

Research Article

The Influence of Social Identity on Conformity in K-Pop Fans

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Abstract.

This study aims to determine how much social identity contributes to conformity in K-Pop fans. It uses a quantitative method with data collection techniques using questionnaires including two measuring instruments, namely the social identity scale and the conformity scale. The population of this study were individuals and social groups, namely K-Pop fans who live in the DKI Jakarta area. The sample in this study were 42 K-Pop fans and 40 non-K-Pop fans totaling 82 respondents. The intent and purpose of this study is to analyze whether there is a contribution of social identity to conformity in K-Pop fans, as well as input and opinions from non-K-Pop fans. The data analysis technique used in this study was simple regression analysis. It concludes that there is an influence of social identity influencing conformity by 56.3%. This shows that social identity influences conformity. Social identity is a representation of a culture that has long been hegemonic so that there is conformity towards individuals who want to become part of the culture in this case K-Pop.

Keywords: social identity, conformity, K-Pop fans, self-concept, stereotype

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1. Introduction

Music nowadays is a part of life among the people. Whether developed or developing countries, music has become part of modern-day life, including Indonesia. The function of music itself is as the “language of the world” capable of bridging and merging each individual in different places, especially for youth and adults.

Consequently, it may be known that music has genre characteristics classified according to tone, rhythm, musical techniques, context, tempo, theme, and geographic level. Music advances have caused new genre music to emerge from time to time because of the unique characteristics of songs that do not match all musical genres. Thus, some popular musical genres are Pop, Rock, Jazz, R&B, Hip-Hop, Rap and Soul [1].

One of the few pop music that actually exists nowadays and influences the world is K-Pop music. In 2011, K-Pop began to appear in some Asian countries, even Europe,

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including Indonesia. Originally in 2002, the Korean drama was launched in Indonesia by endless love commercial TV channels. Endless Love itself is the main heading of the four Korean dramas (tetralogies), which all began with the season names Autumn in My Heart, Winter Sonata, Summer Scent, and Spring Waltzes. After that, no less than 50 Korean dramas dominated the Indonesian entertainment industry [2].

Increasingly popular and everything connected with “Korea” is popular and is popular in Indonesia, including the field of music. Some Korean actors and actresses are also singing, usually the Korean drama has original music. Even the actors and the actors themselves sing. It is the dynamics of Korean music that is present in his works that appeal to their concisions, making Korean music a huge attraction. Furthermore, the combination of drama and music that became the background of the drama further dissolved the audience [3].

Running with the times, the increasing acceptance of Korean culture in Indonesia, K-Pop is one of the most popular cultures where Korean music groups or boy bands and girl bands become new idols for teenagers in Indonesia. This is very common and found in Indonesian society, the point of boy bands and girl bands made from South Korea has become one of the trendsetters for their fans both in terms of performance music or others for their fans in Indonesia, even in this country there are many boy bands and girl bands that have followed or been inspired by K-Pop itself, for example, such as However, surely this culture from South Korea is increasingly felt in Indonesia, one of which is the holding of many music concerts made by girl groups or boy groups from South Korea in Indonesia.

Indonesia is currently experiencing a rampant burst of K-Pop with the Korean artist's looks and charisma that is certainly making his fans hysterical. Korean boy bands and girl groups tend to have a relatively large number of members, so fans have a greater variety in choosing their idol, since each boy and girl group has a unique dance element in combination with wardrobe. Continuing to rise and the increasing popularity of South Korean culture in the international world has given many changes in the lives of people in the world, including in Indonesia itself. The rise of South Korean culture or often referred to as things cannot be separated from the development and entry of music from South Korea itself or commonly referred to as Korean pop or K-Pop. K-Pop itself is one of the most popular or very famous types that comes from South Korea.

American media analyst Henry Jenkins noted that events or phenomena caused by fans evolved from “book activity to art.” Henry Jenkins described interested people

as individuals who sought meaning in a cultural product, which meant a free activity involving their intelligence and emotions. Henry Jenkins thus resisted the notion that meaning was driven by the creative industry or producers. People have a desire to interpret cultures to create their own identities, and fans are a group of individuals interested in cultural products to fully engage and then integrate them into their daily lives [4]. It is also undeniable that it can indicate just how much social identity contributes to the comfort of the fans.

On this case, this of course has an impact on teenagers in Indonesia today, there are many positive and negative impacts with the existence or entry of K-Pop culture on the personality development of its fans in the world, including fans in Indonesia who are not a few are also people who are still minors or teenagers. A small example of the negative impact that can be seen or can be felt by K-Pop fans Of course, the things mentioned earlier occur because the tendency in teenagers has emotional tension, so that at these times it can also be said as a period of storms and typhoons or heightened emotionality, which is a time when the emotions of teenagers cannot be determined, unstable and can explode at any time. This also has an impact on the social life of teenagers who are fans of K-Pop, one of which is irritable teenagers and also tends to like or prefer to be alone.

Fans of Korean Wave in the community of fan clubs give their idols full support, and other fans faithfully follow their idols through bad times and good because of the harmony the group shows. Although the youth have different fan clubs, K-Pop fans support one another, adapting those who like K-Pop or those around to be attracted to the K-Pop world itself. If the music market mostly to teenagers into adulthood, then they are more likely to listen to it with their peers because it demands or pressure from young friends can be positive or negative [5].

Based on this, teenagers have a distinct preference for the idols they idolize, just as the popular K-Pop produces many devoted fans, each boyband and girlband have their own fan club and its characterized according to what they like [6]. However, of the many numbers of boy groups and girl groups from South Korea, the background of a K-Pop idol group plays an important and big role in the formation of one's identity, both positive and negative. The only way to maintain or build a positive identity from k-pop fans is to show the opposite or positive side to the existence of South Korean culture in Indonesia.

One way for fans of South Korean culture or K-Pop to show their identity as a positive K-Pop fan is by showing the abilities they have, for example, is to participate in cover dance activities that perform boyband songs or K-Pop girl groups or everyone can also take part in various activities or series of events related to K-Pop such as volunteers in South Korean boyband or girl group concerts or even other ways by showing your potential by taking internships at a South Korean company and becoming a member of the South Korean group or boy group fan community.

Today's teens are particularly susceptible to conformism behavior. Convenience is present when a person imitates the attitude or behavior of another (imitating) because of real or imagined pressure or demands. Comfort can come from pressures or demands that are influenced by social influences, so it might be said that conformism was very sensitive in the teenagers of the 12-19 years old group, from the early teens to the middle ages [7].

At times like this a teenager must be faced with the many new roles in the world. Teenagers learn a lot of new things or roles from various social environments. For example, such as the family of the community of their peers, including models who become teenagers like idol figures in various media today. In other words, teenagers explore many things and new roles of society if they are absorbed healthily and can carry them out properly, then roles whose roles in their lives or social identity will be formed positively.

From the many sources that can affect the formation of the identity of a teenager is a role model or idol who in other words is a person who is highly idolized or admired by teenagers. Broadly speaking, an idol or figure who becomes a figure is a person who comes from celebrities, such as sports film star singers and so on. The effects of conformity can result in changes in appearance, style of language, and even the values of principles held thus far. According to the Baron and Byrne, a factor affecting conformity was the influence of liked people and the influence of clique size and social pressure [8]. Similarities or compatibility occur in common interests, values, and norms Shared by group members, and from ongoing interactions within specific groups.

Conformity can result in the loss of one's view or aspirations. Since the decisions made are the group's decisions, each group member knowingly or unknowingly belongs to the group's decisions. When associated with this, compatibility or adaptation in the same way helps to prevent prejudice and to create self-concept of social identity based on group relationships and personal identity based on unique individual characteristics [9].

Based on these, conformity events in a group can be linked to social identity theory. Henri Tajfel and John Turner in 1970 who were social psychologists and led the theory to state that a condition in which social identity became more important than one's individual identity, and it established ways in which social identity could affect group behavior [10]. It may be emphasized, therefore, that the theory of social identity is a theory that analyzes behaviors between certain groups based on differences in social status, the legitimacy of the groups and the perceived stability that arise from the difference in social status, and the perceived ability to stay away. One group predicts the other.

Related to this, there is a study that Reicher & Levine analyzed, stating that identity manipulation can affect the relative importance of both personal and social identity because a default choice for behavioral control is possible. The study contributes to further argument of inserting proper identity manipulation, which involves not only the sense of social identity but also strategic communication of social identity [11].

Social identity theory is described as a theory that predicts behavior between certain groups based on differences in group status, legitimacy and perceived stability due to differences in status, and perceived ability to move from one group to another. This is different from the term 'social identity theory' which is used in explaining social humans (collective identity). Although some researchers have used it for this, social identity theory was never intended to generalize social categorization. Awareness of the limited scope of social identity theory, led John Turner and colleagues to develop a similar theory from a form of self-categorization theory built on social identity theory insights to generate a more general idea of this process of self-formation and groups. The term 'social identity approach' or 'social identity perspective', is suggested to describe the shared contribution between social identity theory and self-categorization theory.

Based on this, John Turner in 1970 also asserted that in the case of use in the social comparative process between groups based on the need for an in-group positive identity. The relationship between social identity is visible on group comparisons, and it can also be said that social comparisons trigger a group process that can be analyzed as social competition. Social competence may differ from realistic competence, which is a conflict according to the group that is important to resolve. On the other hand, there are objects of trouble that cause social identity in K-Pop fans due to the prevalence of concert-ticket fraud, false album fraud, and so on.

Therefore, it may be concluded that the root of the problem for today's K-Pop fans is the increase in people's names, the K-Pop fans, the fans that give rise K-Pop concerts in Indonesia, and the provenance of such scams as concert tickets, K-Pop albums, to counterfeit merchandise. Based on that, it's no wonder the social identity of K-Pop fans is being tarnished and represented as a community with negative elements.

The negative impact can also be felt by people around K-Pop fans who are still teenagers, negative stereotypes can easily stick from fans or fans where most or existing K-Pop fans who are still in adolescence or minors are considered to always act excessively, crazy, hysterical, too obsessive, have an addictive nature and are also excessive consumptive.

Again, negative impacts can also be felt not only by fans and people around fans, even negative impacts can also be felt by idols or figures who are role models. For example, idols who can be injured or minor and even serious injuries caused by excessive K-Popers enthusiasm. One example of K-Pop fan behavior is excessive consumptive where many fans consciously buy K-Pop albums that watch a lot of concerts when their idols hold concerts watching or downloading videos from their idols watching music videos on various media platforms listening to songs that are also on various media vengerling platforms on social media, walking blogs, and buying merchandise that cannot be said to be All of these things are a form of their liking or love for these K-Pop fans for their idols and making it their own identity to non K-Popers society that they are true K-Popers. Again, again, behind all the behavior of these K-Pop fans, there are people who take advantage of this situation to commit criminal acts, for example fraud, there are times when one fraudsters on behalf of K-Pop fans gets a profit of around 10 million rupiah [12].

As a result, the aim of researchers is to elevate this phenomenon as research because researchers want to expose links to the theory of social identity with the conformity of K-Pop fans who have been the talk of the masses through their contamination with irresponsible elements that make K-Pop fans a negative impact community. As connected with the phenomenon, K-Pop fans go through the process in individual to adjust to Korean Wave's own norms, such as supporting one another and the different K-Pop fan boy or girl bands, not spreading hate speech, and so on.

2. Methods

The study employed a quantitative method using data collection techniques that used a questionnaire made up of two measuring devices, which are the social identity scale and the conformity scale. The study populations are 82 individuals of *K-Pop* fans in the Special Capital District of Jakarta. The population census in 2022 provides the actual data that people who recognize themselves and their communities as *K-Popers* are able to provide positive and negative aspects for the wider community, so this is used as research to review the problems that occur in *K-Popers* and how social identity contributes to conformity to *K-Pop* fans. The sample in this study is an 82 respondents *K-Pop* fan individual and non-grouped *K-Pop* individual, which are 42 *K-Popers* and 40 non *K-Popers*. The sample population in this research was simply adapted to those who appealed to the *K-Pop* world as well as knew everything about the South Korea entertainment industry based on the questionnaire (Google Forms) that has been disseminated in the Special Capital District of Jakarta. The data analysis technique used in this study is simple regression analysis, also data analysis is using SPSS for Windows Programs.

The distribution of *K-Pop* fans and non *K-Pop* fans is the purpose and purpose of this research to analyze whether there is any social identity contribution to conformity in *K-Popers* believed by direct *K-Popers* and input and the opinion of non *K-Popers*. The sample population technique on this research applies to random sampling technique, it means the data have the same chance of extracting samples.

3. Results and Discussion

Regression analysis is based on functional or causal relationships one independent variable with one dependent variable. Linear regression analysis aims to see how much one dependent variable (bound) can influence an independent (free) variable.

The data processing in this study uses a simple linear analysis model. Independent variables in the study are Social Identity Contributions (X), as well as dependencies in the study are Conformity (Y) :

$$Y = a + bX + e$$

Description :

Y = Conformity

- X = Social Identity Contribution
- a = Constants
- b = Regression Coefficient
- e = Error Term

A simple linear regression analysis test is done with SPSS software assistance, as for the calculation for simple linear regression analysis as follows (Table1, Table 2, Table 3):

TABLE 1: Result of Simple Linear Regression Analysis (Source : Research Result).

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10,453	5,477		1,909	,063
	Social Identity Contribution (X)	,563	,129	,542	4,371	,000
a. Dependent Variable: Conformity (Y)						

Based on the calculations for the simple linear regression analysis in the above chart that explains the contribution of social identity (X) to conformity can be formed regression equations as follows.

$$Y = 10,453 + 0,563X$$

Description :

Y = Conformity

X = Social Identity Contribution

Based on the regression equations above then for the research variables can be made an interpretation as follows: (1) The value of the constants has meaning if a variable of social identity contribution (X) has a value of none or fixed (no increase), then conformity (Y) will increased, and (2) The coefficient value of social identity contributions (X) with positive value suggests that one point increase in social identity contributions (X) and the conformity (Y) will increased. With that result it can mean that a contribution of social identity (X) contributes to conformity (Y).

The contribution of social identity includes many characteristics that can represent including, gender, interpersonal relationships, self-concept, and others. Through social identity individuals associate themselves with social groups and roles that influence their behavior and actions. Martin and Hewstone, are individuals who prefer to adjust to the behavior of group members correctly and if they want to be liked by group members. Psychologically, loyalty and obedience to the group, feelings of fate and coverage are

TABLE 2: APPENDIX (Source : Research Result).

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Social Identity Contribution (X) ^b	.	Enter
a. Dependent Variable: Konformitas (Y)			
b. All requested variables entered.			

TABLE 3: Unstandardized Coefficients and Standardized Coefficients.

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	10,453	5,477		1,909
	Social Identity Contribution (X)	,563	,129	,542	4,371
a. Dependent Variable: Conformity (Y)					

called conformity. This conformity arises because of the similar interests, values, and norms adopted by group members, as well as continuous interaction in a certain group [13].

Conformity has the impact of losing the opinion or aspirations of each individual. Considering that the decision that is carried out is a group decision, so that each group member consciously or unconsciously is dragged into a group decision.

Based on the statistics, as a main results in this study show how much is constant social contribution (X) to *K-Pop* fans. The hypothesis that reads on the contribution of social identity to conformity to *K-Pop* fans is valid. The value of $t = 4,371$. The value of Sig. was obtained at 0.063. This confirms that social identity variables affect conformity by 6.3%. Based on this, it can be seen that the conformity that occurs is vulnerable to the wider community because of the onslaught of the Korean Wave which makes many people who initially did not know or dislike *K-Pop* eventually become *K-Pop* fans.

The active *K-Pop* fandom in Indonesia is able to cause many events that have direct involvement in these fandoms. This can be called the social identity of *K-Pop* fans who are influenced by group membership and affiliation (Langit, 2019). Individual identity consists of the individual himself as well as the social environment that is able to cause self-categorization in groups. Therefore, it can be seen that the results of self-categorization can be used as a justification that produces positive psychosocial

outcomes that are able to give a positive impression and fluctuations in self-esteem and self-improvement as a form of self-categorization in *K-Pop* fan members.

K-Pop fans (fandom) who play an active role in activities related to their idols in order to provide positive fan support to their idols because fans are not only said to be music lovers of their idols, but fans can also encourage positive power in themselves for good causes (Hakim, et.al, 2021). Therefore, this is related to research conducted to state that in doing knowledge (fangirling or fanboying) it can increase the happiness and functioning of individuals with a review of social identity theory (social identity contribution) and conformity that occurs to *K-Pop* fans.

In social identity theory, the term social identification or social identification is also known. The more a person feels a strong identification with his group, the higher the emotional bond with his identity as a member of the group. His behavior also became in line with his views on how the members of the group should act. For example, the more someone identifies himself as a “fan of band X” or “fan of idol Y”, the more he will behave like his view of typical band X fans. If a fan of band X is known to be dedicated and protective of his idol, then he will behave like that. Furthermore, social identification also makes us depend on our confidence from membership in the group. If a person is considered insulting his group, for example, then he will decorate as if he is the one who is insulted.

There are positive emotions that make *K-Pop* fans motivated to meet the needs of self-stimulation, self-esteem, entertainment, escape, aesthetics, and group affiliation [16]. *K-Pop* fans are able to manage their personal and social identity in a better direction in improving individual self. [17], suggests that pleasure and happiness are common causes of social relationships with the individual environment. One of the factors of fanship is social identity with the individual environment. *K-Pop* fans who claim to be fans of a *K-Pop* idol/band are able to categorize themselves and their environment as part of the group. The result of self-categorization in a particular group or group, will make fans experience a morally positive interest or interest in the intragroup.

There are also three stages in the formation of self-identity carried out by *K-Pop* fans, namely personal layer, enactment layer, and relational. The first stage is the personal layer, namely when k-pop fans are in a social situation where fans of South Korean culture or *K-Pop* are in an environment that has the same thing, namely both like South Korean culture or *K-Pop* culture. Then, the second is the enactment layer, which is where people around *K-Pop* fans begin to realize and recognize themselves from *K-Pop* fans

who are *K-Pop* fans based on things that are done regularly by *K-Pop* fans. and the last one is relational, which is a stage where *K-Pop* fans or South Korean culture have found their identity as a fan of South Korean culture. There is one more stage where fans of *K-Pop* or South Korean culture have been tied to an association group or organization or even a larger culture than before, which is called a communal stage.

These things happen that do not escape the development of media and globalization in the spread of South Korean culture or *K-Pop* to various countries in the world, including fans of South Korean culture or *K-Pop* fans, social identity is still very sensitive where some of them are still fighting for and maintaining or even building a good and positive social identity even though along with the stigma or stereotypes of ordinary people who see one eye that k-pop fans are a group of people who have a negative impact on each other.

4. Conclusion

Based on the results of the above research, it can be concluded that the hypothesis presented in this study is received, which is that there is a significant contribution between social identity and conformity to *K-Pop* fans. The analysis applied to this study is simple regression, based on testing the scale of social identity and conformity. Then, the result of Unstandardized Coefficients' worth of 0.563, if added, would be 56.3% which could be said to be higher in social identity, hence lower in conformity. Conversely, the higher conformity, the lower social identity.

On this case, there are suggestions that researchers can offer *K-Pop* fans to be sure that the group they follow is in full harmony with the identity of the group (social identity) rather than merely seeking to be accepted by the group. The widespread problems have occurred in the capital, such as concert ticket fraud, conflicting fake merchandise, a hoax of bad consequences for both *K-Pop* idols and fans, and so on it can be concluded if a *K-Pop* fan has always convinced himself and does not merely want to be accepted by the group that he is a *K-Pop*ers, and it is also for those who are irresponsible to recognize themselves that an act done is bad and harmful to the other and not to repeat the act in order not to create an interpretation of social identity in a large group of *K-Pop* fans.

Therefore, it can be said that a high penchant for people who like something will make fans feel the difference and change positively and become part of ingroup. Based on social identity theory, it is that the psychological bond of individuals with other individuals

who share the same interests as other fans, will focus on how being part of that group of fans affects their feelings.

References

- [1] Yang J. *Made in Korea: Studies in Popular music*. Routledge; 2016. Korean Black Music and its Culture: Soul, Funk, and Hip-Hop.
- [2] Sinsomboonthong T. Cultural Hybridity of K-Pop Music: From the West to South Korea, From South Korea to The Globe. *J Lang Cult*. 2020;39(1):65–83.
- [3] Pertiwi SA. Konformitas dan Fanatisme pada Remaja Korean Wave. *Psikoborneo. Jurnal Ilmiah Psikologi*. 2013;2(1):157–66.
- [4] Rengganis DA. Kontribusi Identitas Sosial terhadap Konformitas pada Penggemar K-Pop. *Jurnal Psikologi*. 2017;1(9):1–9.
- [5] Harefa SR. Hubungan antara Konformitas dengan Perilaku Konsumtif pada Penggemar K-Pop Dewasa Awal (Korean Pop) [Doctoral Dissertation]. Jakarta: Universitas Mercu Buana; 2022
- [6] Marsinondang M, Dewi FI. Self-Control and Aggressive Behavior in Adolescent Fans of Korean Pop (K-Pop). Paper presented at 3rd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2021); 2022, April; Atlantis Press. P. 1403-1407.
- [7] Cahyani D, Purnamasari Y. Celebrity Worship on Early Adult K-Pop Fangirling. Paper presenter at *the 4th ASEAN Conference on Psychology, Counseling, and Humanities (ACPCH 2018)*; 2019, March; Atlantis Press.
- [8] Choi J, Maliangkay R. Introduction: Why Fandom Matters to The International Rise of K-Pop. Routledge; 2014. In *K-Pop – The International Rise of the Korean Music Industry*; p. 1-18
- [9] Song KY, Velding V. Transnational Masculinity in the Eyes of Local Beholders? Young Americans' Perception of K-Pop Masculinities. *J Men's Stud*. 2020;28(1):3–21.
- [10] Rachman NY, Jannah NF, Revilda E, Nasihuddin A, Wahdaniah I, Fibrianto AS. Malang's K-Pop Fans Hyperreality. Paper presented at International Conference on Social Studies and Environmental Issues (ICOSSEI 2019). Atlantis Press; 2020, February. p.324-329.
- [11] Reicher SD, Haslam SA, Platow MJ. Shared social identity in leadership. *Curr Opin Psychol*. 2018 Oct;23:129–33.

- [12] Yulianti W. Fenomena Fanwar di Kalangan Penggemar K-Pop pada Media Sosial Instagram. *Jurnal Publique*. 2022;3(01):1–21.
- [13] Putri L. Budiaman, Saipiatuddin. Perilaku Konformitas Sosial Remaja terhadap Musik K-Pop sebagai Bentuk Identitas Sosial Unit Kegiatan Mahasiswa Hallyu Up! *Edutainment Bandung*. Edukasi IPS. 2021;5(1):14–20.
- [14] Langit PV, Astuti KS, Yuliyanti A, Nasution RM. The Pervasiveness of K-Pop in 21st Century Indonesia. *Routledge*; 2019. 21st Century Innovation in Music Education. p. 31-40.
- [15] Hakim AR, Mardhiyah A, Novtadijanto DM, Nurkholifah N, Ramdani Z, Amri A. Pembentukan Identitas Diri pada K-Popers. *Motiva. Jurnal Psikologi*. 2021;4(1):18–31.
- [16] Amirudin K. The Relationship Between Assertiveness and Fanaticism with Conformity to Korean Culture (Korean Wave) in Generation Z. [Doctoral Dissertation]. Surabaya: Universitas 17 Agustus 1945; 2022
- [17] Dalimunthe IA, Hariyadi AP, Agustin SD, Safitri D. The Role of Korean Pop Culture in Changing the Behaviour of Teenage K-Pop Fans Among IKOM UNJ Students. Paper presented at ICHELSS: International Conference on Humanities, Education, Law, and Social Sciences. 2022, November; 2(1): 95-105.