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Research Paper

Flow and Identity- A Study on the Associations of Flow and Identity

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ABSTRACT

The present study explores the relationship between Personal and Social identity with the concept of flow for individuals from Engineering, Psychology, and Medical Educational Backgrounds. The research aimed to study the correlation between Personal and Social identity with Flow. And to study Social and Personal identities as Predictors of Flow. Convincing sampling is used, and a total of 130 participants, (50 Engineering, 50 Psychology, and 30 Medical) falling under the age group of 20 - 30 years took part in this research. Flow State Scale and Personal and Social Identities Scale are used for the collection of data. Pearson Correlation and Regression are used for the analysis of the collected data by SPSS software. The findings reveal that Social and Personal Identities are positively correlated with the concept of flow and are predictors of flow for individuals with an Engineering educational background. Social and Personal identities are moderately correlated with flow and Social Identity is a predictor of flow, but Personal Identity is not a predictor of flow for individuals with a Psychology educational background. Social and Personal Identities are not positively correlated with the flow and are not predictors of Flow for individuals with a Medical educational background.

Keywords: *Identity, Personal, Social, Flow, Engineering, Medical Psychology*

This study investigates the connection between identity (both social and personal) and the state of flow, which is characterized by intense focus and enjoyment in an activity. By examining how identity influences the occurrence and quality of flow experiences, we can gain insights into the factors that facilitate or hinder these experiences, contributing to personal growth and well-being.

Identity, encompassing characteristics, beliefs, values, and roles, plays a crucial role in shaping individuals' experiences and interactions. Social identity pertains to group affiliations, while personal identity refers to individual characteristics and self-perceptions. Flow, on the other hand, is a desirable state associated with enhanced performance and personal fulfillment. Exploring the relationship between identity and flow helps us understand the conditions under which flow is more likely to occur and how identity affects this process.

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To ensure diverse identities are represented, participants from three educational backgrounds (Engineering, Medical, Psychology) will be recruited for the study. Surveys will collect data on participants' identities and flow experiences, which will be analyzed statistically to identify patterns, correlations, and potential predictors of flow experiences.

The study's findings will provide insights into the relationship between identity and flow. It is hypothesized that alignment between personal and social identities may enhance the occurrence and quality of flow experiences, while conflicts or lack of clarity in identity may hinder flow. This knowledge has practical implications, enabling individuals and organizations to create environments that foster flow by aligning activities with individuals' identities, values, and goals. Additionally, interventions targeting identity exploration and development can be informed to promote flow and well-being. Overall, this study contributes to understanding the factors influencing flow experiences and the intersection of identity and optimal human functioning.

By investigating the relationship between identity (social and personal) and flow, this research aims to enhance our understanding of the factors influencing flow experiences. The findings will provide valuable insights into how identity shapes individuals' engagement in activities and their likelihood of experiencing flow. This knowledge can be applied to promote personal growth, well-being, and optimal human experiences in various contexts.

Flow and Identity

Flow is a state of deep engagement and absorption that individuals experience when they are faced with a challenging activity and feel capable of handling it. It was first described by Csikszentmihalyi as a phenomenon where people engage in activities purely for the sake of the activity itself, without seeking external rewards. During flow, individuals are highly motivated to persist in their activities and to engage in them again. Csikszentmihalyi identified nine characteristics of the flow experience, including a balance between challenge and skill, focused concentration, clear goals, and a sense of control.

The overarching perspective of the social identity approach acknowledges that individuals are psychologically embedded in groups and operate based on shared social identities. These social identities refer to the aspects of a person's identity that arise from their group affiliations, encompassing the emotional response and cognitive assessment associated with such memberships.

The psychological perspective known as the personal identity approach is a conceptual structure that centers on how individuals form and uphold their own sense of self. It investigates the manner in which people perceive themselves, their distinctiveness, and the stability of their personal attributes throughout their lives. This approach places importance on the individual's subjective encounter of being a person, encompassing their thoughts, feelings, recollections, and beliefs.

Evidence on the Association Between Flow and Identity

Flow and personal expressiveness, which can be viewed in some cases as a stand-in for personal identity, have been the subjects of a small number of literary works. For instance, Waterman et al. (2003) measured the variables of interest, flow, and feelings of personal expressiveness and found that these variables were strongly related when predicting the subjective experience of intrinsic motivation, with the correlation between flow and personal expressiveness being 0.50 and 0.66, respectively, in two sub-studies.

When looking at adolescent self-defining leisure activities and identity experiences across three nations, Coatsworth et al. (2005) observed a correlation of.55 between flow and personal expressiveness.

The relationship between flow and personal expressiveness has not been quantitatively tested, but a later study by Waterman (2005) noted that the category of high-effort, high-enjoyment activities was associated with a greater reported level of both flow and personal expressiveness than those with low-effort, low-enjoyment activities.

When predicting identity consolidation from self-construction, eudaimonistic self-discovery, and agentic personality, Schwartz (2006) found a correlation of.25 between ego identification and self-discovery of identity (at three levels: flow, personal expressiveness, and interest). Although it had not yet been shown, the authors hypothesised that flow and personal identity might be related. When assessing subjective identity-related experience (such as flow, intrinsic motivation, and novelty), a study by Sharp et al. (2007) investigated gender and national differences for adolescents and emerging adults.

The findings demonstrated that identity-related experiences varied significantly across seven major categories of activity, and personal expressiveness was strongly correlated with self-defining activities when in a state of flow. The relationship between flow and individual identity, however, was not explicitly established or operationalized.

According to a qualitative case study by Tietze (2008), listening to jazz music can promote both flow and a sense of a distinct unique identity. The conceptions of flow and personal identity were quantitatively and explicitly examined in the most current study by Mao et al. (2016), and they discovered substantial positive correlations between these two constructs in four different categories of self-defining activities (rs varied from 0.43 to 0.84).

Even though flow has been identified as a key component of engaging in self-defining activities, which can help with identity development at the personal level, there hasn't been much research that specifically discusses the connection between flow and identity at the social level up until this point. Furthermore, prior research examining the relationship between activities and personal identity has primarily centred on youth participation in organised extracurricular activities that are located in schools (Eccles et al., 2003; Hansen et al., 2003; Coatsworth et al., 2005).

However, identity development is likely to happen in a variety of structured and unstructured activities that people do in alone or with others, such as performing music, rock climbing, working for a living, and writing a paper (Csikszentmihalyi and Kleiber, 1991; Kleiber, 1999; Waterman, 1993b). In order to explore the relationships between flow and identity through a variety of self-defining behaviours, the current study aims to add to the existing body of literature on the theme.

REVIEW OF LITERATURE

Henk B and colleagues (2012) investigated the correlation between flow and identity during adolescence, specifically exploring how personality traits influence this relationship. Thestudy included 236 high school students, and the results revealed a positive association between flow experiences and both identity exploration and commitment. Notably, this connection was more pronounced among students with specific personality traits such as openness to experience.

Consequently, the research suggests that flow experiences can contribute to the formation of a cohesive and adaptable sense of identity during adolescence.

Basu, R et al (2011) investigated how identity and flow are connected in leisure activities, specifically focusing on amateur dancers. Through interviews and observations with nine dancers, the researchers discovered that flow experiences were strongly associated with their identity as dancers. The study indicates that engaging in leisure activities allows individuals to explore and express their identities, with flow experiences playing a significant role in this process.

Engeser S et al (2016) conducted a study on the relationship between flow and identity formation in career construction counseling. By interviewing nine individuals who had undergone career counseling, the researchers found that flow experiences were closely tied to the development of a sense of purpose and meaning in their careers. The study highlights the importance of flow experiences as a valuable tool for promoting identity formation and career development.

Trusheim, E et al (2015) examined the relationship between flow and identity in outdoor sports. By interviewing 11 dedicated outdoor sports enthusiasts, the researchers revealed a close association between flow experiences and their identity as outdoor enthusiasts. The study emphasizes the role of flow experiences in shaping individuals' identities within leisure activities.

Badura et al. (2019) examined the relationship between flow and occupational identity among nurses. They found a positive association between flow experiences and occupational identity, which was partially mediated by work engagement. The study suggests that flow experiences can be a crucial factor in shaping occupational identity and work engagement among nurses.

Strukelj et al. (2015) found that flow experiences were positively associated with identity and psychological well-being among young professionals, with identity mediating the relationship between flow and well-being. They suggest that promoting flow experiences enhances identity and psychological well-being in this group.

METHEDOLOGY

Aim

To find out the relationship between Flow and Identity among individuals from three different educational backgrounds.

Objectives

- To study the association between Flow and Social Identity among individuals from different educational backgrounds.
- To study the association between Flow and Personal Identity among individuals from different educational backgrounds.
- To study Social Identity as a predictor of flow among individuals from different educational backgrounds.
- To study Personal Identity as a predictor of flow among individuals from different educational backgrounds.

Hypothesis

- H1 – There will be a significant relationship between Personal Identity and Flow for Engineering.
- H2– There will be a significant relationship between Social Identity and flow for Engineering.
- H3 – There will be a significant relationship between Personal Identity and Flow for Psychology.
- H4 – There will be a significant relationship between Social Identity and Flow for Psychology.
- H5 – There will be a significant relationship between Personal Identity and Flow for Medical.
- H6 – There will be a significant relationship between Social Identity and Flow for Medical.
- H7 – Personal Identity will be a predictor of Flow for Engineering.
- H8 – Social Identity will be a predictor of Flow for Engineering.
- H9 – Personal Identity will be a predictor of Flow for Psychology.
- H10 – Social Identity will be a predictor of flow for Psychology.
- H10 – Personal Identity will be Predictor of flow for Medical.
- H12 – Social Identity will be a predictor of flow for medical.

Design

It a study to find the associations between Flow and Identity.

Variables

Flow – Personal Identity – Social Identity

- **Independent Variables:** Personal Identity & Social Identity
- **Dependent Variable:** Flow

Sample

Convenience sampling was used for the participants who took part in the research in the age group (20-30 years) from three different educational backgrounds (Engineering – Law – MEDICAL). All participants voluntarily participated in the study by giving their consent.

Description of The Tool

1. THE FLOW SHORT SCALE

The Flow Short Scale (FSS-2) is a psychometric tool developed by Rheinberg, Vollmeyer, and Engeser (2003) to measure the experience of flow, a state of complete absorption and engagement in an activity. The FSS-2 consists of 13 items designed to assess the various dimensions of flow experienced during a specific activity. The psychometric properties of the scale indicate its reliability and validity. Here are some key psychometric properties of the FSS-2:

A. Reliability: The FSS-2 has shown good internal consistency, indicating that the items in the scale consistently measure the construct of flow. Internal consistency is typically assessed using Cronbach's alpha coefficient, which measures the extent to which items in the scale are interrelated. The FSS-2 has demonstrated high internal consistency, with reported alpha coefficients ranging from 0.87 to 0.91.

B. Validity: The FSS-2 has demonstrated good construct validity, which refers to the extent to which the scale measures the intended construct of flow. The scale has been found to correlate positively with other measures of flow, suggesting that it is capturing

the concept effectively. Additionally, studies have shown that the FSS-2 can differentiate between flow and other related constructs, such as boredom or anxiety.

C. Generalizability: The FSS-2 has been used across various domains and activities, including sports, work, leisure, and academic settings. It has been found to be applicable to different populations, such as athletes, students, professionals, and gamers. This suggests that the scale can be reliably used in different contexts to assess flow experiences.

2. Social and Personal Identities Scale

A new measure sensitive to differences in the importance that people ascribe to their social (group) and personal identities is described. The Social and Personal Identities (SIPI) scale distinguishes between the interpersonal level of self which differentiates the individual as unique from others, and the social identity level of self whereby the individual is identified by his or her group memberships. In contrast to perspectives that emphasize the context-dependence of self-conception, our measure was designed to capture individual differences in participants' readiness to categorize themselves using group and personal self-categories as measured by the degree of importance or centrality assigned to each. Factor and reliability analyses support the scale's stability as a two-factor structure with high internal consistency, and these factors are modestly correlated. Results from six studies substantiate the scale's criterion and construct validity.

Inclusive and Exclusive Criteria

Inclusive Criteria - The factors which are considered during the research are as follows; Occupation, Educational Background and Educational Qualification.

Exclusive Criteria – The factors which are not considered during the research are as follows; Family type (Joint or Nuclear), Marital status (Married, Unmarried, Divorced, or Separated) Age, Gender.

Procedure

The research problem was acknowledged and the target sample was selected by convenience sampling. The information regarding the study was given to the participants and their data was collected with the help of a standardized tool. They were asked to give their consent for the research study and their data were kept confidential.

RESULTS AND DISCUSSION

Table 1 Descriptive Analysis

		Flow	PI	SI
N	Valid	130	130	130
	Missing	2	2	2
Mean		75.08	47.31	53.87
Median		76.00	48.00	54.50
Mode		78	40	40
Std. Deviation		13.072	12.124	11.217

Table 2 Correlation of Flow and Identity

Correlations

		Flow	PI	SI
Flow	Pearson Correlation	1	.329**	.353**
	Sig. (2-tailed)		.000	.000
	N	130	130	130
PI	Pearson Correlation	.329**	1	.431**
	Sig. (2-tailed)	.000		.000
	N	130	130	130
SI	Pearson Correlation	.353**	.431**	1
	Sig. (2-tailed)	.000	.000	
	N	130	130	130

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 Correlation of Flow and Identity of Engineering Background

Correlations

		FLOWe	PIe	SIe
FLOWe	Pearson Correlation	1	.523**	.401**
	Sig. (2-tailed)		.000	.004
	N	50	50	50
PIe	Pearson Correlation	.523**	1	.400**
	Sig. (2-tailed)	.000		.004
	N	50	50	50
SIe	Pearson Correlation	.401**	.400**	1
	Sig. (2-tailed)	.004	.004	
	N	50	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 Correlation of Flow and Identity of Psychology Background

Correlations

		FLOWp	PIp	SIp
FLOWp	Pearson Correlation	1	.130	.381**
	Sig. (2-tailed)		.370	.006
	N	50	50	50
PIp	Pearson Correlation	.130	1	.491**
	Sig. (2-tailed)	.370		.000
	N	50	50	50
SIp	Pearson Correlation	.381**	.491**	1
	Sig. (2-tailed)	.006	.000	
	N	50	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5 Correlation of Flow and Identity of Medical Background

Correlations

		FLOWm	PIm	SIm
FLOWm	Pearson Correlation	1	.205	.310
	Sig. (2-tailed)		.276	.096
	N	30	30	30
PIm	Pearson Correlation	.205	1	.341
	Sig. (2-tailed)	.276		.065
	N	30	30	30
SIm	Pearson Correlation	.310	.341	1
	Sig. (2-tailed)	.096	.065	
	N	30	30	30

Table 6 Regression of Flow and Personal Identity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.329[a]	.108	.102	12.390

a. Predictors: (Constant), PI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2391.220	1	2391.220	15.576	.000[b]
	Residual	19650.849	128	153.522		
	Total	22042.069	129			

a. Dependent Variable: Flow

b. Predictors: (Constant), PI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	58.285	4.393		13.267	.000	49.592	66.978
	PI	.355	.090	.329	3.947	.000	.177	.533

a. Dependent Variable: Flow

Table 7 Regression of Flow and Social Identity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353[a]	.125	.118	12.278

a. Predictors: (Constant), SI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2746.315	1	2746.315	18.218	.000[b]
	Residual	19295.754	128	150.748		
	Total	22042.069	129			

a. Dependent Variable: Flow

b. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	52.926	5.302		9.982	.000	42.435	63.417
	SI	.411	.096	.353	4.268	.000	.221	.602

a. Dependent Variable: Flow

Table 8 Regression of Flow and Personal Identity of Engineering Background

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.523[a]	.274	.259	13.5602

a. Predictors: (Constant), PIe

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3326.527	1	3326.527	18.091	.000[b]
	Residual	8826.193	48	183.879		
	Total	12152.720	49			

a. Dependent Variable: FLOWe

b. Predictors: (Constant), PIe

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	45.288	7.735		5.855	.000	29.735	60.840
	PIe	.664	.156	.523	4.253	.000	.350	.977

a. Dependent Variable: FLOWe

Table 9 Regression of Flow and Social Identity of Engineering Background

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.401[a]	.161	.143	14.5761

a. Predictors: (Constant), SIe

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1954.564	1	1954.564	9.200	.004[b]
	Residual	10198.156	48	212.462		
	Total	12152.720	49			

a. Dependent Variable: FLOWe

b. Predictors: (Constant), SIe

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	47.259	10.072		4.692	.000	27.009	67.509
	SIe	.568	.187	.401	3.033	.004	.191	.944

a. Dependent Variable: FLOWe

Table 10 Regression of Flow and Personal Identity of Psychology Background

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.130[a]	.017	-.004	10.8729

a. Predictors: (Constant), PIp

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	96.833	1	96.833	.819	.370[b]
	Residual	5674.547	48	118.220		
	Total	5771.380	49			

a. Dependent Variable: FLOWp

b. Predictors: (Constant), PIp

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	68.195	6.403		10.651	.000	55.321	81.069
	PIp	.115	.127	.130	.905	.370	-.141	.371

a. Dependent Variable: FLOWp

Table 11 Regression of Flow and Social Identity of Psychology Background

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.381[a]	.145	.127	10.1380

a. Predictors: (Constant), SIp

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	837.947	1	837.947	8.153	.006[b]
	Residual	4933.433	48	102.780		
	Total	5771.380	49			

a. Dependent Variable: FLOWp

b. Predictors: (Constant), SIp

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	53.959	7.102		7.598	.000	39.679	68.239
	SIp	.355	.124	.381	2.855	.006	.105	.605

a. Dependent Variable: FLOWp

Table 12 Regression of Flow and Personal Identity of Medical Background

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.205[a]	.042	.008	11.3530

a. Predictors: (Constant), PIm

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	158.955	1	158.955	1.233	.276[b]
	Residual	3608.911	28	128.890		
	Total	3767.867	29			

a. Dependent Variable: FLOWm

b. Predictors: (Constant), PIm

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	64.527	8.545		7.551	.000	47.023	82.031
	PIm	.211	.190	.205	1.111	.276	-.178	.601

a. Dependent Variable: FLOWm

Table 13 Regression of Flow and Social Identity of Medical Background

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.310[a]	.096	.064	11.0300

a. Predictors: (Constant), SIm

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	361.364	1	361.364	2.970	.096[b]
	Residual	3406.503	28	121.661		
	Total	3767.867	29			

a. Dependent Variable: FLOWm

b. Predictors: (Constant), SIm

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	55.987	10.492		5.336	.000	34.496	77.479
	SIm	.339	.197	.310	1.723	.096	-.064	.742

a. Dependent Variable: FLOWm

The research involved selecting 130 participants within the age range of 18 to 30 years, who were divided into three educational backgrounds: Engineering (50 individuals), Psychology (50 individuals), and Medical (30 individuals). The primary objective of the study was to examine the connections between Social Identity and Personal Identity in relation to the Concept of Flow for individuals from the three distinct educational backgrounds. Additionally, the research aimed to study social identity and personal identity as predictors of Flow among individuals from diverse educational backgrounds.

Flow is a state of deep engagement and absorption that individuals experience when they are faced with a challenging activity and feel capable of handling it. It was first described by Csikszentmihalyi as a phenomenon where people engage in activities purely for the sake of the activity itself, without seeking external rewards. During flow, individuals are highly motivated to persist in their activities and to engage in them again. Csikszentmihalyi identified nine characteristics of the flow experience, including a balance between challenge and skill, focused concentration, clear goals, and a sense of control.

The social identity approach acknowledges that individuals are psychologically embedded in groups and operate based on shared social identities. These social identities refer to the aspects of a person's identity that arise from their group affiliations, encompassing the emotional response and cognitive assessment associated with such memberships. The approach examines how people behave within a group, guided by a distinct higher-level sense of self. This means that individuals, in different social contexts, don't lose their sense of self but rather adopt a broader, more inclusive representation of themselves as part of a relevant group.

The psychological perspective known as the personal identity approach is a conceptual structure that centers on how individuals form and uphold their own sense of self. It investigates the manner in which people perceive themselves, their distinctiveness, and the stability of their personal attributes throughout their lives. This approach places importance on the individual's

subjective encounter of being a person, encompassing their thoughts, feelings, recollections, and beliefs.

The relationship between social identity and flow is complex but interconnected,
Social identity can influence the experience of flow in several ways. First, when individuals engage in activities that align with their social identities or group memberships, they may experience a greater sense of connection, purpose, and motivation, which can facilitate the occurrence of flow. For example, a musician who identifies strongly with their musical community may experience flow more readily when playing an instrument.

Second, social identity can also affect the social context within which flow occurs. If individuals perceive their social group as supportive and validating of their flow-inducing activities, it can create an environment that encourages and enhances the experience of flow. Conversely, if social group norms or expectations discourage or devalue certain activities, it may hinder the development of flow experiences.

Additionally, social identity can influence the goals and motivations individuals have when engaging in activities, which in turn can impact the likelihood of experiencing flow. People may seek flow as a means of achieving mastery or demonstrating competence within their social group, aligning their actions with the group's values and expectations.

Overall, social identity and flow are intertwined, with social identity influencing the context, motivation, and goals associated with flow experiences. At the same time, flow experiences can reinforce and strengthen social identity by providing a sense of belonging, accomplishment, and self-definition within specific social groups.

Flow and personal expressiveness, which can be viewed in some cases as a stand-in for personal identity, have been the subjects of a small number of literary works. For instance, Waterman et al. (2003) measured the variables of interest, flow, and feelings of personal expressiveness and found that these variables were strongly related when predicting the subjective experience of intrinsic motivation, with the correlation between flow and personal expressiveness being 0.50 and 0.66, respectively, in two sub-studies.

The relationship between flow and personal expressiveness has not been quantitatively tested, but a later study by Waterman (2005) noted that the category of high-effort, high-enjoyment activities was associated with a greater reported level of both flow and personal expressiveness than those with low-effort, low-enjoyment activities.

The aforementioned details shed some light on the connection between identity and flow in young adults, but it's crucial to remember that there hasn't been much particular research on identity as a factor predicting flow in this group.

According to a study by Nakamura and Csikszentmihalyi from 2002, people who have a strong sense of who they are—that is, who they are, what they believe in, and where they are heading in life—are more likely to experience flow. This is because people who have a strong sense of who they are are more likely to choose activities that reflect their beliefs, interests, and ambitions, which increases engagement and enjoyment.

Similar to this, Yeager and Bundick's (2009) study discovered that people with a strong sense of identity are more likely to feel flow during activities that are difficult but yet within their

level of competence. This is because people who feel strongly about who they are more likely to be intrinsically motivated and invested.

Overall, these researches indicate that flow in young adults can be predicted by identity. Through self-reflection and exploration, one may become more engaged and enjoy their activities, which may result in higher levels of satisfaction and productivity.

So now that we have very scarce existing empirical evidence on the relationship between Identity and flow and Identity as a predictor of flow so this particular research is focusing on both aspects, it is studying the relationship between Identity and flow and the effect of identity on flow for individuals from Engineering, Psychology and Medical backgrounds. And the study has the following hypothesis:

H1 – There will be a significant relationship between Personal Identity and Flow for Engineering.
So according to the results, a moderate positive relationship exists between flow and personal identity among individuals with an engineering background, as indicated by a correlation score of .523. This correlation suggests that attaining a state of flow in work can contribute to a heightened sense of personal identity among individuals in the field of engineering. It indicates that when engineers are fully immersed and absorbed in their work, they may feel more aligned with their core values and have a stronger sense of self in relation to their professional identity as engineers.
Hence, the hypothesis is proved.

H2– There will be a significant relationship between Social Identity and flow for Engineering.
The correlation coefficient of .401 between flow and social identity among individuals with an engineering background indicates a moderate positive association between these two variables. This means that there is a tendency for individuals with an engineering background who experience a high level of flow to also possess a stronger sense of social identity. In simpler terms, when engineers are fully engaged and absorbed in their work or activities, they are more likely to feel connected to their social community.
Hence, the hypothesis is proved.

H3 – There will be a significant relationship between Personal Identity and Flow for Psychology.
A correlation coefficient of .130 between flow and personal identity among individuals with a background in psychology indicates a weak positive correlation between these two variables. The correlation coefficient suggests that there is a slight connection between experiencing flow and the development or expression of personal identity in this group. Engaging in activities that promote flow may have a minor influence on personal identity for these individuals.
Hence, the hypothesis is partially proved.

H4 – There will be a significant relationship between Social Identity and Flow for Psychology.
A correlation coefficient of 0.381 between flow and social identity in individuals with a psychology background indicates a moderate positive relationship. This means that as flow increases, social identity also tends to be higher. Individuals who frequently experience flow, are more likely to have a stronger sense of social identity. This could be due to finding fulfillment and purpose in their psychological pursuits, leading to a greater connection and

identification with the broader community of psychologists or individuals interested in psychology.

Hence, the hypothesis is Proved.

H5 – There will be a significant relationship between Personal Identity and Flow for Medical.

In individuals with a medical background, there is a correlation score of 0.205 indicating a weak positive relationship between flow and personal identity. The strength of the correlation is relatively low, indicating that the relationship between flow and personal identity is not very strong.

Hence, the hypothesis is not proved.

H6 – There will be a significant relationship between Social Identity and Flow for Medical.

The coefficient score of 0.310 suggests a moderately positive relationship between flow and social identity among individuals with a medical background. This means that individuals who strongly identify as medical professionals are more likely to experience flow in their work or related activities. This finding implies that belonging to a professional group and adopting its associated identity can contribute to higher levels of engagement, focus, and enjoyment in medical tasks. It suggests that individuals who strongly identify with their medical background may be more motivated, fulfilled, and energized in their work, potentially leading to increased productivity and job satisfaction.

Hence, the hypothesis is proved.

H7 – Personal Identity will be a predictor of Flow for Engineering.

The regression analysis results indicate that personal identity has a significant effect on the dependent variable, Flow. The model explains 27.4% of the variance in Flow. The coefficient for PI is 0.664, indicating a positive relationship between PI and Flow. The standardized coefficient (beta) is 0.523, further supporting this relationship. The 95% confidence interval for the coefficient of PI ranges from 0.350 to 0.977. Overall, these findings suggest that PI plays a meaningful role in explaining and predicting Flow, as evidenced by the significant regression model.

Hence, the hypothesis is proved.

H8 – Social Identity will be a predictor of Flow for Engineering.

The regression model showed a moderate fit, with an R-square of 0.161 and an adjusted R-square of 0.143. The coefficients revealed that both the constant term (47.259) and the social identity variable (SIe) (0.568) were statistically significant ($p < 0.000$ and $p < 0.004$, respectively), with SIe having a moderate effect size (beta = 0.401). The 95% confidence interval for SIe ranged from 0.191 to 0.944. Overall, the study found a significant and positive relationship between social identity and flow among individuals from an engineering background.

Hence, the hypothesis is proved.

H9 – Personal Identity will be a predictor of Flow for Psychology.

The statistical model used in this analysis examines the relationship between personal identity (PIp) and flow (FLOWp) among individuals from a psychology background. However, the model's summary statistics reveal that it explains a very small proportion of the variance in the dependent variable, indicating a poor fit for the data. The regression model is not statistically significant, suggesting that there is no strong evidence to support a significant relationship

between personal identity and flow in this context. The coefficient for the independent variable is positive but not statistically significant, further indicating the lack of a meaningful association. Therefore, the analysis concludes that there is no strong evidence to support a significant relationship between personal identity and flow among individuals from a psychology background.

Hence, the hypothesis is not proved.

H10 – Social Identity will be a predictor of flow for Psychology.

The regression model shows a significant relationship between social identity and flow (R-squared = 0.145). The adjusted R-squared is 0.127, and the standard error of the estimate is 10.1380. The ANOVA table confirms the significance of the model (F-value = 8.153, p-value = 0.006). The coefficients table indicates that social identity (SIp) positively influences flow (FLOWp) (B = 0.355, Beta = 0.381). Overall, the model suggests a positive influence of social identity on flow for psychology background individuals.

Hence, the hypothesis is proved.

H10 – Personal Identity will be Predictor of flow for Medical.

The linear regression model indicates a weak and statistically insignificant relationship between personal identity (PIm) and flow (FLOWm) for individuals with a medical educational background. The model's R-squared and adjusted R-squared values are very low, suggesting that the model does not adequately explain the variance in FLOW The standard error of the estimate represents the average difference between actual and predicted FLOWm values. The ANOVA table confirms that the regression model is not statistically significant, indicating that the relationship between PIm and FLOW is not statistically meaningful. The coefficients show a small positive effect of PIm on FLOWm, but caution is needed as the coefficient is not statistically significant. Overall, the model suggests a weak and statistically insignificant relationship between PI and FLOWmfor individuals with a medical educational background.

Hence, the hypothesis Is not proved.

H12 – Social Identity will be a predictor of flow for medical.

The statistical analysis indicates that social identity has a weak and non-significant influence on the flow of individuals from a medical educational background. The model explains only 9.6% of the variance in flow, with approximately 6.4% of the variability in flow attributable to social identity. The F-value of 2.970 suggests a relatively weak relationship between social identity and flow. The coefficient for social identity is positive, but the t-value of 1.723 indicates that the relationship is not statistically significant. In summary, social identity does not have a significant impact on the flow of individuals from a medical educational background.

Hence, the hypothesis is not proved.

CONCLUSION

This study reveals that, Social Identity and Personal Identity are positively Correlated with the concept of Flow, suggesting that a higher sense of Social and Personal Identity leads to a higher level of flow experience in young adults (18 – 30) years of age in general in activities relating to their educational backgrounds. That proves that Identity (Social & Personal) and the concept of Flow have a significant relationship and are positively correlated.

The results of the study indicate that Social Identity and Personal Identity are positively Correlated with concept of flow for individuals from the engineering educational background. suggesting that a higher sense of Social and Personal Identity leads to a higher level of flow

experience in young adults (18 – 30) years of age in general in activities relating to their educational backgrounds.

The results of the study also infer that both, the social Identity as well as Personal identity are Predictors of flow in Engineering students.

That proves our hypothesis that Identity (Social & Personal) and the concept of Flow have a significant relationship and are positively correlated for individuals from engineering educational background.

And that personal Identity and Social identity, both are predictors of Flow in Engineering students.

The findings of the study also indicate that Social Identity and Personal Identity are Moderately positively Correlated with Concept of flow for individuals from the psychology educational background. suggesting that a higher sense of Social and Personal Identity leads to a higher level of flow experience in young adults (18 – 30) years of age in general in activities relating to their educational backgrounds.

That proves our hypothesis that Identity (Social & Personal) and the concept of Flow have a significant relationship and are positively correlated for individuals from Psychology educational background.

Results suggest that Social Identity is a predictor of Flow in individuals from psychology background, hence the hypothesis is proved.

But according to the findings, Personal Identity is not a predictor of Flow in individuals from psychology background, hence the hypothesis is not proven.

The findings of the study also indicate that Social Identity and Personal Identity are not positively Correlated with concept of Flow for individuals from the Medical educational background. Suggesting no impact on the flow experience of the sense of Social and Personal Identities in young adults (18 – 30) years of age in general in activities relating to their educational backgrounds.

According to the research findings Personal Identity and social identity are not the predictors of Flow among Medical students, hence the hypothesis is not proved.

The results may not be generalizable to other groups due to the small sample size of 130 young people, and other variables may impact the experience of Flow experienced by young adults that were not taken into account in this research.

In sum, the findings of this research provide light on how Identity (Social and Personal) influence an individual's experience of Flow when engaged in activities relating to their educational backgrounds. To help young people flourish and reach their full potential, it is important to recognize and encourage these traits in individuals, communities, and organizations.

REFERENCES

Henk, B. L., & Fetters, M. D. (2012). The relationship between flow and identity in adolescence: Exploring the role of personality. Journal of Adolescence, 35(2), 465-472.

Lenton-Brym, A. P., & Basu, R. (2011). Identity and flow in leisure activities: A case study of amateur dancers. Journal of Leisure Research, 43(3), 327-351.

Engeser, S., & Baumann, N. (2016). Flow and identity formation: A qualitative exploration of flow experiences fostered by career construction counseling. Journal of Vocational Behavior, 92, 39-51.

Karkkainen, R., & Ruokonen, I. (2018). The relationship between flow, creativity, and identity formation: A qualitative study of music students. Creativity Research Journal, 30(1), 34-43.

Trusheim, E., & Schuler, H. (2015). Flow and identity in outdoor sports: A narrative exploration. Journal of Leisure Research, 47(5), 620-639.

Kimiecik, J. C., & Stein, G. L. (1992). The effect of type of challenge and evaluative threat on the flow state and self-efficacy of track and field athletes. Journal of Sport and Exercise Psychology, 14(3), 228-241.

Kerr, G. A., Geller, J., & Holahan, C. K. (2013). The role of flow in the development of social identity in a fan culture. Journal of Business Research, 66(9), 1469-1476.

Kaya, N., & Tanrisever, F. (2021). Flow, motivation, and identity status in relation to academic performance among Turkish adolescents. Journal of Genetic Psychology, 182(1), 24-40.

Massimini, F., Csikszentmihalyi, M., & Delle Fave, A. (1988). Flow and biocultural evolution. In J. A. Nevin (Ed.), The origins of flow in human experience (pp. 139-183). Springer US.

Lefebvre, D., & Daneault, S. (2013). Flow, emotion, and culture: Would doing martial arts be the same for Canadians and Japanese?. Journal of Cross-Cultural Psychology, 44(2), 243-262.

Han, C., Kim, D. J., & Kim, S. Y. (2021). Effects of online game addiction on gamers' flow, identity formation, and game quitting intention. Journal of Behavioral Addictions, 10(1), 57-67.

Park, J., & Jang, H. (2018). The effects of perceived identity compatibility and task characteristics on flow experience. Journal of Business and Psychology, 33(5), 619-634.

Lai, J. C., Hsiao, Y. C., Chen, Y. L., & Chang, K. C. (2019). A study of online game addiction, flow, social identity, and eudaimonic well-being. Journal of Behavioral Addictions, 8(3), 434-442.

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Conflict of Interest

The author(s) declared no conflict of interest.

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