|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **RR Measure (project)** | **RR Rate (App)** | **Breath Counter (App)** |
| 1 | 21 bpm | 22 bpm | 17 bpm |
| 2 | 22 bpm | 18 bpm | 18 bpm |
| 3 | 22 bpm | 20 bpm | 17 bpm |
| 4 | 18 bpm | 22 bpm | 18 bpm |
| 5 | 21 bpm | 21 bpm | 17 bpm |
| 6 | 24 bpm | 21 bpm | 15 bpm |
| 7 | Max tapes/Try again | 32 bpm | 26 bpm |
| 8 | 33 bpm | 30 bpm | 29 bpm |
| 9 | 27 bpm | 29 bpm | 30 bpm |
| 10 | 27 bpm | 28 bpm | 29 bpm |

Comparison of RR Rate using various apps

In serial no. 7,8,9,10 rapid breathing is done deliberately.

RESULTS

1. Apps which require user to tap each time they breathe have a major drawback as the user generally shows irregularity in breathing.

2. But, in non-tap methods available so far like the App Breath Counter in last column, user have to wait for complete 1 minute to know RR.

3. RR Measure App’s performance primarily depends on user’s consistency in tapping.

(a). To Get accurate results only with less errors, it can be simply modified by reducing the threshold consistency %, but after doing that the user must have to be very consistent with his tapping as it will discard inconsistent breathing pattern.

(b). To get results very quickly, it can be modified by reducing the no of taps, but doing that will decrease accuracy.

(c). We as of now have fixed threshold consistency by choosing it such that user don’t have to be very-very sensitive and no of taps such that it gives result in a fair amount of time (20-35 seconds, 35 seconds Max).

or

(d). Depending on the requirement/clinical setting/individual’s choice, Options may be provided to user to choose if he/she

1. wants to discard all abnormal breathing/tapping pattern. (decrease Thc)

2. wants to measure abnormal breathing also. (Increase Thc, Error Prone)

3. wants RR very fast and is okay with some errors. (Reduce no of taps required)

Error factor must have to be changed with some table depending on Z and Thc chosen by user. For it, database/ table have to be added to the code for it.