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MOVIES THAT MOVE YOU: HOW CINEMATHERAPY CAN ENCOURAGE STUDENTS TO EXERCISE

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Abstrak

Penelitian ini bertujuan menguji efektivitas cinematherapy sebagai intervensi untuk meningkatkan niat berolahraga pada mahasiswa. Penelitian menggunakan desain kuasi-eksperimen dengan model pre-test post-test control group. Dari lima puluh mahasiswa, dipilih empat belas mahasiswa psikologi dengan skor awal terendah, lalu dibagi secara acak ke dalam kelompok eksperimen (n=7) dan kontrol (n=7). Kelompok kontrol tidak menerima perlakuan, sedangkan kelompok eksperimen menonton film motivasional sebanyak tiga kali per minggu selama tiga minggu. Instrumen yang digunakan adalah Exercise Intention Scale, diberikan sebelum dan sesudah intervensi. Hasil uji statistik menunjukkan bahwa kelompok eksperimen mengalami peningkatan skor niat berolahraga yang signifikan lebih tinggi dibandingkan kelompok kontrol (t = 2,869; p = ,014). Rata-rata skor kelompok eksperimen meningkat dari 33 (pretest) menjadi 53 (posttest), sementara kelompok kontrol hanya meningkat dari 33 menjadi 39. Temuan ini menegaskan bahwa intervensi berbasis film merupakan cara praktis, terjangkau, dan relevan untuk mendorong mahasiswa lebih aktif berolahraga melalui stimulasi emosional dan kognitif dari narasi yang dekat dengan kehidupan mereka.

Kata kunci: niat berolahraga; psikologi eksperimental; psikologi olahraga; psikologi pendidikan; sinematerapi

Abstract

This study examined the effectiveness of cinematherapy as an intervention to enhance college students' exercise intention. A quasi-experimental pre-test post-test control group design was employed. From fifty psychology students, fourteen with the lowest baseline scores were selected and randomly assigned to either the experimental group (n=7) or control group (n=7). The control group received no intervention, while the experimental group watched motivational films three times per week for three weeks. The Exercise Intention Scale was administered before and after the intervention. Statistical analysis revealed that the experimental group showed a significantly greater increase in exercise intention compared to the control group (t = 2.869, p = .014). The mean score of the experimental group increased from 33 at pretest to 53 at posttest, whereas the control group's mean score increased only from 33 to 39. These findings confirm that film-based interventions can serve as a practical, affordable, and emotionally engaging approach to encourage exercise intention among college students through relatable narratives that stimulate both emotional and cognitive processes.

Keywords: exercise intention; experiment psychology; sport psychology; educational psychology; cinematherapy

INTRODUCTION

The notable drop in the prevalence of physical activity among teenagers and college students has become a major public health concern because physical activity is known to be linked to both physical and mental health outcomes. More than 80% of teenagers worldwide do not engage in the recommended daily amounts of physical activity, according to the World Health Organization (World Health Organization, 2022). In Indonesia, this trend is even more noticeable. According to Basic Health Research (Kemenkes RI, 2021), physical inactivity rises with age and peaks among those between the ages of 15 and 24. Even though the advantages of exercise are widely known, recent studies reveal that sedentary lifestyles, excessive use of

digital devices, and increased academic demands are causing young people's levels of physical activity to decline (Gomez-Baya & Barbosa Cano, 2025; Vasilj et al., 2024).

Naturally, the problem is that inactivity can have detrimental effects on one's health. A significant risk factor for NCDs like obesity, type 2 diabetes, and heart disease is limited daily exercise (Bull et al., 2020; Katzmarzyk et al., 2021; Samuel et al., 2020). Furthermore, research has shown that college students who do not participate in a healthy amount of physical activity are more likely to experience academic burnout and a lower quality of life than those who do (Castro et al., 2020; Firth et al., 2023; Zhang et al., 2020).

On the other hand, engaging in regular physical activity brings a wide range of benefits that extend beyond physical health. Studies have shown that active students tend to report better mental health, including lower levels of anxiety and depression, as well as improved emotional regulation (Rodriguez-Ayllon et al., 2019; Singh et al., 2023). Physically active individuals also demonstrate sharper cognitive performance, such as better attention span, memory retention, and problem-solving skills, all of which contribute to academic success (Donnelly et al., 2016; Wassenaar et al., 2021). Furthermore, exercise has been linked to higher self-esteem, greater resilience to stress, and more satisfying social interactions among young adults (Dale et al., 2019; Lubans et al., 2016). These positive outcomes suggest that promoting physical activity is not merely about preventing disease, but also about helping students thrive emotionally, socially, and academically. Therefore, it is essential to investigate new intervention strategies to boost college students' motivation to exercise.

Examples of interventions to encourage participation in physical activity include the creation of athletic clubs, health education seminars, and the distribution of educational materials. Nevertheless, these approaches tend to minimize affective and emotional components while emphasizing cognitive and informational components. Recent evidence supports this concern: Tyne and Warren-Westgate (2025) found that university students' exercise engagement is profoundly shaped by how exercise makes them feel, yet most conventional programs overlook these affective experiences. Similarly, Li et al. (2025) demonstrated that achievement emotions, particularly enjoyment and boredom, play critical mediating roles in determining whether college students maintain physical activity habits, suggesting that purely cognitive interventions miss a crucial psychological pathway. Sacilotto et al. (2022), in their comprehensive scoping review of cinema and video therapy, noted that traditional health promotion strategies often fail to leverage emotional engagement, which is precisely what makes film-based interventions uniquely valuable. Creating innovative immersive methods like film therapy is a fresh strategy. According to Pannu and Goyal (2024), film therapy employs narrative and visual elements as psychological cues to influence behavior, emotion, and thought processes. Films can be effective motivators for behavioral intention, such as the adoption of healthy habits like regular exercise, by offering relatable characters and narratives (Evans, 2024; Hu et al., 2023).

Film can elicit psychological experiences beyond those offered by other media because it is a narrative medium that blends visual, auditory, and emotional elements (Hankir et al., 2015; Gagliano et al., 2023). In a therapeutic setting, movies can induce catharsis, promote introspection, and enhance a person's comprehension of their surroundings and identity. The intentional use of film to promote behavioral change, boost motivation, and control emotional reactions is referred to as cinematherapy in psychological interventions (Pannu & Goyal, 2024; Srinivasan, 2024).

These psychological processes are employed in cinematherapy to support therapeutic or individual growth. Carefully chosen films can act as a window providing fresh viewpoints and opportunities or as a mirror enabling people to consider their experiences (Dermer & Hutchings, 2000; Wang & Tang, 2021). Viewers become emotionally invested in the characters' journeys when they watch movies with protagonists who overcome hardship and change their lives via physical activity.

Another affordable and adaptable intervention is film. Students in college should be especially aware of this since they are already familiar with audiovisual media. A study by Al-Hussaini and Arcelus-Ulibarrena (2023) found that watching movies can greatly increase motivation, self-efficacy, and prosocial behavior. As a result, the possibility of using film therapy to develop exercise intentions is an innovative and promising intervention that merits further research.

Studies that are currently available look at how movies and other audiovisual media affect behavior related to health. For instance, Mardiah and Marifah (2024) showed how film-based instruction promotes empathy for the environment. Likewise, Glaser et al. (2022) discovered that using an online intervention for high school students during the COVID-19 pandemic can improve resilience, boost social support, and lessen psychological distress and anxiety symptoms in at-risk adolescents.

Beyond the effects on health, Prasirtsuk and Traipanyasart (2022) demonstrated how movie representations can mold teenagers' lifestyles by affecting their propensity to emulate both healthy and unhealthy actions portrayed by characters. The notion that movies can affect intentions and habits is supported by these findings. According to Sacilotto et al. (2022), in their review Through the Looking Glass: A Scoping Review of Cinema and Video Therapy, discovered that movies can enhance emotion control, self-awareness, and social skills.

Non-film-based interventions have also been studied to promote healthy behaviors. For instance, Fichtner et al. (2023) discovered that online programs can boost adults' desire to exercise. Likewise, Xiao et al. (2025) demonstrated that social media exposure to fitness-related content affects exercise behavior both directly and through a series of psychological processes that start with emotional activation (intrinsic motivation), progress to cognitive planning (intention), and end with action.

The use of film as a medium for health-related behavioral interventions has been studied in the literature, but there aren't many studies that particularly look at using film therapy to boost college students' intentions to exercise. Most of the research that is currently available has focused on using movies to educate people about their value, encourage prosocial behavior, or promote mental health.

Despite the growing body of evidence supporting film-based interventions for various psychological outcomes, a critical gap remains. No experimental study to date has specifically examined whether cinematherapy can enhance college students' intention to exercise, particularly in non-Western educational contexts such as Indonesia. This gap is not merely academic; it carries practical consequences. First, the prevalence of physical inactivity among Indonesian young adults (ages 15–24) has reached alarming levels, with data from Basic Health Research (Kemenkes RI, 2021) showing that this age group is the most sedentary compared to any other age bracket. Second, university students face unique barriers to exercise, including time constraints from academic workloads, limited access to affordable fitness facilities, and

low self-efficacy for initiating physical activity routines (Brunet et al., 2023). Third, traditional exercise promotion strategies, such as informational pamphlets, health seminars, and gym membership subsidies, require ongoing funding and institutional infrastructure that many universities, particularly in developing countries, simply cannot sustain (Jaeschke et al., 2022; Milton et al., 2021). Fourth, cinematherapy offers a distinctly different value proposition: it is low-cost, requires only a screen and a shared space, and leverages media that students already consume voluntarily in their daily lives. Establishing the effectiveness of cinematherapy for exercise intention could therefore provide educators, counselors, and health promoters with an evidence-based, culturally adaptable, and financially feasible tool to address physical inactivity among college students. Without such evidence, universities may continue investing in resource-intensive interventions that fail to engage students emotionally or reach those who need support the most. As a result, this study advances our understanding of the effectiveness of film therapy as a cutting-edge strategy to boost college students' interest in physical activity.

METHOD

We applied a quasi-experimental framework consisting of a pre-test and post-test control group design, a design often applied for testing the effectiveness of interventions with small participant samples (Campbell, 1965; Capili & Anastasi, 2024; Creswell, 2009). It was chosen because it facilitates the analysis of differences in outcomes between the experimental group receiving the intervention and the control group receiving it. This is an especially suited model when full randomization is impossible, but an analysis of the causal effects of an intervention (Capili & Anastasi, 2024; Naillah et al., 2025) could still be carried out. The pre-test sets the baseline of conditions for the subjects, whereas the post-test assesses the effectiveness of the intervention, specifically film-based cinema therapy.

Research subjects are defined as individuals or groups who serve as the main source of data for research through treatment or measurement, providing information related to the research aims. The study of these subjects is conducted through observation, literature reviews, and interviews for each subtype, and as such, is informed by specific research questions. Collected data is then organized systematically and considered as research data from these subjects (Creswell, 2009; Nashrullah, 2023; Sugiyono, 2019).

Under this definition, the study was conducted among 14 participants who were divided into experimental and control groups. To examine baseline conditions, both groups performed a pretest. Then, the experimental group was subjected to an intervention with three weekly movie-viewing sessions, whereas the control group received no intervention. Following the intervention, both groups undertook a posttest to measure outcome changes. The experimental film selections are Brittany Runs a Marathon, Creed, and Eddie the Eagle, chosen for their themes of motivation, resilience, and personal growth, as reflected in scenes of struggle and achievement. Table 1 below provides a detailed overview of the three films used in the cinematherapy intervention, including their release year, director, and a brief synopsis highlighting themes relevant to exercise motivation.

Table 1.
Overview of Motivational Films Used in the Cinematherapy Intervention

Film Title	Year	Director	Brief Synopsis (Relevant to Exercise Motivation)
Brittany Runs a Marathon	2019	Paul Downs Colaizzo	A woman in her late twenties, dissatisfied with her sedentary lifestyle and struggling with low self-esteem, sets a seemingly impossible goal: running the New York City Marathon. The film follows her journey of small daily efforts, setbacks, and gradual physical and emotional transformation, emphasizing that exercise is not about perfection but about showing up.
Creed	2015	Ryan Coogler	The son of legendary boxer Apollo Creed, despite never having known his father, leaves his stable office job to pursue a career in professional boxing. Under the reluctant mentorship of the retired Rocky Balboa, he endures grueling physical training, confronts his fears of inadequacy, and learns that discipline and perseverance matter more than natural talent.
Eddie the Eagle	2016	Dexter Fletcher	Based on a true story, a young British ski jumper with poor eyesight and no financial support or formal training dreams of competing in the Winter Olympics. Repeatedly told he is not talented enough, he persists through ridicule, injuries, and repeated failures, ultimately redefining what success means, not winning medals, but refusing to give up.

These films were selected for their thematic engagement with exercise motivation and their alignment with the constructs of the Theory of Planned Behavior.

The Exercise Intention Scale (Kerner & Grossman, 2001) was the key tool used in the survey. Informed by Ajzen's (1991) Theory of Planned Behavior, which extends the Theory of Reasoned Action by incorporating perceived behavioral control as a determinant of intention and behavior, particularly in situations where individuals lack full volitional control. This scale generalizes three of the core constructs of the Theory of Planned Behavior, attitude toward a particular behavior, subjective norm, and perceived behavioral control, into actual items measuring students' exercise intentions. By doing so, it provides a structured framework to evaluate how beliefs, social expectations, and perceived ability interact to shape motivation for physical activity. The scale was completed at both pre-test and post-test stages of this study to examine changes in students' intentions to participate in physical activity as a consequence of the cinema therapy intervention.

Table 2.
Research Design

Subject	Pretest	Intervention	Posttest
Experiment Group	T1	I	T3
Control Group	T2	-	T4

T1: Pre-Intervention Measurement in the experiment group
T2: Pre-Intervention Measurement in the control group
I: Intervention in the form of cinematherapy given to the experiment group
T3: Measurement after intervention in the experiment group
T4: Measurement after intervention in the control group

The experimental process started with a single-week pre-test conducted on the students of psychology. Fifty participants completed the surveys; after which, 14 of the low-scoring participants were selected for inclusion in the study. They were randomly assigned to one of the experimental groups or the control groups, with seven subjects from each. The experimental group received weekly film watching in a communal room for three consecutive weeks. The control group did not receive intervention during this period. Following the end of the intervention, the two groups filled in identical post-test questionnaires.

An independent-samples t-test was used to analyze the data in order to determine whether the two groups' exercise intentions differed significantly. With the aid of JASP version 0, 95 data were processed. Three programs for statistics. Assumptions of normality and homogeneity of variance, descriptive statistical analysis, and inferential tests (e.g., independent-samples t-test) were used to determine whether the experimental and control samples differed statistically significantly.

Table 3.
Categories of Exercise Intention Scales

Categories	Value Range
Low	11-32
Medium	33-55
High	56-77

The categorization presented in Table 3 was constructed to facilitate a structured analysis of scores from the Exercise Intention Scale (Kerner & Grossman, 2001). Following the approach recommended by De Vet et al. (2011) for ordinal scale interpretation in small-sample intervention studies, the score range (11-77) was divided into three equal intervals: low (11-32), medium (33-55), and high (56-77). While these categories are heuristic rather than clinically validated, they provide a transparent framework for visualizing motivational shifts before and after the intervention. This method of equal-interval categorization has been previously employed in exercise psychology research to differentiate intention levels when normative cutoff scores are unavailable (McEachan et al., 2011; Rhodes & Courneya, 2003;).

RESULT AND DISCUSSION

Table 4.
Data Description of The Experimental Group

Subject	Pre-Test	Categories	Post-Test	Categories
A1	11	L	47	M
A2	28	L	39	M
A3	31	L	42	M
A4	37	M	51	M
A5	40	M	67	H
A6	41	M	58	H
A7	45	M	70	H
Average	33		53	

L: Low
M: Medium
H: High

Table 4 depicts the development of scores for the experimental group from pre-test to post-test. At the beginning, participants who were low or medium in exercise intention made significant changes post-cinematherapy. Some individuals shifted from low to medium, while others advanced from medium to high, indicating a consistent upward trend in motivation. The average score increased from 33 (SD = 11.0) at pre-test to 53 (SD = 12.1) at post-test, representing a mean gain of 20 points. This improvement indicates that the cinematherapy intervention was associated with a substantial upward shift in exercise intention among participants. Notably, no participants remained in the low category following the intervention, whereas four out of seven participants (57.1%) moved from low to medium, and three participants (42.9%) advanced from medium to high. This pattern suggests a dose-response relationship between exposure to motivational films and increased intention to exercise, although causal interpretation requires confirmation through replication with larger samples.

In contrast, as shown in Table 5, the control group displayed only modest changes. While a few participants shifted from low to medium, others remained unchanged or declined slightly. The mean score increased marginally from 33 to 39, indicating limited motivational progress without intervention.

Table 5.
Data Description of The Control Group

Subject	Pre-Test	Categories	Post-Test	Categories
B1	18	L	31	L
B2	22	L	39	M
B3	28	L	40	M
B4	33	M	42	M
B5	38	M	38	M
B6	47	M	45	M
B7	48	M	41	M
Average	33		39	

L: Low
M: Medium
H: High

Table 6.
Assumption Check

Test of Normality (Shapiro-Wilk)

Residuals	W	p
Gain	0.937	.381

	F	df_1	df_2	p
Gain	0.002	1	12	.964

Table 6 presents these hypothesis testing results for prior test assumptions conducted before the primary statistical analysis using JASP. The normality of the residuals was investigated with the Shapiro–Wilk test, which did not yield a significant effect for non-normality (p = .381), thus satisfying the test of normality. Levene's test was also used to establish homogeneity of variance between the experimental and control groups, yielding a non-significant result (p = .964), indicating that variances are equal across groups. Taken together, these results indicated the evidence confirmed the main assumptions of the independent-samples t-test and, in turn, supported the validity of the inferential analysis that followed.

Table 7.
Result of Analysis: Independent Sample t-Test

	t	df	p
Gain	2.869	12	.014

Note. Student's t-test.

Statistical Analysis (Table 7) showing the Results of the independent-samples t-test confirmed a significant difference between the two groups ($t = 2.869$, $df = 12$, $p = .014$). This finding demonstrates that the gain in exercise intention was not random but attributable to the cinematherapy intervention. The significance level below .05 provides strong evidence that film-based strategies can positively influence college students' motivation to engage in physical activity. Taken together, these results highlight the contrast between the experimental group's substantial improvement and the control group's minimal change, reinforcing the effectiveness of cinematherapy as an intervention. The effect size, calculated using Cohen's d, was 1.53 (95% CI [0.42, 2.64]), indicating a large practical significance according to Cohen's (1988) conventions, where $d = 0.2$ is considered small, 0.5 medium, and 0.8 large.

Discussion

Crucially, this study demonstrates that cinematherapy can significantly influence college students' intentions to exercise. Exercise intention was significantly higher in the experimental group that watched movies every week for three weeks than in the control group (independent-samples t-test: $t = 2.869$, $p = .014$). These results support the idea that movies may serve as promising psychological stimuli that encourage motivation for physical activity through emotional and narrative engagement. While the findings suggest a positive effect, they should be interpreted cautiously given the small sample size and hypothetical scoring categories. Thus, the motivational shift observed in the experimental group is probably explicable by this theoretical framework, but further research is required to confirm its generalizability.

The observed motivational shift in the experimental group can be interpreted through the lens of Ajzen's (1991) Theory of Planned Behavior. Specifically, the intervention films appeared to reinforce positive attitudes toward exercise, highlight supportive subjective norms, and enhance perceived behavioral control, thereby aligning with the three central determinants of behavioral intention. This alignment suggests that cinematherapy does not merely provide emotional stimulation but operates within a theoretically grounded framework that explains how intention is formed and strengthened. Consequently, the findings extend the applicability of TPB to the domain of film-based interventions, offering empirical support for the theory's relevance in promoting exercise motivation among college students. The motivational shift observed in the experimental group is probably explicable by this theoretical framework.

These results are consistent with recent studies that emphasize the significance of affective and motivational factors in encouraging students to engage in physical activity. Zhong (2024) showed that psychological well-being and motivations for physical activity are closely related, highlighting the need for interventions that address emotional aspects rather than just

informational strategies. Likewise, Sáez et al. (2021) discovered that social context, gender, and satisfaction all influence university students' motivation for physical activity, demonstrating the importance of involving both cognitive and affective processes. Moreover, Ma et al. (2025) found that mental health and academic achievement are strongly correlated with physical activity, highlighting the significance of methods to increase exercise intention in higher education.

Several limitations must be acknowledged to contextualize these findings appropriately. First, the small sample size (N = 14) limits statistical power and increases the risk of Type II error; a post-hoc power analysis using G*Power (Faul et al., 2009) indicated that the achieved power was .62, below the conventional threshold of .80. Second, the categorization of exercise intention scores (low, medium, high) was heuristic rather than standardized, although we followed established conventions for ordinal scale interpretation in small-sample research (De Vet et al., 2011). Third, the study measured only short-term changes in intention immediately following the three-week intervention; we did not assess whether these motivational gains translated into sustained physical activity behavior over time, nor did we conduct a follow-up measurement to examine decay effects (Rhodes & Courneya, 2003). Fourth, the absence of a placebo control group (e.g., watching neutral films) means we cannot definitively rule out nonspecific effects such as attention from researchers or group social dynamics. Fifth, the participants were all psychology students from a single Indonesian university, which limits generalizability to other populations, including non-psychology majors, students from different cultural backgrounds, or non-student young adults. Despite these limitations, the significant between-group differences provide preliminary evidence supporting cinematherapy as a promising intervention warranting further investigation.

CONCLUSION

This study provides empirical evidence that cinematherapy significantly enhances college students' intention to exercise, as demonstrated by the experimental group's superior improvement compared to the control group ($t = 2.869$, $p = .014$). Beyond its practical significance, this study makes several contributions to the theoretical literature on health behavior change. First, by demonstrating that cinematherapy significantly increases exercise intention, the findings extend the applicability of Ajzen's (1991) Theory of Planned Behavior (TPB) to film-based interventions. Prior applications of TPB to exercise have largely relied on self-report questionnaires and informational messaging; this study shows that narrative-driven emotional experiences can influence the same three core constructs, attitudes toward exercise, subjective norms, and perceived behavioral control, through an entirely different pathway. Second, the results suggest that narrative transportation, the psychological process through which viewers become absorbed into a story (Wang & Tang, 2021), may serve as an alternative route to intention formation that complements the rational, deliberative processes traditionally emphasized in TPB. This finding aligns with emerging evidence that affective experiences can shape behavioral intentions independently of cognitive beliefs (Li et al., 2025; Tyne & Warren-Westgate, 2025). Third, the study provides preliminary evidence that cinematherapy's effectiveness extends to non-Western educational contexts (Indonesia), suggesting that the motivational power of relatable narratives may be culturally transferable rather than bound to Western individualistic cultures where most film therapy research has been conducted. Fourth, the large effect size (Cohen's $d = 1.53$) observed in this small-sample study raises theoretical questions about the intensity of narrative-based interventions: do films produce stronger motivational effects than traditional educational materials because they engage multiple sensory channels simultaneously? Future theory development should integrate insights from

media psychology, specifically the dual-process models of persuasion (Petty & Cacioppo, 1986), to explain how cinematherapy operates through both central (cognitive) and peripheral (affective) routes.

The findings suggest three practical implications for health promotion practitioners. First, cinematherapy offers a low-cost, scalable intervention that can be implemented in university settings with minimal resources, requiring only access to films and a group viewing space. Second, the mechanism appears to operate through emotional engagement rather than didactic instruction, making it particularly suitable for students who may be resistant to traditional health education approaches (Zhong, 2024). Third, the intervention's acceptability is likely high given students' existing familiarity with and positive attitudes toward film consumption. Future research should prioritize longitudinal designs with follow-up assessments (e.g., 3 and 6 months post-intervention) to evaluate whether increased intention translates into sustained behavioral change. Additionally, replication studies with larger, more diverse samples and active control conditions are needed to establish causal generalizability and identify which film characteristics (e.g., protagonist gender, narrative structure, genre) maximize motivational impact.

Given the preliminary nature of this study, several directions warrant further investigation. Future research should replicate these findings using larger and more diverse samples to establish generalizability. Longitudinal designs with follow-up assessments are needed to determine whether increased intention translates into sustained behavioral change. Additionally, comparative studies could examine which film characteristics produce the strongest motivational effects. Finally, exploring the applicability of cinematherapy to other populations would help clarify the boundaries of its effectiveness.

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