**ERGO II Ethics application form – Psychology Committee**

1. **Applicant Details**

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| **1.1 Applicant name** | James W. Butterworth |
| **1.2 Supervisor** | Dr. Nicholas J. Kelley |
| **1.3 Other researchers / collaborators (if applicable):** *Name, address, email* | Jahima Khatun, jk11g20@soton.ac.uk  Amber Hockey, ash1g18@soton.ac.uk |

1. **Study Details**

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| **2.1 Title of study** | Sleep Quality and the Self (Daily Diary) |
| **2.2 Type of project** (e.g. undergraduate, Masters, Doctorate, staff) | Doctorate |

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| **2.3 Briefly describe the rationale for carrying out this project and its specific aims and objectives.** |
| Current literature directly exploring the relationship between sleep quality and various concepts of the self is limited. Prior research has focused primarily on Sleep Quality and Self-Esteem, or Sleep Quality and Self-Control; beyond this, various self-concepts (such as Self-Enhancement, or Sense-of-Self, for example) is lacking; having only been explored as a covariate or ignored altogether. Due to the sheer number of measures of self and identity, there is no leading theory behind the relationship between sleep quality and the self. A previous study by the same researchers explored the correlational relationships between sleep quality and a multitude of self-concepts; including previously unexplored measures and those with limited or ambiguous research. This research provided the foundations for further in-depth exploration of these topics and provide valuable insight into the link between sleep and identity.  We have recently completed a follow up study which looked precisely at the self-constructs that revealed the greatest effects. This study was a longitudinal study (*daily diary*) exploring how these self-constructs changes over time, and how it is influenced by variation in sleep-quality. We now aim to replicate this follow up study, with the additional instruction of a behaviour change. In other words, alongside the 10 day virtual-diary, we are asking participant to attempt to spend a few minutes of their day consciously making an effort to show self-control, or self-compassion, or positive self-esteem (depending on randomly assigned condition). The survey will remain entirely the same, except for this added instruction. We will distribute this survey via both of the same platforms as the prior studies: the research platform, *Prolific*, and the University of Southampton *eFolio* system. The findings of this extended research will identify the potential necessity for a large-scale intervention study. This present research will reveal the effects of behavioural change on subjective feelings of self-compassion, self-control, positive self-esteem, and sleep quality, all of which have been repeatedly shown to improve clinical and psychological wellbeing. |

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| **2.4 Provide a brief outline of the basic study design. Outline what approach is being used and why.** |
| As before, the present study will use an online *daily diary* approach to explore changes in self-reported feelings of the self (I.e.: self-compassion; self-control) over the course of two weeks. We will also explore how the role of sleep quality influences this variation. The experiment will use an online questionnaire method to collect all data; we will use *eFolio* to recruit participants, and *Qualtrics* to distribute and collect data. The design will be longitudinal, and between subjects. Participants will be required to complete a very brief (3 minute) questionnaire every day for 14 days, in which they will report their subjective feelings of various constructs of the self (using both state and trait measures). This study builds on the findings of our previous research, and therefore uses many of the same well-validated measures. We will also add a small value writing task and state versions of several previously approved trait measures. The full list of self-constructs:   * Self-Compassion * Self-Control * Self-Esteem * Isolation * Loneliness * Self-Continuity * Vitality * Optimism   The questionnaire will also include some further measures of basic demographic material, personality, etc.  In addition to this online diary, we are asking participants to make a conscious effort to show increased self-compassion, self-control, or self-esteem, or no change to their daily lives (depending on their randomly assigned condition) during their daily routine over the course of 10 days. We do not request that they complete any specific tasks, but we offer suggestions in order to demonstrate and clarify the instructions. E.g.: forgiving yourself for being rude to a waitress (S-Com); denying yourself unnecessary luxuries (such as unhealthy foods)[S-Con]; or recognizing why you are valuable and competent [S-Est]. Participants may choose to write down thoughts and feelings as if they were supporting themselves from a third perspective, and/or they may choose to meditate and reflect on their behaviours, but such examples are not a mandatory requirement of the study. |

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| **2.5 What are the key research question(s)? Specify hypotheses if applicable.** |
| The primary research asks what (if any) the link between sleep quality and the self and identity is. This can be applied to each individual measure of the self (listed above), and as an overall concept. By extension, we ask the question of how these self-constructs individually and collectively change with changing sleep quality, and with the additional factor of effortful behaviour change. For example, do participants experience reduced lower self-compassion following nights of poorer sleep quality? Does sleep quality improve with effortful behaviour change? Hypotheses include various directional correlations between sleep quality and each individual measure of the self, with additional measures of the self as covariates. We expect to see participant who consistently attempt the instructed behaviour change to report improved sleep quality, and changes to self-reported measures of the self. Generally, we expect to see a positive correlation between improved sleep quality and more positive self-reported self-constructs. This will ultimately answer the question: do behavioural changes mediate the effect of sleep quality on these self-constructs (individually and collectively)? |

1. **Sample and setting**

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| **3.1 Who are the proposed participants and where are they from (e.g. fellow students, club members)? List inclusion / exclusion criteria if applicable.** |
| The questionnaire will be only available to students from the University of Southampton, and participants via the *Prolific* platform, and the only participation criteria is to be over the age of 18, and a fluent English speaker; we expect inclusion of participants from a diverse range of backgrounds (i.e.: gender / race / nationality / age). Participants must not have completed any prior research related to the Sleep Quality and The Self study. |

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| **3.2. How will the participants be identified and approached? Provide an indication of your sample size. If participants are under the responsibility of others (e.g., parents/carers, teachers) state if you have permission or how you will obtain permission from the third party).** |
| As the experiment is entirely questionnaire based, it will be distributed across an online platform and therefore participants will be recruited via *eFolio and Prolific*. We aim to collect data from 120 participants (60 from *eFolio* and 60 from *Prolific*) within each of 4 conditions (480 participants in total) which will give us adequate statistical power to detect modest associations between sleep and self-related variables. As this study requires commitment every day, it is likely that some participants will withdraw over the course of the 10 days. Therefore, this number should allow for at least 400 participants to remain from start to finish. |

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| **3.3 Describe the relationship between researcher and sample. Describe any relationship e.g., teacher, friend, boss, clinician, etc.** |
| There will be no direct interaction between researcher and participant |

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| **3.4 How will you obtain the consent of participants? (***please upload a copy of the consent form if obtaining written consent***) NB. Consent form is not needed for studies collecting data online.** |
| As the experiment is an online questionnaire, when participants click on the link to open the questionnaire, they will have to read the information sheet /consent form (opening page of the questionnaires will be these documents) and click a button at the bottom of the page to indicate consent to continue. Participants will not be allowed to continue with the questionnaires if they do not click the “Consent” button. |

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| **3.5 Is there any reason to believe participants may not be able to give full informed consent? If yes, what steps do you propose to take to safeguard their interests?** |
| No |

1. **Research procedures, interventions and measurements**

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| **4.1 Give a brief account of the procedure as experienced by the participant. Make it clear who does what, how many times and in what order. Make clear the role of all assistants and collaborators. Make clear the total demands made on participants, including time and travel.** *Upload copies of questionnaires and interview schedules to ERGO.* |
| Participants will complete all questionnaires online, and attempt to consciously make an effort to change 1 behavioural trait (either self-compassion, self-control, self-esteem, or none). We ask participant to attempt this behavioural change as they go about their daily lives. Depending on their assigned condition, participants are instructed to make a conscious effort to show self-compassion, self-control, or positive self-esteem throughout thier day. This could be forgiving yourself for being rude to a waitress (S-Com); denying yourself unnecessary luxuries (unhealthy foods)[S-Con]; or recognizing why you are valuable and competent [S-Est]. We suggest that participants may find it useful to keep a “kindness journal” in which they should spend a few minutes every day expressing or noting their behaviours according to their condition. They may choose to find somewhere quiet and write a paragraph in a personal diary or close their eyes and reflect on these behaviours, or regularly remind themselves to attempt these behaviours, as if you were supporting a friend. These behaviours will be monitored by use of 2 additional questions to the daily survey: “Roughly how long did you spend showing [*condition*](in minutes)” and “briefly describe the way(s) in which you showed [*condition*]”. Participants will be able to complete the survey in its entirety from any device with access to internet (computer / phone). They will be sent (via *email*) a link to a new online questionnaire every day for 10 days. Participants will simply need to click on the provided link to the online questionnaire, sign (click the button) the consent form, before simply answering all questions of the questionnaire. The questionnaire will be sent to them at the same time every day, with the intention that participants will complete the questionnaire around the same time every day. Each questionnaire will consist of roughly 30 questions, and therefore will take roughly 3 minutes to complete. However, the very first day of the study will also contain additional information and questions (e.g. demographics) and therefore will take closer to 5 minutes to complete. Questions will consist primarily of Likert scale questions (i.e.: “on a scale of 1 – 5, how much do you agree…”). |

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| **4.2 Will the procedure involve deception of any sort? If yes, what is your justification?** |
| No |

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| **4.3. Detail any possible (psychological or physical) discomfort, inconvenience, or distress that participants may experience, including after the study, and what precautions will be taken to minimise these risks.** |
| There is no known risk with participation. |

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| **4.4 Detail any possible (psychological or physical) discomfort, inconvenience, or distress that YOU as a researcher may experience, including after the study, and what precautions will be taken to minimise these risks. If the study involves lone working please state the risks and the procedures put in place to minimise these risks (**[**please refer to the lone working policy**](https://www.southampton.ac.uk/assets/sharepoint/intranet/hr/How%20to/Policy%20-%20Lone%20working.pdf)**).** |
| There is no known risk associated with this experiment. |

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| **4.5 Explain how you will care for any participants in ‘special groups’ e.g., those in a dependent relationship, are vulnerable or are lacking mental capacity), if applicable:** |
| Not applicable: there is no reason a vulnerable group should require special attention to complete the task compared to non-vulnerable groups. |

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| **4.6 Please give details of any payments or incentives being used to recruit participants, if applicable:** |
| Students recruited via the university of Southampton *eFolio* system will be ‘paid’ at a rate of 1 credit per day. Participants recruited via *Prolific* will be paid at a rate of £0.26 per day. Participants will **not** be paid double on the first day as, although this survey includes demographic questions and may take slightly longer, the survey should not exceed 3 minutes. It is possible that participants may be paid an additional bonus sum on completion of the full study (as an incentive not to withdraw). This will be 5 credits (*eFolio*) or £1(*Prolific*). Due to the longitudinal nature of this study, participants will be paid individually for each completed study, which may accumulate to a total of 15 credits (*eFolio*) or £3.60(*Prolific*), depending on the number of surveys they complete. |

**5. Access and storage of data**

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| **5.1 How will participant confidentiality be maintained? Confidentiality is defined as non-disclosure of research information except to another authorised person. Confidential information can be shared with those already party to it and may also be disclosed where the person providing the information provides explicit consent. Consider whether it is truly possible to maintain a participant’s involvement in the study confidential, e.g. can people observe the participant taking part in the study? How will data be anonymised to ensure participants’ confidentiality?** |
| When the Prolific sample sign up for the study, they are automatically provided a random ID code so that the researcher or anyone else cannot identify the participant. Prolific participants will remain completely anonymous for the duration of the study.  When *eFolio* participants sign up to take part in the study, they will automatically provide their university email address. This will provide a way for us to distribute the study and provide their payment (credits). They will, however, be required to make-up an ID number for themselves this will allow us to match their responses across the 10 surveys, but also it will separate their data from any identifiable information (i.e.: there will be no way to link their email with their ID number). Following full data collection, participants’ email addresses will be removed from the data, and their unique ID code will be used to match the data across the 10 days. Their data will then be re-assigned a random number and the unique ID codes will also be removed. At this point, there will be no data that can identify the participant. This is how we will anonymise eFolio participants. |

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| **5.2 How will personal data and study results be stored securely during and after the study. Who will have access to these data?** |
| Research data will be kept securely on a password protected computer and anonymised. Raw data will be collected and stored on Qualtrics, which is password protected. The downloaded anonymised data will be stored on the researcher’s personal computers. In future the data may be uploaded to an Open Access database for further research purposes. Only the lead and co researchers will have access to this data. |

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| **5.3 How will it be made clear to participants that they may withdraw consent to participate? Please note that anonymous data (e.g. anonymous questionnaires) cannot be withdrawn after they have been submitted. If there is a point up to which data can be withdrawn/destroyed e.g., up to interview data being transcribed please state this here.** |
| It will be explicitly stated to participants in the brief and debrief that they may withdraw their data at any time without penalty. |

**6. Additional Ethical considerations**

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| **6.1 Are there any additional ethical considerations or other information you feel may be relevant to this study?** |
| **No.** |