PRISMA flowchart was made according to PRISMA principles. Based on careful research and discussion, some search terms were identified based on keywords and topics of the study, including “Poultry/Chicken/Laying hens/Broiler”, “Health status”, “Disease”, “Vocalization/Sound/Audio/Acoustic”, “Temperature”, “Feces/Manure/Excrement”, “Behavior/Activity/Posture”, “Warning/Detection/Monitoring/Diagnosis”, “Machine learning”, “Deep learning”, and synonyms of the above terms, which are mentioned in lines 108-111 of the manuscript. Search terms were formulated based on the combination of search keywords and topics, and 899 literatures were retrieved in the Science Citation Index database. 24 additional literatures were added based on our reading of the work of major research groups in the research field. There were in total 909 literatures after removing duplicates. By reviewing titles and abstracts of the literatures, 77 articles were identified relevant. After reading the full text of the 77 literatures, it was decided to include 42 literatures that were most relevant to the topics discussed in the manuscript. A PRISMA flowchart was made as shown in Figure S1.

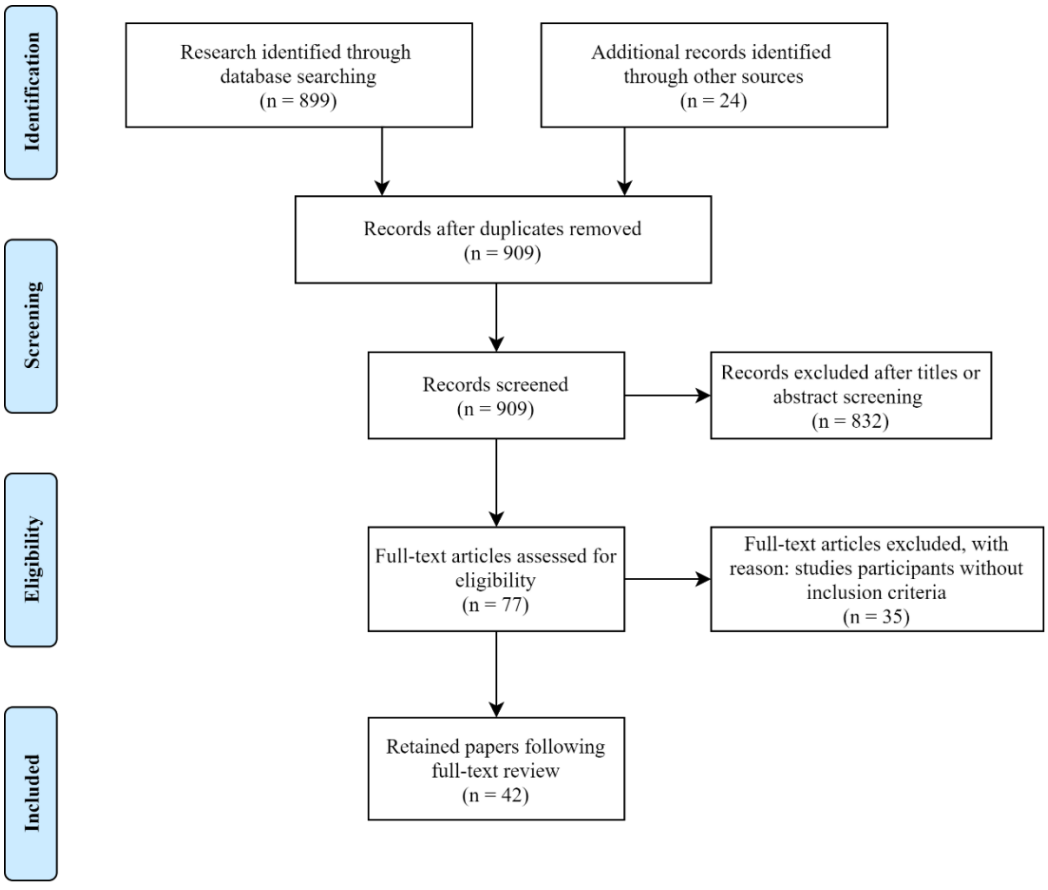

Figure S1. PRISMA flowchart.