. Methodology of conducting psychophysiological research carried out with the help of a polygraph // <i>Bulletin of KazNPU named after. Abaya. Series Psychology</i>. – 2022. - №3(72) – P.186-194. DOI: https://doi.org/10.51889/7197.2022.94.69.021
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10. Aimaganbetova O.Kh., Kassen G.A., Baimoldina L.O., Sadykova N.M., Kazikhanov B.M., Sadvakasova Z.M. Theoretical review of the experience of countries around the world in the use of the psychophysiological research method based on the polygraph // Bulletin of KazNPU named after. Abaya. Series Psychology. – 2022. - №3(72) – P.40-54. DOI: <https://doi.org/10.51889/1017.2022.78.89.005>
11. Aimaganbetova O.Kh., Adilova E.T., Sadykova N.M., Baimoldina L.O., Study of psychological characteristics and structure of religious identity of student youth // Bulletin of KazNPU named after. Abaya. Series Psychology. – 2022. - №4 (73) – P.160-168. <https://doi.org/10.51889/7339.2022.88.93.022>
12. Aimaganbetova O.Kh., Madalieva Z.B., Sadvakassova Z.M., Zakaryanova Sh.N. Modern understanding of radicalism (theoretical aspect) // Materials of the international scientific and methodological conference “The role of psychological science and practice in solving social problems of society”, dedicated to the 60th anniversary of the birth of Doctor of Psychological Sciences, professor, academician of KazNAEN M.A. Perlenbetov and the 2nd Congress of the ROO "Kazakh Psychological Society". – Almaty, 2021. – P.56-60. ISBN 2226-1052.
13. Sadvakassova Z.M., Aimaganbetova O.Kh., Madalieva Z.B., Kassen G.A., Adilova E.T. Historical analysis of the use of the polygraph: its role in the prevention of extremist activity // Collection of materials of the International Scientific and Theoretical Conference: “Current Issues in the Development of Military Science.” - Almaty: Military Institute of Ground Forces named after S. Nurmagambetov, 2022. – P. 82 -90.
14. Aimaganbetova O.Kh., Adilova E.T. Interethnic and interfaith tension in the research paradigm of ethnopsychology // Materials of the international scientific and practical conference I Zharikbaev readings “Current problems of the development of psychology and pedagogy”, dedicated to the 95th anniversary of Professor K.B. Zharikbaev. Almaty: Kazakh university, 2022. – P.147-150.
15. Zakaryanova Sh.N., Baimoldina L.O., Kazikhanov B.M., Aimaganbetova O.Kh., Sadvakasova Z.M., Adilova E.T. Theoretical foundations for identifying hidden information in polygraph studies // Materials of the international scientific and practical conference I Zharikbaev readings “Current problems of the development of psychology and pedagogy”, dedicated to the 95th anniversary of Professor K.B. Zharikbaev. – Almaty: Kazakh university, 2022. – P.151-155.
16. Sadvakasova Z.M., Aimaganbetova O.Kh., Baimoldina L.O., Kasen G.A., Adilova E.T. Prevention of radicalist sentiments among university students // Materials of the international scientific and practical conference I Zharikbaev readings “Current problems of the development of psychology and pedagogy”, dedicated to the 95th anniversary of Professor K.B. Zharikbaev. Almaty: Kazakh university, 2022. – P.256-258.
17. Zakaryanova Sh.N., Baimoldina L.O., Kazikhanov B.M., Aimaganbetova O.Kh., Adilova E.T., Sadvakasova Z.M.

	<p>Individual psychological features of the formation of psychological meaning when assessing the recognition of hidden information // Materials of the International Scientific and Practical Conference “Education and Psychological and Pedagogical Science: Systematicity, Continuity, Innovation”. T. Tazhibaev readings. – Almaty: Kazakh university, 2023. – P.526-530.</p> <p>18. Baimoldina L.O., Zakaryanova Sh.N., Kazikhanov B.M., Madalieva Z.B., Kasen G.A. The role of psychosemantics in the formation of the psychological meaning of questions during polygraph tests. // Materials of the International Scientific and Practical Conference “Education and Psychological and Pedagogical Science: Systematicity, Continuity, Innovation”. T. Tazhibaev readings. – Almaty: Kazakh university, 2023. – P.530-535.</p> <p>19. Aimaganbetova O.Kh., Adilova E.T. Interfaith tension through the prism of the theoretical study of aggressiveness // Social psychology: questions of theory and practice. Materials of the VIII International Scientific and Practical Conference in Memory of M.Yu. Kondratiev “Social psychology: issues of theory and practice” (May 11–12, 2023). – M.: Federal State Budgetary Educational Institution of Higher Education MGPPU, 2023. – P.41-44.</p> <p>20. Aimaganbetova O.Kh., Kassym L., Kazikhanov B.M., Adilova A.T. Features of the relationship of religious identity and value orientations of modern kazakhstan student///Bulletin of KazNU. Series psychology and sociology. - 2024. - No. 1(84), accepted for publication.</p>
<p>Patents (certificate of authorship)</p>	<p>1) Aimaganbetova Olga Khabizhanovna; Kassen Gulmira Amankyzy; Madalieva Zabira Bekeshovna; Zakaryanova Shynar Nurbekovna; Sadvakassova Zukhra Maratovna; Baimoldina Laura Orazbekovna. The main directions of the paradigm of radicalism. Features of psychophysiological research using a polygraph. Monograph. No. 20604 dated September 30, 2021.</p> <p>2) Aimaganbetova Olga Khabizhanovna; Kazikhanov Berik Mendybaevich; Adilova Elnur Temirkanovna; Zakaryanova Shynar Nurbekovna; Sadvakassova Zukhra Maratovna. The procedure for psychophysiological research within the framework of the scientific project “Psychophysiological study of susceptibility to radicalist sentiments using a polygraph and primary prevention of radicalization of students.” No. 32378 dated February 7, 2023.</p> <p>3) Aimaganbetova Olga Khabizhanovna; Kazikhanov Berik Mendybaevich; Adilova Elnur Temirkanovna; Zakaryanova Shynar Nurbekovna; Sadvakassova Zukhra Maratovna. Research program for the project “Psychophysiological study of susceptibility to radicalist sentiments using a polygraph and primary prevention of radicalization of students.” No. 32379 dated February 7, 2023.</p> <p>4) Aimaganbetova Olga Khabizhanovna; Kassen Gulmira Amankyzy; Kazikhanov Berik Mendybaevich; Adilova Elnur Temirkanovna; Sadvakassova Zukhra Maratovna. Training</p>

	<p>program for the prevention of radicalization of student youth in the educational process. No. 34533 dated April 11, 2023.</p> <p>5) Aimaganbetova Olga Khabizhanovna; Kazikhanov Berik Mendybaevich; Madalieva Zabira Bekeshovna; Adilova Elnur Temirkanovna; Kassen Gulmira Amankyzy; Sadvakassova Zukhra Maratovna; Zakaryanova Shynar Nurbekovna; Baimoldina Laura Orazbekovna. Psychophysiological study of students' susceptibility to radicalist sentiments using a polygraph. No. 35786 dated May 17, 2023.</p> <p>6) Aimaganbetova Olga Habizhanovna; Berik Mendybayevich Kazikhanov; Madalieva Zabira Bekeshovna; Adilova Elnur Temirkanovna. «Questionnaire 1 Multi-topic screening option 1 (ART)», Questionnaire 2 Multi-topic screening option 2 (ART)», «Questionnaire 3 One-volume screening DLST» dated February 23, 2024 No. 43229.</p>
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