



Code 06: Results from the Second Round of the Fuzzy Delphi

Results and Analysis of the Second Round of the Fuzzy Delphi Questionnaire Social Impact of Medical Research Utilization																			
Contextual Themes	Global Themes	Organizing Themes	Basic Themes	Entirely Disagree (1)	Somewhat Disagree (2)	Neutral (3)	Somewhat Agree (4)	Entirely (5)	Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis	Triangular Fuzzy Average			Mean Crisp	Qualitative Changes
															Low limit	Medium limit	High Limit		
Knowledge Governance and Research	Activity Mechanisms of Knowledge Governance and Research	Knowledge and Research Governance at The Micro Level (Research Policy by The Researcher)	Determining Research Priorities	0	0	1	5	17	4.696	0.559	-1.735	0.481	2.415	0.935	0.674	0.924	0.989	0.862	Validated
			Transferring The Research Question	0	0	2	12	9	4.304	0.635	-0.34	0.481	-0.517	0.935	0.576	0.826	0.978	0.793	Validated
			Research Targeting	0	0	2	10	11	4.391	0.656	-0.617	0.481	-0.484	0.935	0.598	0.848	0.978	0.808	Validated
			Research Culture	0	0	2	11	10	4.348	0.647	-0.475	0.481	-0.54	0.935	0.587	0.837	0.978	0.801	Validated
			Research Training	0	0	3	10	10	4.304	0.703	-0.512	0.481	-0.738	0.935	0.576	0.826	0.967	0.79	Validated
			Research Environment	0	0	2	12	9	4.304	0.635	-0.34	0.481	-0.517	0.935	0.576	0.826	0.978	0.793	Validated
			Research Ethics Considerations	0	0	4	10	9	4.217	0.736	-0.376	0.481	-0.975	0.935	0.554	0.804	0.957	0.772	Validated
			Research Management	0	0	1	10	12	4.478	0.593	-0.625	0.481	-0.47	0.935	0.62	0.87	0.989	0.826	Validated
			Research Management and Organizational Factors	0	0	1	8	14	4.565	0.59	-1.002	0.481	0.157	0.935	0.641	0.891	0.989	0.841	Validated
			Recognition and Types of Social Values of Research	0	0	4	10	9	4.217	0.736	-0.376	0.481	-0.975	0.935	0.554	0.804	0.957	0.772	Validated
			Participatory Research	0	0	3	11	9	4.261	0.689	-0.392	0.481	-0.717	0.935	0.565	0.815	0.967	0.783	Validated
		Knowledge and Research Governance at The Meso Level (Researcher Actions by Universities and Scientific Institutions)	Research Funding Systems	0	0	2	5	16	4.609	0.656	-1.496	0.481	1.196	0.935	0.652	0.902	0.978	0.844	Validated
			Knowledge Acquisition (Attracting Knowledge-Holders)	0	0	1	15	7	4.261	0.541	0.175	0.481	-0.185	0.935	0.565	0.815	0.989	0.79	Validated
			Participatory Collaboration	0	0	2	12	9	4.304	0.635	-0.34	0.481	-0.517	0.935	0.576	0.826	0.978	0.793	Validated
			Research topic Adaptation (Adaptation of New Policies and Guidelines)	0	0	1	15	7	4.261	0.541	0.175	0.481	-0.185	0.935	0.565	0.815	0.989	0.79	Validated
			Identification of Research Dimensions	0	0	4	13	6	4.087	0.668	-0.096	0.481	-0.536	0.935	0.522	0.772	0.957	0.75	Validated
			Research Evaluation Processes	0	0	1	10	12	4.478	0.593	-0.625	0.481	-0.47	0.935	0.62	0.87	0.989	0.826	Validated
			Research Evaluation Systems	0	0	1	13	9	4.348	0.573	-0.132	0.481	-0.616	0.935	0.587	0.837	0.989	0.804	Validated
			Health Technology Evaluation Indicators	0	1	2	12	8	4.174	0.778	-0.959	0.481	1.422	0.935	0.543	0.793	0.957	0.764	Validated



Results and Analysis of the Second Round of the Fuzzy Delphi Questionnaire Social Impact of Medical Research Utilization

Contextual Themes	Global Themes	Organizing Themes	Basic Themes	Entirely Disagree (1)	Somewhat Disagree (2)	Neutral (3)	Somewhat Agree (4)	Entirely (5)	Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis	Triangular Fuzzy Average			Mean Crisp	Qualitative Changes
															Low limit	Medium limit	High Limit		
Contextual Themes			Effective Components in Social Evaluation of Research	0	0	2	9	12	4.435	0.662	-0.767	0.481	-0.347	0.935	0.609	0.859	0.978	0.815	Validated
			Challenges in Measuring the Social Impact of Research	0	0	4	8	11	4.304	0.765	-0.601	0.481	-0.974	0.935	0.576	0.826	0.957	0.786	Validated
	Accountability Mechanisms of Knowledge Governance and Research	Governance of Knowledge and Research at The Macro Level (Sociology of Research by The Science Institution)	Research Pathway	0	1	2	9	11	4.304	0.822	-1.185	0.481	1.334	0.935	0.576	0.826	0.957	0.786	Validated
			Establishing a Research Strategic Committee	0	1	3	9	10	4.217	0.85	-0.94	0.481	0.486	0.935	0.554	0.804	0.946	0.768	Validated
			Access to Knowledge (Stakeholders' Access to Research Results)	0	0	2	9	12	4.435	0.662	-0.767	0.481	-0.347	0.935	0.609	0.859	0.978	0.815	Validated
			Extensive Stakeholder Participation	0	0	2	11	10	4.348	0.647	-0.475	0.481	-0.54	0.935	0.587	0.837	0.978	0.801	Validated
			Participation in Decision-Making of Research Results	0	0	0	13	10	4.435	0.507	0.282	0.481	-2.113	0.935	0.609	0.859	1	0.822	Validated
			Stakeholder Participation in the Research Process	0	0	1	10	12	4.478	0.593	-0.625	0.481	-0.47	0.935	0.62	0.87	0.989	0.826	Validated
			Practical Aspects of Participation and Collaboration in Research	0	0	1	8	14	4.565	0.59	-1.002	0.481	0.157	0.935	0.641	0.891	0.989	0.841	Validated
			Level of Stakeholder Participation in Research (Micro, Meso, Macro)	0	0	3	8	12	4.391	0.722	-0.773	0.481	-0.587	0.935	0.598	0.848	0.967	0.804	Validated
Knowledge Production and Exchange	Knowledge Producers	Researchers and Scientists	The Role of Researchers in Research	0	0	1	6	16	4.652	0.573	-1.457	0.481	1.411	0.935	0.663	0.913	0.989	0.855	Validated
			Individual Characteristics of Researchers in Knowledge Creation	0	0	0	9	14	4.609	0.499	-0.477	0.481	-1.951	0.935	0.652	0.902	1	0.851	Validated
			Research Group Strategies	0	0	2	11	10	4.348	0.647	-0.475	0.481	-0.54	0.935	0.587	0.837	0.978	0.801	Validated
		Educational and Research Organizations and Centers	Organizational Structures and Characteristics	0	0	1	12	10	4.391	0.583	-0.291	0.481	-0.665	0.935	0.598	0.848	0.989	0.812	Validated
			Organizational Performance	0	0	3	10	10	4.304	0.703	-0.512	0.481	-0.738	0.935	0.576	0.826	0.967	0.79	Validated
			Application of Knowledge in The Organization	0	0	0	11	12	4.522	0.511	-0.093	0.481	-2.19	0.935	0.63	0.88	1	0.837	Validated



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Contextual Themes	Global Themes	Organizing Themes	Basic Themes	Entirely Disagree (1)	Somewhat Disagree (2)	Neutral (3)	Somewhat Agree (4)	Entirely (5)	Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis	Triangular Fuzzy Average			Mean Crisp	Qualitative Changes
															Low limit	Medium limit	High Limit		
Contextual Themes	Knowledge Users	Policymakers	Role Policy Implementers	0	0	1	4	18	4.739	0.541	-2.063	0.481	3.823	0.935	0.685	0.935	0.989	0.87	Validated
			Characteristics of Policymakers	0	0	1	11	11	4.435	0.59	-0.454	0.481	-0.616	0.935	0.609	0.859	0.989	0.819	Validated
			Characteristics of Policymaking	0	0	0	10	13	4.565	0.507	-0.282	0.481	-2.113	0.935	0.641	0.891	1	0.844	Validated
			Encouragement of The Use of Research Evidence in The Decision-Making System	0	0	2	4	17	4.652	0.647	-1.728	0.481	1.945	0.935	0.663	0.913	0.978	0.851	Validated
			Feeling of The Need for Research in Decision-Making	0	0	0	4	19	4.826	0.388	-1.843	0.481	1.522	0.935	0.707	0.957	1	0.888	Validated
		Stakeholders	Professional Users (Interested Groups: Individuals, Organizations, Communities, Industries or Economies)	0	0	0	15	8	4.348	0.487	0.684	0.481	-1.687	0.935	0.587	0.837	1	0.808	Validated
			End Users (General Public, Citizens, Public Representatives)	0	0	1	11	11	4.435	0.59	-0.454	0.481	-0.616	0.935	0.609	0.859	0.989	0.819	Validated
			Type of User Group Decision-Making	0	0	2	12	9	4.304	0.635	-0.34	0.481	-0.517	0.935	0.576	0.826	0.978	0.793	Validated
			Types and Characteristics of User Groups	0	0	2	13	8	4.261	0.619	-0.212	0.481	-0.408	0.935	0.565	0.815	0.978	0.786	Validated
		Knowledge Brokers and Managers	The Role of Knowledge Intermediaries	0	0	0	8	15	4.652	0.487	-0.684	0.481	-1.687	0.935	0.663	0.913	1	0.859	Validated
			The Role of Research Popularization (Popularization of Social Value)	0	0	1	9	13	4.522	0.593	-0.806	0.481	-0.218	0.935	0.63	0.88	0.989	0.833	Validated
Knowledge Dissemination and Transfer	Knowledge Dissemination Processes	Activities Based on Active and Effective Knowledge Dissemination	Dissemination of Knowledge to Peers	0	0	1	12	10	4.391	0.583	-0.291	0.481	-0.665	0.935	0.598	0.848	0.989	0.812	Validated
			Social Orientation of Research in Knowledge Dissemination	0	0	3	11	9	4.261	0.689	-0.392	0.481	-0.717	0.935	0.565	0.815	0.967	0.783	Validated
			Activities Related to Knowledge Transfer	0	0	1	12	10	4.391	0.583	-0.291	0.481	-0.665	0.935	0.598	0.848	0.989	0.812	Validated
			Dissemination of Knowledge to Potential Users (e.g., Stakeholders, Policymakers, and Policy Implementers)	0	0	0	12	11	4.478	0.511	0.093	0.481	-2.19	0.935	0.62	0.87	1	0.83	Validated



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															Low limit	Medium limit	High Limit			
		Activities Based on The Publication of Research Results	Public Knowledge Dissemination Strategies	0	0	1	13	9	4.348	0.573	-0.132	0.481	-0.616	0.935	0.587	0.837	0.989	0.804	Validated	
			Purposeful Sharing of Research	0	0	1	5	17	4.696	0.559	-1.735	0.481	2.415	0.935	0.674	0.924	0.989	0.862	Validated	
			How to Communicate Research Findings	0	0	1	6	16	4.652	0.573	-1.457	0.481	1.411	0.935	0.663	0.913	0.989	0.855	Validated	
	Knowledge Transfer Processes	Factors Facilitating Knowledge Transfer	Characteristics of Researchers in Knowledge Transfer	0	0	0	11	12	4.522	0.511	-0.093	0.481	-2.19	0.935	0.63	0.88	1	0.837	Validated	
			Transfer Infrastructures for Accessing Results Through Databases	0	0	1	9	13	4.522	0.593	-0.806	0.481	-0.218	0.935	0.63	0.88	0.989	0.833	Validated	
		Environmental Factors for Knowledge Transfer	Targeted Transfer of Research Results to Potential Users	0	0	0	13	10	4.435	0.507	0.282	0.481	-2.113	0.935	0.609	0.859	1	0.822	Validated	
			Facilitation of Knowledge Transfer	0	0	0	8	15	4.652	0.487	-0.684	0.481	-1.687	0.935	0.663	0.913	1	0.859	Validated	
			Transfer of Knowledge from Research	0	0	1	11	11	4.435	0.59	-0.454	0.481	-0.616	0.935	0.609	0.859	0.989	0.819	Validated	
	Knowledge Mobilization	Knowledge Distribution	Activities Based on Social Interactions	Interaction of Knowledge Users with Each Other	0	0	1	6	16	4.652	0.573	-1.457	0.481	1.411	0.935	0.663	0.913	0.989	0.855	Validated
				Type of Social Communication	0	0	4	10	9	4.217	0.736	-0.376	0.481	-0.975	0.935	0.554	0.804	0.957	0.772	Validated
Specificity of Appropriate Communication System				0	0	2	13	8	4.261	0.619	-0.212	0.481	-0.408	0.935	0.565	0.815	0.978	0.786	Validated	
Interactive Process (Transfer and Exchange of Knowledge Between Two Parties)				0	0	2	13	8	4.261	0.619	-0.212	0.481	-0.408	0.935	0.565	0.815	0.978	0.786	Validated	
Link Between Social Needs and The University				0	0	0	4	19	4.826	0.388	-1.843	0.481	1.522	0.935	0.707	0.957	1	0.888	Validated	
Drivers of Knowledge Exchange				0	0	2	9	12	4.435	0.662	-0.767	0.481	-0.347	0.935	0.609	0.859	0.978	0.815	Validated	
Activities Based on Social Networks			Knowledge Representation	0	0	2	12	9	4.304	0.635	-0.34	0.481	-0.517	0.935	0.576	0.826	0.978	0.793	Validated	
			Social and Scientific Networks	0	0	1	6	16	4.652	0.573	-1.457	0.481	1.411	0.935	0.663	0.913	0.989	0.855	Validated	
			Collaboration Networks	0	0	2	10	11	4.391	0.656	-0.617	0.481	-0.484	0.935	0.598	0.848	0.978	0.808	Validated	
			Sharing Platforms	0	0	0	9	14	4.609	0.499	-0.477	0.481	-1.951	0.935	0.652	0.902	1	0.851	Validated	



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															Low limit	Medium limit	High Limit		
			Digital Platform Connectivity Capacity	0	0	2	11	10	4.348	0.647	-0.475	0.481	-0.54	0.935	0.587	0.837	0.978	0.801	Validated
Knowledge Popularization	Components of Knowledge Popularization	Social Impact of Research in Health (as a Long-Term Effect)	Impact on Health Status	0	0	0	6	17	4.739	0.449	-1.167	0.481	-0.709	0.935	0.685	0.935	1	0.873	Validated
			Impact on Economic Indicators	0	0	2	5	16	4.609	0.656	-1.496	0.481	1.196	0.935	0.652	0.902	0.978	0.844	Validated
		Social Impact of Research in Organizations (as a Medium-Term Effect)	Impact on Health Determinants	0	0	0	7	16	4.696	0.47	-0.911	0.481	-1.291	0.935	0.674	0.924	1	0.866	Validated
			Impact on Education	0	1	2	10	10	4.261	0.81	-1.096	0.481	1.291	0.935	0.565	0.815	0.957	0.779	Validated
			Impact on Decision-Making	0	0	2	8	13	4.478	0.665	-0.928	0.481	-0.124	0.935	0.62	0.87	0.978	0.822	Validated
		Social Impact of Research (as a Short-Term Effect)	Social Impact of Research in The Fields of Scientometrics	1	0	5	9	8	4	1	-1.195	0.481	2.158	0.935	0.511	0.75	0.902	0.721	Validated
			Impact on Service Delivery	0	0	1	3	19	4.783	0.518	-2.468	0.481	5.859	0.935	0.696	0.946	0.989	0.877	Validated
			Social Goals of Research	0	1	2	11	9	4.217	0.795	-1.021	0.481	1.318	0.935	0.554	0.804	0.957	0.772	Validated
			Social Return on Research Investment	0	1	4	10	8	4.087	0.848	-0.664	0.481	0.019	0.935	0.522	0.772	0.935	0.743	Validated
			Social Benefits of Research	0	1	1	13	8	4.217	0.736	-1.125	0.481	2.533	0.935	0.554	0.804	0.967	0.775	Validated
Knowledge Utilization	Knowledge Implementation	Behaviors Leading to the Development and Strengthening of Research	Allocation of Research Resources	0	1	2	5	15	4.478	0.846	-1.654	0.481	2.221	0.935	0.62	0.87	0.957	0.815	Validated
			Development and Strengthening of Research Activities	0	1	1	8	13	4.435	0.788	-1.599	0.481	2.902	0.935	0.609	0.859	0.967	0.812	Validated
			Development and Active Performance of Researchers	0	1	0	10	12	4.435	0.728	-1.69	0.481	4.364	0.935	0.609	0.859	0.978	0.815	Validated
			Development of Individual and Organizational Networks	0	1	1	9	12	4.391	0.783	-1.474	0.481	2.64	0.935	0.598	0.848	0.967	0.804	Validated
			Improvement of Public Health and Well-Being	0	0	3	6	14	4.478	0.73	-1.068	0.481	-0.168	0.935	0.62	0.87	0.967	0.819	Validated
		Behaviors Leading to Research Results in Health Promotion	Increasing Social Benefits	0	0	3	10	10	4.304	0.703	-0.512	0.481	-0.738	0.935	0.576	0.826	0.967	0.79	Validated
			Improving Disease Treatment Outcomes	0	0	1	5	17	4.696	0.559	-1.735	0.481	2.415	0.935	0.674	0.924	0.989	0.862	Validated
			Improving Public Services	0	0	2	8	13	4.478	0.665	-0.928	0.481	-0.124	0.935	0.62	0.87	0.978	0.822	Validated
			Improving Experience	0	1	0	13	9	4.304	0.703	-1.372	0.481	3.986	0.935	0.576	0.826	0.978	0.793	Validated
			Improving Research Impact	0	0	1	10	12	4.478	0.593	-0.625	0.481	-0.47	0.935	0.62	0.87	0.989	0.826	Validated



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															Low limit	Medium limit	High Limit		
Knowledge Exploitation			Improving Clinical Practice	0	0	0	12	11	4.478	0.511	0.093	0.481	-2.19	0.935	0.62	0.87	1	0.83	Validated
			Usefulness of Knowledge	0	0	2	10	11	4.391	0.656	-0.617	0.481	-0.484	0.935	0.598	0.848	0.978	0.808	Validated
		Behaviors Leading to the Application of Research	Commercial and Consumer Outcomes of Research or Research Services	0	0	1	13	9	4.348	0.573	-0.132	0.481	-0.616	0.935	0.587	0.837	0.989	0.804	Validated
			Marketing of Research-Derived Knowledge	0	0	2	12	9	4.304	0.635	-0.34	0.481	-0.517	0.935	0.576	0.826	0.978	0.793	Validated
			Pathways to Research Commercialization	0	0	3	13	7	4.174	0.65	-0.177	0.481	-0.462	0.935	0.543	0.793	0.967	0.768	Validated
			Factors Affecting Knowledge Translation	0	0	1	10	12	4.478	0.593	-0.625	0.481	-0.47	0.935	0.62	0.87	0.989	0.826	Validated
			Facilitating Knowledge Translation (Using Appropriate Research Language, Presenting Research Results in a Timely Manner)	0	0	2	10	11	4.391	0.656	-0.617	0.481	-0.484	0.935	0.598	0.848	0.978	0.808	Validated
			Structures and Processes of Knowledge Translation	0	0	2	11	10	4.348	0.647	-0.475	0.481	-0.54	0.935	0.587	0.837	0.978	0.801	Validated
			Implementation of Clinical Research	0	0	0	14	9	4.391	0.499	0.477	0.481	-1.951	0.935	0.598	0.848	1	0.815	Validated
			Translating Knowledge into Practice	0	0	0	7	16	4.696	0.47	-0.911	0.481	-1.291	0.935	0.674	0.924	1	0.866	Validated
			Utilization of Research Outcomes	0	0	0	13	10	4.435	0.507	0.282	0.481	-2.113	0.935	0.609	0.859	1	0.822	Validated
			Promoting Knowledge Application	0	0	0	12	11	4.478	0.511	0.093	0.481	-2.19	0.935	0.62	0.87	1	0.83	Validated
			Practical and Policy Applications of Research	0	0	1	8	14	4.565	0.59	-1.002	0.481	0.157	0.935	0.641	0.891	0.989	0.841	Validated
Using Research Results	0	0	1	5	17	4.696	0.559	-1.735	0.481	2.415	0.935	0.674	0.924	0.989	0.862	Validated			