TRANSFORMING CAMPUS LIFE: BOOSTING YOUNG ADULT WELL-BEING THROUGH PLAY

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The escalating global prevalence of mental health issues among young adults is a pressing concern. Singapore, like many nations, is experiencing a growing incidence of mental health issues among this age group, which often faces high levels of stress and societal expectations to be competent and happy. and societal expectations to be competent and happy. This paper explores developing innovative physical positive psychology interventions (PPI) on campus, inviting engagement and fostering playful experiences to improve the emotional and social well-being of young adults aged 17 to 22 at a design school in Singapore. The goal is to demonstrate a tangible increase in positive emotions substantiating improvements in overall well-being after interactions with the interventions.

Using the Positive and Negative Affect Schedule - Short Form (PANAS-SF), the study assessed emotional changes among 143 participants over a six-week period. While no significant difference in positive affect was observed between intervention and control groups ($t(177) = 0.930$, $p = .353$), a significant reduction in negative affect was found among those engaging in the interventions ($t(177) = -4.506$, $p < .0001$), suggesting a beneficial effect on reducing negative emotions. The findings highlight the effectiveness of play interventions in enhancing the emotional well-being of students within educational settings by significantly lowering negative affect, while not significantly altering positive affect within the study's timeframe. These optimistic outcomes provide valuable insights into the effectiveness of the PPIs aimed at enhancing the well-being of students on campus, suggesting that playful experiences on campus can serve as a practical tool for enhancing emotional well-being, particularly by addressing negative emotions.

Keywords: *Play, positive psychology interventions, positive emotions, well-being, young adults*

Introduction

The growing prevalence of mental health challenges among young adults underscores the urgent need for innovative approaches to promoting emotional well-being, a trend also observed in Singapore (Wales et al., 2022). This issue is particularly pressing as young adults face intense academic stress and societal expectations to succeed while maintaining emotional balance (Chodkiewicz & Boyle, 2016; Ho, 2022). As Hargreaves and Shirley (2018) aptly state, “While it is heroic to keep pulling drowning people from a river, it is also important to go upstream to stop those who are pushing them in.” This perspective emphasizes the importance of addressing root causes rather than merely treating symptoms, offering a more sustainable solution to these challenges.

This study addresses the critical need to enhance the well-being of young adults, primarily those aged 17 to 22, at the School of Design & Media in Nanyang Polytechnic in Singapore. "The Playful Kit!," a physical positive psychology intervention (PPI), was designed to foster playful experiences on campus. Drawing on theoretical frameworks such as the PERMA Model (Seligman, 2011) and Self-Determination Theory (Ryan & Deci, 2000), the intervention focuses on fostering autonomy, competence, and relatedness—three essential components of intrinsic motivation and well-being. Implemented at the school, the intervention aimed to evaluate its potential for increasing postive emotions and reducing negative emotions, resulting in improved emotional well-being (Levenson, 1994).

Background and Literature Review

The "Playful Kit!" leverages play to enhance well-being, drawing on positive psychology's recognition of play's role in boosting positive emotions (Bateson, 2014; Fredrickson, 2001; Seligman, 2011). Given the extended amount of time students spend on campus, integrating play into this environment by creating a safe, engaging, and psychologically supportive space presents a promising strategy to enhance their mental and emotional health (Farley, Behr & Brown, 2021), fostering emotional resilience and reducing stress.

Csikszentmihalyi (1981) describes play as a pathway to intrinsic motivation and flow, while Fredrickson's (2001) Broaden-and-Build Theory demonstrates how positive emotions derived from play broaden cognitive and emotional resources. Conversely, the reduction of negative emotions is critical for improving overall well-being, as suggested by Levenson (1994).

This study is grounded in two complementary foundational well-being theories: the Self-Determination Theory (SDT) and the PERMA Model shown in Figure 1. Figure 2 illustrates the Self-Determination Theory (SDT), which posits three essential psychological needs for human flourishing: Autonomy, Competency, and Relatedness. These universally innate needs, when satisfied, correlate with personal well-being, individual growth, optimal functioning, and enhanced social development.

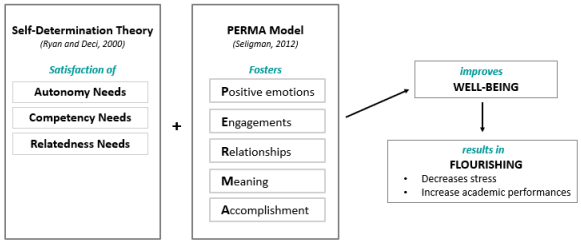

Figure 1 Well-Being Theories employed in the design of the intervention

Drawing from the Self-Determination Theory, the concept of 'Autonomy' enhances intrinsic motivation, 'Competence' involves mastering tasks tailored to users' capabilities and 'Relatedness' engages and connects players fostering social connections through play, improves psychological functioning, psychological growth and well-being. Conclusively, the play elements in the "Playful Kit!" should be enjoyable, moderately challenging, and realistically achievable, and relatable.

Figure 2 Details of the Self-Determination Theory (SDT) (Ryan and Deci, 2000)

Another widely adopted well-being model by Dr Martin Seligman is the PERMA Model presented in Figure 3. The PERMA Model identifies Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment as the core building blocks of well-being (Seligman, 2011). Together, these models informed the design of "The Playful Kit!" by emphasizing activities that are intrinsically motivating, socially engaging, and emotionally enriching.

Positive Emotions	Encompass experiencing positive emotions through cultivating gratitude, forgiveness, savouring joy, practicing mindfulness, and building hope and optimism.
Engagement	Refers to complete absorption in an activity or task in which someone fully deploys their skills, strengths, and attention, often associated with the concept of 'flow' (Csikszentmihalyi, 1989) when one's skills are just sufficient for a challenging activity.
Relationships	Encompass feelings amplified through our relationships, for example, great joy, meaning, laughter, a feeling of belonging, and pride in accomplishment. The feelings of being loved, valued, and supported by others is one of the best antidotes to "the downs" of life and a good way to bounce back.
Meaning	Entails a sense of meaning and purpose can be derived from belonging to and serving something bigger than the self, such as family, religion, science, politics, work organizations, justice, the community, social causes, among others.
Accomplishment	pertains to achievements, a sense of competence, success and mastery in completing tasks.

Seligman (2011)

Figure 3 Details of the PERMA Model by Seligman (2011)

Design of "The Playful Kit!" Intervention

This design is guided by a comprehensive theoretical framework, incorporating research on play, playfulness, positive emotions, social connections, and well-being (Huizinga, 1949; Csikszentmihalyi, 1981; Ryan and Deci, 2000; Seligman, 2011). Figure 4 further elaborate the relationships and outcomes of the comprehensive theoretical framework and underpinning well-being theories as discussed in the literature review.

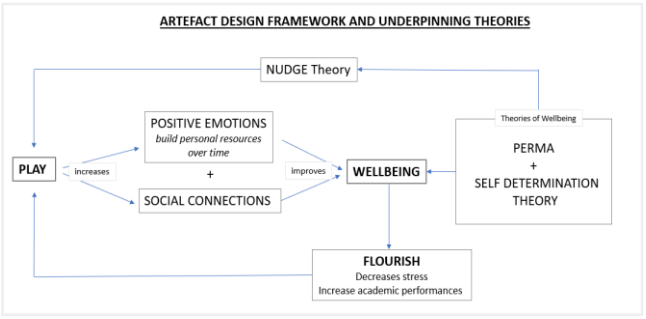

Figure 4 "The Playful Kit!" design framework and underpinning theories

Several case studies were analysed to explore the practical application of SDT and the PERMA Model. These case studies collectively demonstrate the principles of the well-being theories, which are instrumental in shaping the "Design Guidelines for Playful Kit! Elements, serving as a structured framework for creating each play element, ensuring that the interventions remain aligned to its design intentions and result in enhancing the well-being of participants.

Design Guidelines for *<insert title of play element>*		
User Needs based on Self-Determination Theory (Ryan & Deci, 2000)		
Component	**Level**	**Describe how it is achieved**
Autonomy	☐ ☐ ☐	*i.e., User decides level and depth of engagement*
Relatedness	☐ ☐ ☐	
Competency	☐ ☐ ☐	
Based on PERMA Model as analysis for Intended Outcomes (Seligman, 2011)		
Component	**Level**	**Describe what is achieved**
Positive Emotions	☐ ☐ ☐	*i.e., Encourages altruism*
Engagements	☐ ☐ ☐	
Relationships	☐ ☐ ☐	
Meaning	☐ ☐ ☐	
Accomplishment	☐ ☐ ☐	

Figure 5 Design Guidelines for Playful Kit! Elements

Two play elements, “Kindness QR” and “Toss for Better”, were implemented in classroom settings to evaluate the interventions’ impact on student well-being. The play elements were administered to the students in a classroom environment for this study. As shown in Figure 6, “Kindness QR” involved an array of QR codes, each revealing a random act of kindness when scanned. Participants had the *autonomy* to choose when and how often to engage, introducing an element of spontaneity and playfulness. Though modest, the acts varied in their levels of engagement *(competence)* and personal investment *(relatedness)*, fostering emotional and social benefits. Additionally, these random acts of kindess encouraged altruism and social connections, key contributors to well-being.

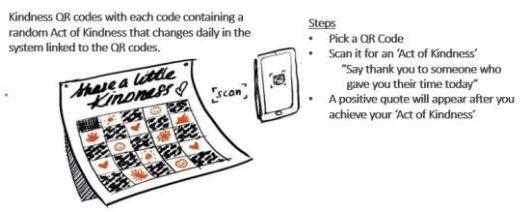

Figure 6 “Kindness QR” intervention

The second play element, “Toss for Better” as shown in Figure 7 constitutes a more structured setup. Embedded within the “Toss for Better” component is an element that contributes to the cultivation of self-compassion (Korner et al., 2015) and the cognitive re-appraisal of unfavourable thoughts. Participants are prompted to articulate their negative emotions on an activity sheet, reframed them into positive perspectives, and then physically tore off and crumpled the negative section. These were discarded into bins labeled with supportive messages, facilitating emotional release and constructive reframing. (Neff, 2021). This hands-on process enables participants to discard the physical representations of their negative emotions while encouraging constructive act of reframing, fostering a more positive mindset.

Figure 7 “Toss for Better” intervention

Methodology

The Positive and Negative Affect Schedule – Short Form (PANAS-SF) has been designated as the principal quantitative instrument to assess the effects of the play elements featured in the "Playful Kit!" given the necessity for *prompt responses immediately after engagement* with the play elements (Moskowitz et al., 2020). Participants will evaluate their emotions using a 20-item questionnaire and utilise a 5-point Likert scale for scoring, as depicted in Figure 8.

Emotions You Felt		Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
PANAS 1	Interested	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 2	Distressed	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 3	Excited	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 4	Upset	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 5	Strong	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 6	Guilty	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 7	Scared	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 8	Hostile	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 9	Enthusiastic	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 10	Proud	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 11	Irritable	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 12	Alert	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 13	Ashamed	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 14	Inspired	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 15	Nervous	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 16	Determined	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 17	Attentive	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 18	Jittery	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 19	Active	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PANAS 20	Afraid	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Scoring:

Positive Affect Score: Add the scores on items 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19. Scores can range from 10 – 50, with higher scores representing higher levels of positive affect.

Negative Affect Score: Add the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10 – 50, with lower scores representing lower levels of negative affect.

Your scores on the PANAS:

Positive:_____ **Negative:**_____

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positiveand negative affect: the PANAS scales. Journal of personality and social psychology, 54(6), 1063.

Figure 8 PANAS-SF Questionnaire

A total of 143 students from various courses and study stages from the School of Design & Media participated in this study over six weeks. They were divided into two groups: Group 1 had no exposure to the play elements while Group 2 engaged with the play elements. All participants completed a PANAS-SF pre-survey at the start of the six weeks to establish their baseline emotional states during mid-term where stress levels are usually high due to [CC1][G(2]assignment deadlines. For Group 1[CC3][gt4], a survey to assess their states of emotions was conducted at the end of six weeks as controlled study. Post-engagement surveys were conducted for Groups 2 to evaluate immediate and sustained emotional effects under similar emotional and physical stress levels periods.

Data Analysis & Findings

The data analysis for this study involved conducting pooled t-tests to compare the changes in positivity and negativity scores between participants who were

exposed to the play intervention and those who were not, assuming equal variances across the groups. An increased Positive Affect (PA) and/or decreased Negative Affect (NA) will indicate efficacy of the positive psychological interventions (PPI), denoting improved overall well-being. For the first research question, which asked if there was a difference in positive affect (PA) for those exposed to play intervention compared to those who were not, the results in Figure 9 showed a t-statistic of 0.930 with 177 degrees of freedom and a p-value of 0.353. Since the p-value was greater than the conventional alpha level of 0.05, we failed to reject the null hypothesis, indicating no statistically significant difference in the change of PA scores between the two groups. This suggests that while play intervention might engage participants in positive activities, it does not significantly enhance positive emotions within the study's timeframe compared to those not exposed to the intervention.

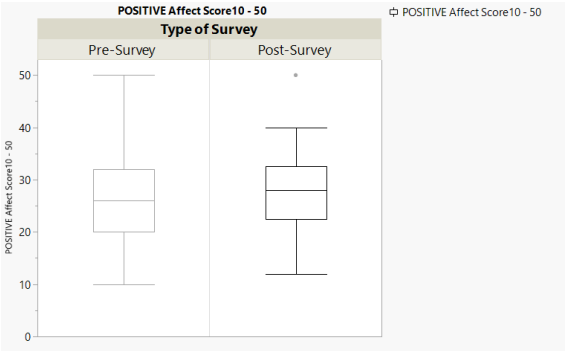

Figure 9 Effect of Play Intervention on Emotional Well-being: Changes in Positive Affect Scores (Pre- and Post-Survey)

The second research question seeks to investigate a difference in the negative affect (NA) for those who were exposed to the play intervention compared to those who did not. Figure 10 revealed a t-statistic of -4.506 with 177 degrees of freedom and a highly significant p-value of less than 0.0001. This led to the rejection of the null hypothesis, demonstrating a statistically significant difference in the change of NA scores. Specifically, those who underwent play intervention showed a significant reduction in negativity scores compared to the control group. This finding highlights the effectiveness of play intervention in reducing negative emotions, which is crucial for enhancing overall emotional well-being.

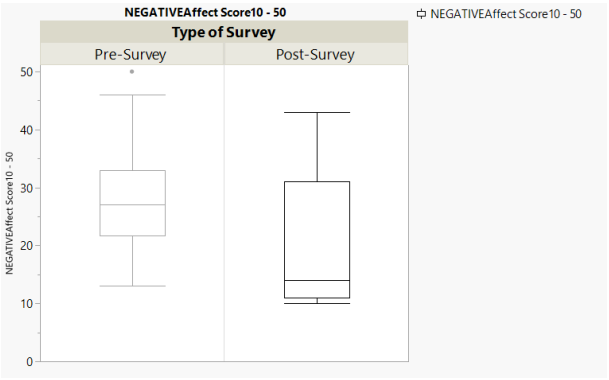

Figure 10 Effect of Play Intervention on Emotional Well-being: Changes in Negativity Scores (Pre- and Post-Survey)

In summary, the study's findings revealed distinct impacts of the interventions indicating that play intervention significantly reduces negative emotions.[CC5][G(6]

Discussion

The inquiry of this research aims to explore the introduction of play using positive psychological interventions (PPI) on campus boosting the well-being of young adults in a design school in Singapore. The results underscore play's potential as an effective tool in environments like educational settings to manage and alleviate negative emotions among students. In schools, where academic pressure and social stressors are prevalent, integrating play interventions can serve as a buffer against stress, potentially leading to a decrease in anxiety, depression, and other stress-related issues. This can create a more supportive and less stressful learning environment, which is conducive to better mental health and academic performance.

However, the study, while providing valuable insights, has several limitations that must be acknowledged to contextualize the findings appropriately. Firstly, the sample size of 143 students, although sufficient for initial exploratory research, is relatively small, which could limit the generalizability of the results to broader populations of young adults, and beyond the design school. Secondly, the duration of the intervention was limited to six weeks, which might not be long enough to observe long-term changes in emotional well-being. Mental health interventions often require sustained engagement to yield enduring results. The short-term nature of this study might also not capture the full potential of the "Playful Kit!" in fostering lasting positive changes, particularly in terms of habit formation and sustained emotional resilience. Repetitive interaction with play elements over time may be considered for sustained positive outcomes (*habits*). While the study accounted for academic workload and period, factors such as personal life events or pre-existing mental health conditions were not fully accounted for, which could have influenced the results.

Conclusion

Despite its limitations, the study has significant implications for educational institutions and the field of positive psychology. The findings suggest that integrating structured, playful activities, guided by SDT and the PERMA model, into the daily routines of educational environments can reduce stress, significantly enhancing emotional well-being, and the management of negative emotions increases resilience (Levenson, 1994; Fredrickson, 2001). The study emphasizes the transformative role of play in creating supportive educational environments. By integrating immersive and interactive playful activities, institutions can promote sustained positive emotional states, strengthen social connections, and enhance community engagement. This approach has the potential to drive systemic changes, positioning play as a central element of campus culture and contributing to a holistic educational experience. Future initiatives should explore the mechanisms by which play fosters emotional resilience and evaluate the long-term impact of such interventions on student well-being.

Moreover, the incorporation of physical play elements could serve as an antidote to the pervasive digital engagement among young adults, promoting a 'digital detox' and facilitating genuine, face-to-face social interactions. Importantly, the benefits of playful engagement extend beyond those naturally inclined towards play; even those initially hesitant can experience improvements in well-being from the positive emotions generated by such activities. This research sets a foundation for further exploration into how play can be systematically integrated into educational and broader societal contexts to support the emotional and social development of young adults.

Acknowledgement

I wish to express my sincere gratitude to Dr. Chia Choon Yee, Dr. Vanessa Vinodhen and Dr. Wee Soon Ching, for their invaluable support to this research. I also extend my appreciation to Nanyang Polytechnic, the Director, Ms. Tina Jailani and my colleagues at the School of Design & Media. A special note of appreciation goes to Dr. Evie Rosset for her insightful guidance and mentorship, which were instrumental in shaping this work and who has been a profound source of inspiration throughout this research.

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