1. No, this is not a guarantee that deadlock has occurred. There exists the possibility that none of the threads got scheduled since the last sample. As the sample time decreases, this becomes more likely.

2. The duration of the jiffy. The shorter the jiffy, the more likely it is that no new thread got scheduled.

3. Yes, I think this is true. As the value of ACTIVE\_DURATION increases, diners grab fewer chopsticks. Therefor, the diners are performing fewer actions that initiate deadlock, so deadlock is less likely to occur.