
Role of BSCL in tackling student challenges in mental health

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Abstract

This position paper examines both quantitatively and qualitatively the extent to which German students at the Hamm-Lippstadt University of Applied Sciences (HSHL) can be assisted in the perception of psychological symptoms with the use of the Brief Symptom Checklist (BSCL) as a low fidelity prototype for future online/app offers. The results of n=326 survey participations and n=20 one-to-one result discussions show that the completion of self-reports via BSCL can be used in practice and in everyday life only to a limited extent. The resulting implications demonstrate the need for more autonomous solutions and document the requirements collected during the study.

Author Keywords

mental health; students; self-report; perception; symptoms; position paper;

CSS Concepts

- **Document types** *Surveys and overviews;*

Background

In the past, German students have been considered a relatively healthy population from a psychological perspective [3]. However, current statistics show a different pattern. 17% of German students (470,000) are considered to be mentally ill [5]. Compared to 2005, this is an increase of 38%, which, based on current forecasts, will increase in the future [5, 5].

Although the prevalence and intensity of mental health among German students is recognized, experts say there is a lack of adequate and available solutions. For instance, the World Health Organization (WHO) has determined that people have too little assistance available for mental health problems [2]. This also includes the challenging interplay of public perception and the resulting prevention and addressing of mental challenges [6].

In theory, mental illness can be prevented by correctly perceiving and addressing the associated symptoms. In practice, however, an affected person often does not realize that the problems experienced are caused by a mental health condition [7]. For this reason, affected persons need low-threshold offers that are simple, preventative and correspond to the usage habits of the respective generations [5]. For this reason, experts see considerable potential in online offers that are anonymous and meet the user needs of the "smartphone generation".

This position paper examines the extent to which students of the HSHL can be assisted in identifying psychological symptoms in their everyday life using the BSCL as a low fidelity prototype for future online/app offers to meet the above demand.

Perception of symptoms

From a scholarly point of view, the methodological approach to detecting psychological symptoms is related to the respective scientific model (e.g. the medical model, subjective wellbeing, biology and neuroscience) [1]. This study focuses on a mixed-method approach by identifying psychological symptoms using a standardized questionnaire from the medical and the subjective well-being model, as the use of a standardized and evaluated questionnaire ensures scientific reliability.

The BSCL measures and categorizes the subjectively perceived symptoms of a person via self-report. For this purpose, 53 questions on psychological, emotional and physical symptoms for the period of the last seven days are asked. Furthermore, the BSCL provides representative standard values for German-speaking students without diagnosing them and is intended for students who are seeking advice [4].

Findings

Table 1 shows the prevalence results of N=326 participants in the survey period from June 12, 2019 to June 19, 2019 (last week of the exam preparation phase for the final tests). The results show that only scale 9 (Obsessive-Compulsive) showed an average psychological abnormality. The remaining scale values have an average value just below the case definition ($T \geq 60$). In addition, gender-specific differences could be recorded. After evaluating the survey results, the study participants were offered the opportunity to share their survey results in the form of 1-to-1 interviews. N=20 students participated and enriched the overall interpretation of the BSCL. The corresponding results are described in the outlook.

Scales	Women	Men	Total
1. Anger-Hostility	59,77 (± 8,86)	56,11 (± 8,15)	58,54 (± 8,79)
2. Anxiety	58,65 (± 9,56)	54,44 (± 9,87)	57,15 (± 9,95)
3. Depression	59,78 (± 9,56)	57,74 (± 8,91)	58,96 (± 9,33)
4. Paranoid Ideation	61,36 (± 9,36)	55,91 (± 9,10)	59,39 (± 9,62)
5. Phobic Anxiety	58,99 (± 10,78)	54,97 (± 8,36)	57,62 (± 10,05)
6. Psychoticism	57,62 (± 10,05)	55,64 (± 9,66)	57,49 (± 10,39)
7. Somatization	56,64 (± 10,23)	53,98 (± 8,48)	55,60 (± 9,77)
8. Interpersonal Sensitivity	58,74 (± 10,20)	54,46 (± 9,41)	57,05 (± 9,96)
9. Obsessive-Compulsive	62,22 (± 9,25)	58,97 (± 8,57)	61,08 (± 8,96)

Table 1: Average T-values and standard deviation (±) of the BSCL scales taking gender into account for N=326 respondents. The value range extends from 40 = no severity to 80 = very strong severity. A global characteristic value of T≥60 and above indicates a psychological abnormality.

Limitations

The survey of symptom prevalence among students of HSHL showed that no representative number of study participants could be collected. Furthermore, 1% of the study participants stated the gender "diverse". The BSCL results can at present only be evaluated with male or female gender information. This circumstance leads to the exclusion of diverse genders. A further limitation is represented by the temporal significance of the survey results. According to BSCL, the time span is seven days. As a result, no personal characteristics that last beyond this time are measured, so that the interpretation of the results is time-bound. During the discussion of the results with the study participants, for example, it was found that individual study participants were sometimes unable to remember the answered questions and symptom intensities, and in the meantime reported other symptom stresses. The greatest limitation is that the overall interpretation of the BSCL results may only be made in the context of a personal interview and never without appropriate psychological interpretation. This complicates the originally mentioned objective of developing a low-threshold product solution.

Implications for Innovations

BSCL supports the perception process of mental, emotional and physical symptoms within its nine categorization scales. And although the scientific reliability as well as the possibility of snapshots of symptoms speak in favor of the use of BSCL, it will not be used for future online/app applications for the following reasons. According to the statements of the 20 participants in the discussion, the self-reporting of psychological symptoms over intervals is not practical.

Although the detailed result report of BSCL represents added value for the participants, the "costs" to be incurred (time required, number of questions, motivation to answer) are perceived as too high. Furthermore, the BSCL results may only be presented in the context of a review of the outcomes and by trained professionals. Consequently, the use of this self-reporting/screening tool is not perceived as low threshold. This finding suggests the use of alternative survey methods from the "Biology and Neuroscience-Wellbeing as Physiologically Identifiable" model, as these can be used for an autonomous elevation of psychological symptoms.

Using BSCL as a low fidelity prototype for future online/app solutions provided a useful insight into limitations and future requirements for these types of low threshold offers. The future research focus will therefore be on automated recognition methods, like the products "Feel Emotion Sensor" and "Spire Health Tag" available on the market. Similar to the present study, essential product risk analysis and testing via low-fidelity prototypes will ensure future research challenges. Furthermore, the measures elaborated up to the workshop on informed consent, ethical guidelines, evidence and consideration of basic psychological needs will be gathered in order to exchange critical perspectives, experiences and potential plans to address these challenges in the context of an aspiring doctorate.

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