Sentiment extraction and analysis using spoken utterances or written corpora as well as collection and analysis of human heart rate data using sensors are commonly used techniques and methods. On the other hand, these have been not combined yet. The collected data can be used e.g. to investigate the mutual dependence of human physical and emotional activity. The paper describes the procedure of parallel acquisition of heart rate sensor data and tweets expressing sentiment and difficulties related to this procedure. The obtained datasets are described in detail and further discussed to provide as much information as possible for subsequent analyses and conclusions. Analyses and conclusions are not included in this paper. The presented experiment and provided datasets serve as the first basis for further studies where all four presented data sources can be used independently, combined in a reasonable way or used all together. For instance, when the data is used all together, performing studies comparing human sensor data, acquired noninvasively from the surface of the human body and considered as more objective, and human written data expressing the sentiment, which is at least partly cognitively interpreted and thus considered as more subjective, could be beneficial.