

Relationship between Flow State and Subjective Well-being among college students

Hardik Talwar

BA (Hons) Applied Psychology with research , Amity University, Noida

Abstract - The present study examined the relationship between flow state experienced during dance and life satisfaction among college students. Flow represents a state of deep absorption, intrinsic enjoyment, and optimal engagement in an activity. Life satisfaction reflects an individual's cognitive evaluation of overall quality of life. The study aimed to assess levels of flow and life satisfaction among college students engaged in dance, examine differences across flow levels, and determine the association between the two variables.

A quantitative cross-sectional correlational research design was employed. The sample consisted of 118 college students aged 18–25 years who were actively engaged in dance. Data were collected using the Flow State Scale (Jackson & Marsh, 1996) and the Satisfaction with Life Scale (Diener et al., 1985) through an online survey. Data were analysed using descriptive statistics, Pearson correlation, one-way ANOVA, and independent samples t-test.

Results indicated a statistically significant moderate positive correlation between flow and life satisfaction ($r = .31, p < .01$). One-way ANOVA revealed significant differences in life satisfaction across low, moderate, and high flow groups, with higher flow associated with greater life satisfaction ($F(2,115) = 6.44, p < .01$). Independent samples t-test showed that dancers reported significantly higher flow than non-dancers, though

no significant difference was observed in life satisfaction between the two groups. The findings suggest that higher flow experiences during dance are associated with improved life satisfaction among college students.

Key words : Flow, subjective wellbeing, engagement, life satisfaction, mindfulness, college students

1. INTRODUCTION

1.1 Student Well-Being in Higher Education

People change a lot at college, which is why the years spent there are so vital for growth. New social situations, competitive ways of judging students, greater academic standards, and hopes for future jobs

Students must learn how to handle all of these problems. These issues typically accompany alterations in our identity, residence, and financial obligations. As a result, protecting and improving student well-being has become a major concern in both higher education and psychological research.

In contemporary psychology, well-being is defined not only by the lack of pain but also by efficient functioning and positive evaluations of life. Subjective well-being (SWB) is widely recognised as a crucial indicator of life quality. Diener (1984) asserts that subjective well-being consists of two primary components: a cognitive component, generally assessed by life satisfaction, and an affective component, which signifies the balance between positive and negative emotional experiences. Diener et al. (1999) contend that individuals evaluate their overall life satisfaction by comparing their personal goals with their present circumstances.

In college students, higher levels of subjective well-being are linked to better relationships with others, more motivation, better self-reported health, and more interest in schoolwork (Diener et al., 1999). A major area of research in higher education is figuring out what mental processes and sensory environments make people feel good about themselves.

Although involvement in recreational and physical activities has been shown to positively correlate with life satisfaction (Yukhymenko-Lescroart & Sharma, 2019), behavioral participation cannot fully account for variations in well-being. Even if people participate in comparable activities, their experiences may differ. This emphasizes how crucial it is to consider the experience quality while participating in an activity.

1.2 Flow as a State of Experience

According to Csikszentmihalyi (1990), flow is a condition of ideal experience marked by deep immersion in an activity, intense attention, intrinsic satisfaction, and a sensation of control. People frequently describe a blending of awareness and action, a decrease in self-consciousness, and a change in how they perceive time while they are in flow.

When goals are explicit, there is a balance between perceived problems and personal skills, and there is instant feedback, flow is more likely to occur (Csikszentmihalyi, 1990; Nakamura & Csikszentmihalyi, 2002). People get completely absorbed in the activity in such circumstances, which produces a fulfilling psychological state.

According to studies conducted in the fields of education, employment, and leisure, flow is linked to increased motivation, perseverance, creativity, and positive affect (Nakamura & Csikszentmihalyi, 2002). Crucially, flow is intrinsically gratifying, which

means that the experience itself, not outside incentives, is what motivates participation. This implies that recurrent episodes of flow might influence more comprehensive assessments of life quality.

1.3 Three Theoretical Connections Between Subjective Well-Being and Flow

The premise that people's overall assessments of their lives are influenced by repeated excellent experiences is the theoretical foundation for the relationship between flow and subjective well-being. Over time, experiences that are enjoyable, competent, and engaging may build up and influence cognitive assessments like life satisfaction.

This connection is supported by empirical evidence. Clauss, Hoppe, and O'Shea (2017) discovered a favorable correlation between well-being markers and the flow experienced in work-related tasks. Their findings also suggested that this association could be partially explained by psychological need satisfaction. This interpretation aligns with self-determination theory, which emphasizes autonomy, competence, and relatedness as essential for well-being (Ryan & Deci, 2017).

According to Zhang et al. (2023), flow served as a psychological mechanism that connected individual resources to well-being outcomes and strongly predicted subjective well-being among college students. Flow may be a significant experience route to increased life happiness in student populations, despite the fact that their research was mostly concerned with sports involvement.

Despite mounting evidence, most studies on flow and wellbeing have been carried out in professional or athletic contexts (Clauss et al., 2017; Zhang et al., 2023). In higher education, creative and expressive activities have received relatively little attention.

1.4 Dance as a Context for Flow Experiences

One very rich setting where flow experiences are likely to happen is dance. It incorporates synchronization with music and other performers, emotional expression, physical coordination, and continuous attentional focus. According to Csikszentmihalyi (1990), these traits closely match the circumstances found to be favorable to flow.

According to research in the performing arts, dancers often describe feelings of delight, immersion, and decreased self-consciousness, which are quite similar to traditional definitions of flow (Hefferon & Ollis, 2006; Torrents et al., 2010). However, rather than looking at more general well-being outcomes, a large portion of this research has concentrated on professional or pre-professional performers and assessed performance quality or phenomenological features.

Dancing is frequently given as an academic, extracurricular, or recreational activity in higher education. Many students find that dance offers chances for skill improvement, social engagement, and self-expression. Despite these benefits, there is still a dearth of empirical research on the connection between college students' subjective well-being and dance-related flow.

1.5 Gaps in the Literature and Rationale

The literature shows a number of gaps. First, research on the relationship between flow and college students' subjective well-being has mostly concentrated on situations related to sports or the workplace. There is a dearth of empirical data that particularly addresses creative movement activities like dance.

Second, behavioral engagement rather than experiencing quality has frequently been highlighted in studies that link activity involvement to life satisfaction (Yukhymenko-Lescroart & Sharma, 2019). A more direct indicator of wellbeing can be the subjective experience of engaging in an activity.

Third, little study has been done on the direct relationships between students' life happiness and the flow they experience in a particular activity situation. Closing this gap could help us understand how experiencing states affect more general outcomes related to well-being.

By concentrating on dance-specific flow experiences among college students, the current study aims to expand on previous research in light of these theoretical underpinnings and empirical gaps.

1.6 Purpose of the Present Study

The present study employed a cross-sectional survey design to examine the relationship between flow experienced during dance activities and subjective well-being among college students. Specifically, the study aimed to:

1. Assess the level of flow state experienced during dance among college students.
2. Assess the level of subjective well-being among college students engaged in dance.
3. Examine the relationship between dance-related flow and subjective well-being.
4. Compare dancers and non-dancers on levels of flow and subjective well-being.

This study enhances the understanding of the relationship between quality experiences in creative activities and students' life happiness by focusing on dance-specific flow, so building upon prior research conducted in occupational and sports contexts.

1.7 Practical Applications and Implications

Comprehending the correlation between dance-related flow and subjective well-being holds significant practical ramifications for higher education.

First, dance programs and extracurricular activities can be purposefully designed to improve the experiential conditions that promote flow, like the right amount of challenge, well-defined objectives, opportunities for concentrated participation, and gradual skill development. Beyond the benefits of physical engagement alone, improving these experience conditions may increase the contribution of dance activities to students' subjective well-being.

Second, as supplementary tactics for improving students' emotional functioning and life happiness, creative movement and dance-based activities may be incorporated into student support and wellness programs. Because dance activities are quite inexpensive and can be modified for children with varying levels of experience, such programs may be especially beneficial.

Third, when creating activity-based treatments, educators and program designers may discover that the results of this study highlight the significance of experience quality. Strategies for promoting students' well-being in higher education may be more successful if they focus on how students experience activities rather than just encouraging participation.

2. REVIEW OF LITERATURE

Zhang et al. (2023) showed that flow was a strong predictor of life satisfaction when they looked at mindfulness, flow, and subjective well-being among college students.

Flow played a crucial experiential function in mediating the connection between mindfulness and well-being.

Yukhymenko-Lescroart & Sharma (2019) found that exercise involvement was found to predict resilience under stress and life satisfaction.

Fancourt & Finn (2019) found that participating in artistic endeavors, such as dancing and music, was linked to higher levels of life satisfaction and lower levels of despair.

Ryan & Deci (2017) put forth Self-determination theory which emphasized relatedness, competence, and autonomy as essential psychological requirements connected to wellbeing.

Clauss et al. (2017) used Diary technique and showed that daily flow experiences were predictive of daily well-being. Partially meeting psychological needs. This link was mediated by indicating that flow improves perceptions of competence and independence.

Mesurado & Richaud (2017) discovered that teenagers' emotional health and academic self-efficacy were predicted by their level of flow in their academic pursuits.

These results suggest that flow serves as a significant experience mechanism in student populations and transcends professional contexts.

Bassi et al. (2014) researched that college students who regularly felt in flow during their academic and recreational pursuits showed increased perceived competence and life happiness.

Koch et al. (2014) discovered notable gains in mood, affect control, and quality of life in a variety of demographics.

Koch et al. (2014) demonstrated that dance movement therapy enhances mood and quality of life in a variety of demographics.

Rodríguez-Romo et al. (2012) found that university students' mental health was favorably correlated with recreational physical exercise. Students who were actively involved showed less psychological disturbance.

Moneta (2012) studied flow promotes emotional functioning and personal development in educational settings.

Stuckey & Nobel (2010) came to the conclusion that creative engagement improves psychological well-being and emotional regulation upon reviewing the evidence on arts participation

Murcia et. al. (2010) discovered that dancing was linked to improved mood and reported well-being. Experiences with movement were associated with social and emotional advantages, according to participants.

Fullagar & Kelloway (2009) states that Increased flow was associated with lower levels of burnout and increased job satisfaction. Flow served as a psychological buffer against stress at work.

Rogatko's (2009) stated that People who regularly experienced flow reported higher levels of subjective well-being upon analysis of the link between dispositional flow and life satisfaction. The relationship between flow proneness and life pleasure was directly empirically supported by this study.

Keller & Blomann (2008)'s study showed that flow experiences were found to have a negative correlation with depressive symptoms and a good correlation with well-being.

Wipfli et. al. (2008) showed that exercise indirectly promotes well-being by lowering anxiety and depressive symptoms.

Demerouti (2006) found that experiences of flow were favorably correlated with involvement and negatively correlated with emotional tiredness.

MacDonald et. al. (2006) studied musicians and discovered that experiences of flow were linked to both intrinsic drive and successful performance outcomes.

Sawyer (2006) stated that group improvisation and creativity are very beneficial for creating flow, especially in performing arts settings.

Hefferon & Ollis (2006) recorded phenomenological descriptions of flow in professional dancers, emphasizing changed perception of time and immersion. The results imply that environments conducive to flow experiences are found in performing arts situations.

Salanova et. al. (2006) studied flow among college students, they discovered a favorable correlation between academic flow and psychological well-being and engagement. Higher flow students expressed more satisfaction with their academic performance.

Jeong et al. (2005) showed that dance movement therapy to improve participants' emotional functioning and lessen depressive symptoms. Even while these studies do not often measure flow directly, the psychological states they describe closely match the traits of the best possible experience engagement.

Delle Fave & Massimini's (2005) did a cross-cultural analysis of ideal experiences, flow was invariably linked to pleasant emotion and meaning-making. Their results confirmed that flow is a universal factor in psychological functioning.

Asakawa (2004) found that Japanese college students felt better when they were working on academic projects that induced flow.

3. METHODOLOGY

3.1 Aim

The present study aims to find the relationship between flow state and subjective well-being among college students.

3.2 Objectives of the study

The present study was undertaken with the following objectives:

1. To assess the level of flow state experienced during dance among college students.
2. To assess the level of subjective well-being among college students engaged in dance.
3. To examine the relationship between flow state during dance and subjective well-being among college students.
4. To compare dancers and non-dancers on levels of flow state and subjective well-being.

3.3 Hypothesis

There will be a significant positive relationship between flow state during dance and subjective well-being among college students.

3.4 Research Design

A quantitative cross-sectional correlational research design was used for this investigation. Since the study's objective was to use standardized scales to evaluate flow state and subjective well-being and investigate their statistical relationship, a quantitative method was applicable.

Since data from college students was gathered all at once, a cross-sectional design was chosen. Since the main goal of the study was to investigate the relationship between dance flow state and subjective well-being rather than to prove causation, the correlational framework seemed appropriate.

3.5 Participants

150 people responded to the study's initial online data collection. The screening question was used to remove participants who said they were not actively participating in dance. 118 college students dancing made up the final acceptable sample.

The participants were between 18 and 25 years old. The sample was made up of 66% women and 34% men.

3.6 Sampling Technique and Justification

Convenience sampling was utilised. The researcher circulated the online questionnaire to college students who could be reached in order to locate participants. We selected convenience sampling because we didn't have much time, it was easy to go to, and it made sense. Because the study required students to dance, this method made it possible to attract people from the right group. The methodology was suitable for exploratory correlational research within an academic context.

3.7 Variables of the Study

Independent Variable: Flow State during Dance

Dependent Variable: Subjective Well-Being

3.8 Instruments

1. Flow State Scale (FSS)

The Flow status Scale created by Jackson and Marsh (1996) was used to measure flow status. The scale has 36 questions that measure several aspects of the best psychological experience, such as focus, a sensation of control, the merging of action and awareness, a change in how time is perceived, and intrinsic satisfaction.

Answers are put on a Likert scale. Higher scores mean you have experienced flow more often.

Previous study has shown that the scale has very good psychometric qualities. Jackson and Marsh (1996) found that the dimensions were quite consistent with each other and that the construct validity was good.

2. Satisfaction With Life Scale (SWLS)

The Satisfaction With Life Scale, created by Diener, Emmons, Larsen, and Griffin in 1985, was used to measure subjective well-being. There are five questions on the scale that ask about how you feel about your life overall.

Responses are recorded on a scale called a Likert scale. A higher score means you are happier with your life. The scale has shown great internal consistency and strong dependability in different groups of people. Diener et al. (1985) reported good reliability and validity indicators.

4. PROCEDURE

The data was gathered using Google Forms. The questionnaire featured a question to discover those who were dancing and a space for them to say they were okay with it.

It was completely up to the participants whether or not to take part, and remarks were recorded anonymously to protect their privacy.

The answers were reviewed after the data was gathered. People who didn't meet the standards for inclusion were removed. We used Microsoft Excel to figure out the average and total scores for each scales. Once the dataset was clean, it was put into SPSS for statistical analysis.

4.1 Rationale and Statistical Analysis

The Statistical Package for the Social Sciences (SPSS) was used to look at the data. The following statistical methods were used:

Descriptive Statistics: We used the mean and standard deviation to look at the participants' subjective well-being and state of flow. This took care of Goals 1 and 2 right away.

Pearson Product-Moment Correlation: The Pearson correlation was employed to analyse the degree and direction of the association between flow state and subjective well-being. This technique was effective since both variables were continuous and normally distributed. This accomplished Objective 3 and tested the research hypothesis.

One-Way ANOVA: There were three groups of participants: low, moderate, and high flow. To determine whether subjective well-being varied significantly across these levels,

one-way ANOVA was performed. Since ANOVA evaluates mean differences across more than two groups, it was appropriate.

T-test for independent samples: The flow state and subjective well-being of dancers and non-dancers were compared using a t-test. Examining mean differences between two independent groups was a good use for this test. A significance criterion of $p < .05$ was established.

5. RESULTS AND INTERPRETATION

The present study examined the relationship between flow state during dance and subjective well-being among college students. Data were analyzed using SPSS (N = 118).

Table 5.1

Descriptive Statistics for Flow State and Subjective Well-Being (N = 118)

Variable	N	M	SD	MIN	MAX
Flow total	118	129.64	28.93	36	180
SWB total	118	22.22	6.61	5	35

Note. M = Mean; SD = Standard Deviation.

The mean flow score was $M = 129.64$ ($SD = 28.93$). The mean subjective well-being score was $M = 22.22$ ($SD = 6.61$).

Table 5.2

Correlation Between Flow State and Subjective Well-Being

Variable	1	2
Flow total	—	
SWB total	.31**	—

Note. N = 118. $p = .001$ (two-tailed). $p < .01$.

There was a statistically significant positive relationship between flow state and subjective well-being, $r = .31$, $p = .001$. The magnitude of the correlation indicates a moderate positive association.

The research hypothesis stating that there will be a significant positive relationship between flow state and subjective well-being is supported.

Table 5.3

ANOVA Summary for Subjective Well-Being Across Flow Levels

Source	SS	df	MS	F	p
Between groups	7.75	2	3.87	6.44	.002
Within groups	69.18	115	0.60		
Total	76.92	117			

Note. Levene's test was non-significant, $F(2,115) = 0.59$, $p = .557$.

The ANOVA revealed a statistically significant difference in subjective well-being across flow levels, $F(2, 115) = 6.44$, $p = .002$.

Descriptive means indicated that participants in the high flow group ($M = 2.31$) reported higher subjective well-being compared to the moderate ($M = 1.95$) and low ($M = 1.69$) flow groups.

TABLE 5.4

Independent Samples t-Test Comparing Dance Groups

Flow Total

Group	n	M	SD
1	118	129.64	28.93
2	32	109.09	28.44

$t(148) = 3.58$, $p < .001$, Mean difference = 20.54, 95% CI [9.19, 31.90].

For flow state, Levene's test was not significant, $F = 0.41$, $p = .522$, indicating equal variances assumed.

Dancers ($M = 129.64$, $SD = 28.93$) reported significantly higher flow state than non-dancers ($M = 109.09$, $SD = 28.44$), $t(148) = 3.58$, $p < .001$.

SWB Total

Group	n	M	SD
1	118	22.22	6.61
2	32	22.47	5.28

$t(148) = -0.20$, $p = .845$,

Mean difference = -0.25 , 95% CI $[-2.75, 2.25]$.

For subjective well-being, Levene's test was not significant, $F = 2.02$, $p = .157$. There was no statistically significant difference between dancers ($M = 22.22$, $SD = 6.61$) and non-dancers ($M = 22.47$, $SD = 5.28$), $t(148) = -0.20$, $p = .845$.

6. DISCUSSION

This research examined the relationship between college students' subjective well-being and their feeling of dance flow. The results provide experimental validation for the notion of a positive correlation between the flow state experienced during dancing and subjective well-being. A correlation analysis revealed a statistically significant, moderately positive association between flow state and subjective well-being. This suggests that students who reported high levels of deep engagement and excellent dance experiences also had increased levels of life happiness. Thus, the study's hypothesis was validated.

This result aligns with Csikszentmihalyi's theoretical framework on flow, which defines flow as an inherently pleasurable state that enhances psychological functioning. An activity achieves autotelic status when characterised by profound attention, a sense of agency, and intrinsic satisfaction, hence improving one's overall life evaluation. The current findings are consistent with previous empirical studies that demonstrate favourable relationships between well-being and flow in academic and professional contexts.

Studies show that people who have flow experiences often have better mental health and are happier in general. Research conducted with student cohorts has similarly demonstrated that flow is a critical factor influencing subjective well-being.

The ANOVA results showed that the level of flow had a big effect on how people felt about their well-being. Others with a high flow rate said they were happier than others with a moderate or low flow rate. This pattern corroborates the correlational findings, indicating a

graded relationship between happiness and life participation. These results support the hypothesis that the size of the ideal experience has an effect on more general psychological effects.

The independent samples t-test showed that dancers had a lot more flow than people who didn't dance. This result makes sense because professional dancing may have clearer goals, instant feedback, and fair obstacles, all of which are important for reaching a state of flow. But there wasn't a substantial difference in how pleased dancers and non-dancers were. This suggests that dancing can make flow experiences better, but other things can also change how people feel.

Aside from dance, academic, social, and personal factors can also influence life happiness, which serves as an indicator of overall cognitive evaluation.

The results show that dancing makes it more likely that someone would experience flow, but the quality of that flow experience is more closely linked to their subjective well-being. The results enhance existing studies on experiential engagement in higher education and illustrate its impact on cognitive processes.

The study has a lot of power. It argues that making places where kids may fully participate in activities might be good for their health. Hard activities that teach people new skills and are fun on their own could be great for their mental health at school. But we need to keep these limits in mind. Because the study was cross-sectional, it's hard to tell what caused what. Convenience sampling may complicate generalisation. Additionally, self-report ratings could be influenced by biases in the responses. Subsequent studies may employ longitudinal methodologies and diverse populations to further the comprehension of the correlation between flow and well-being in creative environments. In conclusion, the results

corroborate the hypothesis that a positive correlation exists between college students' dance flow state and their subjective well-being. The study confirms that adequate experiential engagement substantially impacts the psychological functioning of teenagers.

7. LIMITATIONS OF THE STUDY

There are some limitations to the current study that should be noted, even if it gave us important information.

First, the study used a convenience sampling method. Even if this method is possible and makes sense, it may not be able to be used with as many students as possible. The sample may not adequately represent a range of educational or cultural backgrounds because it only included college students of a certain age.

Second, the sample size was big enough for correlational analysis, but it was only a little bit big. A bigger and more varied sample might make the results more reliable and powerful statistically.

Third, a cross-sectional research design was used in the study. It is impossible to establish causal links between flow state and subjective well-being because the data were gathered all at once. The results do not show directionality of influence; they merely show association.

Fourth, only self-report measures were used in the study. Despite the use of standardized tools, self-reported answers could be prone to subjective interpretation or social desirability bias.

Fifth, subjective well-being and the flow state during dancing were the main subjects of the study. Academic performance, personality traits, emotional regulation, stress levels, and other potentially significant psychological factors were not investigated.

8. SUGGESTIONS FOR FUTURE RESEARCH

Several avenues for further investigation are suggested in light of the current study's findings.

To investigate whether prolonged experiences of flow lead to long-term gains in subjective well-being, future study may use longitudinal research methods. The direction of effect between the factors would become clearer as a result.

To improve generalizability, researchers can also think about increasing the sample size and incorporating people from various academic fields and cultural backgrounds.

Future studies should look at more mediating or moderating factors, as dancers reported increased flow but did not significantly differ from non-dancers in terms of subjective well-being. How flow experiences translate into life pleasure may depend on a number of factors, including perceived stress, social support, intrinsic motivation, or personality attributes.

To find out if comparable trends appear across expressive activities, more research might examine flow experiences in other creative or performance-based fields, such as music, theater, and visual arts.

To find out if organized treatments targeted at improving flow circumstances will enhance student well-being results, experimental designs may also be taken into consideration.

9. CONCLUSION

The current study looked at the connection between college students' subjective well-being and their dancing flow condition. The results showed that flow state and subjective well-being had a moderately positive, statistically significant association.

Students who expressed greater degrees of ideal experience and immersed engagement during dance also expressed higher levels of life happiness. As a result, the study hypothesis was validated.

Subsequent investigation revealed that students in the high flow group reported higher subjective well-being than those in the moderate and low flow groups, indicating a significant difference in well-being across flow levels. Additionally, compared to non-dancers, dancers reported far higher flow. However, there was no discernible difference in subjective well-being between dancers and non-dancers, indicating that factors other than engagement in a specific activity affect life satisfaction.

All things considered, the results demonstrate the psychological benefits of the best possible experience engagement in creative movement settings. Dancing flow seems to have a significant impact on pupils' cognitive assessment of life satisfaction.

The study has significant ramifications. The findings suggest that structured activities that promote intrinsic engagement, skill development, and challenge may enhance students' well-being, which is crucial information for practitioners and educators. Educational institutions may consider offering opportunities for experiential learning and creative involvement to support mental health programs.

The study contributes to the present corpus of academic literature by extending flow research into dance-specific contexts inside higher education settings. It provides empirical

evidence of the connection between optimal experience and young adults' subjective well-being. Policymakers and institutional planners should take note of the findings, which demonstrate the potential contribution of artistic and creative endeavors to promoting psychological well-being in academic contexts.

The importance of establishing settings that facilitate flow experiences is emphasized in the study's conclusion since these experiences are positively connected with college students' elevated subjective well-being.

ACKNOWLEDGEMENT

Many people have played an important role in the compilation of my research work, either directly or indirectly. I would like to thank Prof. (Dr.) Ranjana Bhatia HOI, Amity Institute of Behavioural Health and Allied Sciences, Amity University, Noida for giving me the opportunity in this upcoming field. Without her encouragement and support, it would not have been possible. I am grateful to **Dr. Satwik Upadhyay**, my guide, for having faith in me, helping me, teaching me, and securing feedback throughout so as to make me eligible and competent enough in my skills. Lastly, I would like to extend a heartfelt gratitude to my family and friends who have been a constant source of support and encouragement.

10. REFERENCES

- [1] Asakawa, K. (2004). Flow experience and autotelic personality in Japanese college students: How do they experience challenges in daily life? *Journal of Happiness Studies*, 5(2), 123–154. <https://doi.org/10.1023/B:JOHS.0000035915.97836.89>
- [2] Bassi, M., Steca, P., Monzani, D., Greco, A., & Delle Fave, A. (2014). Personality and optimal experience in adolescence: Implications for well-being and development. *Journal of Happiness Studies*, 15(4), 829–843. <https://doi.org/10.1007/s10902-013-9451-x>
- [3] Carli, M., Delle Fave, A., & Massimini, F. (1988). The quality of experience in the flow channels: Comparison of Italian and U.S. students. *Journal of Cross-Cultural Psychology*, 19(4), 457–475. <https://doi.org/10.1177/0022022188194004>
- [4] Clauss, E., Hoppe, A., & O'Shea, D. (2017). Flow at work and employee well-being: A diary study. *Journal of Occupational Health Psychology*, 22(4), 473–485. <https://doi.org/10.1037/ocp0000046>
- [5] Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper & Row.
- [6] Csikszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology*, 56(5), 815–822. <https://doi.org/10.1037/0022-3514.56.5.815>
- [7] Delle Fave, A., & Massimini, F. (2005). The investigation of optimal experience and apathy: Developmental and psychosocial implications. *European Psychologist*, 10(4), 264–274. <https://doi.org/10.1027/1016-9040.10.4.264>
- [8] Demerouti, E. (2006). Job characteristics, flow, and performance: The role of conscientiousness. *Journal of Occupational Health Psychology*, 11(3), 266–280. <https://doi.org/10.1037/1076-8998.11.3.266>
- [9] Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575. <https://doi.org/10.1037/0033-2909.95.3.542>
- [10] Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276–302. <https://doi.org/10.1037/0033-2909.125.2.276>
- [11] Fancourt, D., & Finn, S. (2019). What is the evidence on the role of the arts in improving health and well-being? A scoping review. World Health Organization.
- [12] Fullagar, C. J., & Kelloway, E. K. (2009). Flow at work: An experience sampling approach. *Journal of Occupational and Organizational Psychology*, 82(3), 595–615. <https://doi.org/10.1348/096317908X357903>
- [13] Hefferon, K., & Ollis, S. (2006). 'Just clicks': An interpretative phenomenological analysis of professional dancers' experience of flow. *Research in Dance Education*, 7(2), 141–159. <https://doi.org/10.1080/14647890601029527>
- [14] Jeong, Y. J., Hong, S. C., Lee, M. S., Park, M. C., Kim, Y. K., & Suh, C. M. (2005). Dance movement therapy improves emotional responses and modulates neurohormones in adolescents with mild depression. *International Journal of Neuroscience*, 115(12), 1711–1720. <https://doi.org/10.1080/00207450590958574>
- [15] Keller, J., & Blomann, F. (2008). Locus of control and the flow experience: An experimental analysis. *European Journal of Personality*, 22(7), 589–607. <https://doi.org/10.1002/per.692>
- [16] Koch, S. C., Kunz, T., Lykou, S., & Cruz, R. (2014). Effects of dance movement therapy and dance on health-related psychological outcomes: A meta-analysis. *The Arts in Psychotherapy*, 41(1), 46–64. <https://doi.org/10.1016/j.aip.2013.10.004>
- [17] Kowal, J., & Fortier, M. S. (1999). Motivational determinants of flow in sport. *Journal of Sport and Exercise Psychology*, 21(1), 75–94. <https://doi.org/10.1123/jsep.21.1.75>
- [18] MacDonald, R., Byrne, C., & Carlton, L. (2006). Creativity and flow in musical composition. *Psychology of Music*, 34(3), 292–306. <https://doi.org/10.1177/0305735606064838>
- [19] Mesurado, B., & Richaud, M. C. (2017). The relationship between flow and academic achievement. *Journal of Happiness Studies*, 18(3), 681–695. <https://doi.org/10.1007/s10902-016-9736-1>
- [20] Moneta, G. B. (2012). On the measurement and conceptualization of flow. *Social Indicators Research*, 107(2), 1–23. <https://doi.org/10.1007/s11205-011-9842-7>
- [21] Nakamura, J., & Csikszentmihalyi, M. (2002). The concept of flow. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 89–105). Oxford University Press.
- [22] Quiroga Murcia, C., Kreutz, G., Clift, S., & Bongard, S. (2010). Shall we dance? An exploration of the perceived benefits of dancing on well-being. *Arts & Health*, 2(2), 149–163. <https://doi.org/10.1080/17533010903488582>
- [23] Rodríguez-Romo, G., Boned-Pascual, C., & Garrido-Muñoz, M. (2012). Reasons for exercise and health-related quality of life in university students. *Journal of Sports Sciences*, 30(11), 1223–1230. <https://doi.org/10.1080/02640414.2012.693621>
- [24] Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- [25] Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.
- [26] Salanova, M., Bakker, A. B., & Llorens, S. (2006). Flow at work: Evidence for an upward spiral of personal and organizational resources. *Journal of Happiness Studies*, 7(1), 1–22. <https://doi.org/10.1007/s10902-005-8854-8>
- [27] Sawyer, R. K. (2006). *Explaining creativity: The science of human innovation*. Oxford University Press.
- [28] Stuckey, H. L., & Nobel, J. (2010). The connection between art, healing, and public health. *American Journal of Public Health*, 100(2), 254–263. <https://doi.org/10.2105/AJPH.2008.156497>
- [29] Torrents, C., Castañer, M., Dinusová, M., & Anguera, M. T. (2010). Discovering new ways of moving: Observational analysis of motor creativity in dance. *Human Movement Science*, 29(1), 70–81. <https://doi.org/10.1016/j.humov.2009.11.002>

- [30] Wipfli, B., Rethorst, C., & Landers, D. (2008). The anxiolytic effects of exercise: A meta-analysis. *Journal of Sport and Exercise Psychology*, 30(4), 392–410.
<https://doi.org/10.1123/jsep.30.4.392>