

Attachment to Manga (Japanese Comics):

Conceptualizing the Behavioral Components of Manga Attachment and Exploring Attachment Differences Between Avid, Moderate, and Occasional Manga Readers

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Abstract: The purpose of this study is twofold. First, it seeks to conceptualize attachment to manga (Japanese comics) by extrapolating the behavioral markers of attachment theory to manga readership. Second, it compares manga attachment markers as seen in avid, moderate, and occasional readers in order to find differences in the strength of these attachments. The study predicted (a) that attachment theory's common behavioral markers (i.e., proximity maintenance, safe haven, secure base, and separation distress) map onto manga readership and (b) that avid readers display stronger attachment behaviors towards manga than moderate and occasional readers. Participants (N = 279) answered a questionnaire identifying a set of 24 manga attachment markers. Analyses revealed a four-component solution that mirrors the markers of attachment theory, supporting the premise that manga attachment mirrors interpersonal attachment. The results also revealed statistically significant differences in the strength of attachment behaviors to manga among avid, moderate, and occasional readers regarding three behavioral markers (i.e., proximity maintenance, safe haven, and separation distress), thus confirming that avid manga readers display stronger attachment behaviors towards manga. These findings contribute to the increasing literature and understanding on the role of media texts in individuals' wellbeing.

Keywords: Manga, comics, attachment, media, popular culture

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Manga is ubiquitous in Japan, where its extensive historical, economical, and cultural background makes this form of entertainment a staple of contemporary Japanese society and the heart of Japanese popular culture. Contrary to popular belief in some circles though, it is not only children who read it, but people of all ages. Moreover, manga in Japan is a mainstream mass media market instead of the niche market that is associated with comics in other countries such as the US and the UK. Manga reading, manga characters, and the manga visual aesthetic constitute an integral part of everyday life in Japan.

Because of manga's visibility in the socio-cultural landscape of Japan, increasing research from the field of cultural studies has described manga's importance for readers. However, little is known about the psychological phenomena that occurs in connection with manga readership. Two potential reasons for this include the way English-language research on Japanese popular culture focuses on treating it as a subcultural phenomenon, but also, the lack of studies that explore the normative psychological aspects of Japanese popular culture consumption. Given that other fields such as sports or television studies have managed to research psychological phenomena in relation to media consumption, one way of solving this obstacle is to continue developing the field of manga psychology in order to explore why manga matters so much to people. Existing research in this direction suggests

that through reading manga, individuals not only entertain themselves, but also obtain informational and emotional support that is used for self-development.¹ Still, much more could be done in this area.

Consequently, this study explores how readers become attached to manga through two main goals. First, it seeks to conceptualize attachment to manga by identifying a set of behavioral markers that potentially reflect readers' attachment. Second, the study compares these markers among avid, moderate, and occasional manga readers in order to point out differences in the strength of their respective attachments to this media form, especially because not all manga readership implies attachment. By exploring these goals, this study seeks to both expand and contribute to the increasing body of literature that aims to understand the role of manga in individuals' everyday lives.

Attachment Theory as a Lens for Conceptualizing Manga Attachment

Behaviors

During a 9-month participant observation period conducted in manga fan clubs at a university in Japan, I asked participants in several open discussion sessions "Why do you read manga?" The most common answer was a variant of the idea that participants read manga because it is fun, exciting, and entertaining. The second most common reason was that they read manga because it makes them feel

safe. Other cited reasons include reading manga for relaxing when feeling tired or stressed, for cheering up when feeling sad, and/or for having common topics to discuss with friends and peers. Furthermore, participants often stated that their favorite manga characters might be important role models in their lives and that they could not imagine living without manga.

The presence of behaviors such as feeling safe when reading manga, and being distressed at the possibility of not being able to read manga, both mirror behaviors that are commonly associated with interpersonal attachment such as using other individuals as a safe haven and experiencing separation distress. Because these behaviors signal the activation of the attachment behavioral system as described by Bowlby² and Ainsworth et al.,³ and because attachment theory is arguably the most influential relational theory in social psychology, this paper uses attachment theory as a lens for extrapolating attachment behaviors that potentially mirror readers' attachment to manga.

Attachment Theory and Attachment Figures Other than People

According to attachment theory, human beings are equipped with an attachment behavioral system that enables individuals to form and maintain affectional bonds with others (attachment figures), beginning in infancy, for the biological purpose of gaining protection.⁴ In general terms, attachment can be

defined as an innate, strongly emotional, target-specific bond. The outcome is the eliciting of behaviors that seek proximity with attachment figures.^{5 6} Although attachment theory originally described the bond between an infant and a caregiver, later developments would propose that attachment figures are many and varied. For example, Hazan and Shaver argue that romantic love is an attachment process, suggesting that around adolescence, individuals change the primary attachment figure from parents to social peers, and later in adult life for romantic partners.⁷ Elsewhere, Mikulincer and Shaver's adult attachment model postulates that when attachment behavior is activated, anxiety can be reduced by simulating interactions with mental representations of attachment figures such as deities, religious figures, deceased loved ones, or media heroes.⁸ Other examples of non-interpersonal attachment behavior include teenagers' romantic crushes with celebrities,⁹ pets as companions,^{10 11} attachment to special places or to the place of residence,^{12 13} and/or emotional bonding with gifts, collectibles or favorite objects.¹⁴

Attachment Behaviors in Manga Readership

Research on the attachment system identifies recurrent behavioral markers of attachment bonds. These include proximity maintenance, safe haven, secure base, and separation distress.^{15 16} I briefly turn to definitions for each of these four behaviors because they will prove significant. To begin with, proximity maintenance

refers to seeking and keeping physical or psychological proximity with the attachment figure. Safe haven is described as using the attachment figure as a buffer or solace in response to negative external or internal stimulus. Secure base refers to the possibility of engaging with exploratory cognitive behavior given that the person feels sufficiently secure on the availability of their attachment figure. Separation distress implies manifesting negative feelings due to the actual or perceived unavailability of the attachment figure. The following subsections document evidence of attachment behaviors in readers' relationship with manga.

Proximity maintenance. Akashi's study on manga reading habits in elementary and junior high school students reported that while 9.5% of the participants have no interest in manga, 71.9% are moderate manga readers and 18.6% are manga enthusiasts, which comes to around 90% of young Japanese individuals reading manga with some sort of frequency.¹⁷ Such numbers are due to manga being readily available, as well as its low price, and its extensive distribution network. That is, this is a low-cost form of entertainment, which makes it easier to produce and consume compared with other media.¹⁸ Ogino argues that manga's weekly magazines publishing system enabled a form of entertainment based on the anticipation of serialized content, offering the reader a sense of reliability, familiarity, and confidence in the future.¹⁹ Likewise, reading manga in places other

than home (e.g., classrooms, trains, standing in convenience stores, restaurants, manga cafés, etc.) enables spaces where the reader feels calmed. Murase, for instance, argues that manga cafés – places that are part internet café and part hotel – are an extension of private living rooms where readers can relax and get a sense of intimacy, security, and anonymity.²⁰ Additionally, manga readers usually belong to communities of readers (e.g., family, friends, classmates, etc.) that collectively use manga as a common base for developing social skills.²¹ The significance of proximity maintenance behavior does not rely solely on how readers engage with manga but also on the motivations for doing so.

Another study of manga reading habits of college students in Japan reported that reasons for reading manga can be classified in 4 categories: For passing the time (e.g., reading it while commuting in the train), for pleasure (e.g., because it gives dreams and happiness), for learning something new in a pleasant manner (e.g., readers can be exposed to different worldviews), and for ease of access (e.g., no matter the content, is attractive and easy to read).²² Overall, reading manga has a predominant position in Japanese entertainment, offering ample opportunity for readers to engage and to maintain proximity with manga not only because it is ubiquitous, but because it enables rewarding and meaningful experiences that are easily accessible and socially significant.^{23 24 25}

Safe haven. Akashi reports that reading manga relieves children's stress.²⁶

Similarly, Takeuchi reports that in high school, when Japanese students are preparing for demanding university entrance exams, reading manga becomes a means of reducing stress.²⁷ According to Allen and Ingulsrud, one reason for Japanese university students to read manga, especially manga depicting school life, is to learn how to cope with personal problems.²⁸ Another example is the use of manga for regulating affect. For example, a manga sub-genre called healing manga (癒し系マンガ *Iyashikei Manga*), which often depicts alternative realities with little conflict, idyllic natural settings, cute characters, and heartwarming moments, is produced for the specific purpose of soothing readers by either lowering states of mind heightened by stress, or else offering positive emotional experiences.

Further evidence for manga's applicability may be found in the increasing number of studies in clinical psychology that report the use of manga in psychotherapy.^{29 30} For instance, Sasakura³¹ argues that manga is helpful for establishing a relationship with patients, while Shimoyama³² advocates for researching ways in which manga therapy can be established as a viable form of treatment. In general, research suggests that readers use manga as a safe haven both for finding solace when distressed and also for regulating affect.

Secure base. Evidence suggests that the presence of an emotional bond with

manga promotes learning. Research on educational manga (学習マンガ *Gakushū Manga*), a genre of manga that is made for using as teaching material in the classroom, points out the benefits of using educational manga for learning. For example, Kōgo has compared the effects on memory of reading educational manga and text-based materials in university students, and reported that participants had higher memorization rates as measured by their familiarity with the story portrayed in particular manga.³³ In another study, Murata found that using educational manga in conjunction with text-based material promotes the understanding of learning contents,³⁴ while elsewhere Satō found that between learning with educational manga and text-based materials, manga leads to higher rates of content retention.³⁵ Moreover, Nakazawa suggests that from a young age, Japanese children develop “manga reading literacy,” or the ability and skill to comprehend a story told in both visual and textual format as manga does, and finds this skill to be significantly correlated with Japanese language academic ability (i.e., reading and writing the Japanese language).³⁶ In summary, evidence suggests that manga is useful for acquiring broader reading comprehension, enabling efficient learning, and promoting a higher retention of content.

Another approach to studying cognition in relation to media consumption is to focus on the persuasive power of narrative media. In general, individuals tend to

adjust their attitudes, knowledge, and behaviors regarding certain topics after exposure to narrative media. For example, a manga genre in Japan titled functional manga (機能マンガ *Kinō Manga*) is designed to convey practical information in an easy-to-understand manner.³⁷ It is circulated by both private companies and public institutions, and it has proved successful not only for its instructional value but also for raising awareness on topics such as suicide prevention,³⁸ and labor safety and health.³⁹

Also relevant is the approach derived from the use of cognitive psychology in literary studies that proposes fiction as a tool for self-development. There are various studies discussing the positive role manga can play in supporting readers' self-development.^{40 41 42 43} More specifically, in a study on people who greatly influence personality development in young Japanese individuals, Ieshima found that outside familiar individuals, TV personalities and manga heroes had the greatest influence.⁴⁴ From an analysis of over 10000 responses found in a web community titled "I learned important stuff in life from manga" (大切なことはマンガから教わった *Taisetsunakoto wa manga kara osowatta*), research concluded that the increasing evidence of manga's positive influence on young individuals' emotional and cognitive aspects make it highly suitable for supporting the self-development of young people in Japan.^{45 46} To summarize, research suggests that from a young age, manga

readership supports cognitive development, and that the emotional bond established with manga has a positive effect on the development of personality.

Separation distress. While the appearance of negative emotions after the ending or cancellation of a serialized manga has not received academic attention, separation distress behaviors have been documented in narrative media such as film, screen products, and anime. Kottasz, Bennett, and Randell created and validated a scale for measuring “post-series depression” (PSD), a phenomenon that describes feelings of loss, emptiness, and melancholia after a loved screen product ends.⁴⁷ Similarly, online English language communities coined and popularized the term “Post Anime Depression Syndrome” (PADS), describing feelings of loss after finishing an anime series.⁴⁸ In Japan, the popular online video sharing service website Niconico (ニコニコ), refers to the same phenomenon as “Anime Burnout Syndrome” (アニメ燃え尽き症候群 *Anime moetsuki shōkōgun*) or “Anime Loss” (アニメロス *Anime rosu*).⁴⁹ Additional examples of separation distress behavior in anime fans include the popular phenomenon known as “Refugee” (難民 *Nanmin*), referring to anime fans who feel distressed when an anime series is not renewed for a new season, therefore seeking comfort in watching a similar anime series as substitute.⁵⁰ These behaviors are also observed in manga readership, even though they are informally documented in online forums or social media. For example, manga

readers tend to describe feelings of extreme sadness when manga ceases serialization without concluding the story or when they finish reading all the volumes in a completed manga. In general, separation distress behaviors are observed and documented as being an integral part of the experience of engaging with narrative media.

Study

In order to explore the possibility of the attachment behavioral system activating with avid readership of manga, the present study tested two hypotheses.

Hypothesis 1 predicted that attachment theory's common behavioral markers map onto manga readership. The study expected to find that manga readers' most frequent behaviors mirror attachment behaviors in four ways. First, readers maintain close proximity with their favored manga. Second, manga readers read it more often when they are feeling particularly vulnerable. Third, readers use manga as motivation to engage in activities that they do not often engage with. Fourth, readers feel distressed at the possibility, or actual event, that a manga they like ends or ceases to be published.

Hypothesis 2 predicted that avid manga readers display stronger attachment behavioral markers towards manga than moderate and occasional readers of manga would. The study expected to find that the presence of attachment behaviors towards

manga is not random since it requires avid readership, and that there are significant differences in the strength of the behavioral markers between different groups of readers.

Method

Survey Development

I devised a series of steps in an effort to test the attachment theory approach to manga attachment. The first step was to identify a set of items that tap the construct of emotional attachment. To achieve this objective, Japanese university students ($N = 58$) who were members of manga clubs were invited to participate in guided brainstorming sessions. Attendants were notified that the purpose of the meetings was to collect information on manga reading habits as part of an ongoing research on manga readership. The participants totaled 58 manga club members whose participation was divided into three one-hour sessions that took place a week apart from each other. For these meetings, participants were asked open-ended questions that extrapolated behaviors from markers in attachment theory that would express their attachment to manga.

From the participants' answers and discussion, a total of 32 situations were identified as potentially relevant to the purpose of the study. To further reduce the pool of items, items that three independent judges unaware of the objectives of the

study deemed to be repetitive were discarded. As a result, a total of 24 items were retained. Following parameters for scale translation in cross-cultural research, the 24 items collected in these meetings were translated into English, adapted into 7-point Likert scale statements, and translated back into Japanese.⁵¹

Materials and Procedure

The questionnaire titled “Questionnaire about Japanese Manga Reading Habits” was administered using the traditional pen-and-paper technique. A team of collaborators approached students outside a cafeteria during lunch time at a Japanese national university located in Japan’s central region, explained the nature of the survey, and asked participants if they would be willing to complete it. Those who completed the questionnaire were offered the chance to enter a lottery of two 3000 JPY gift cards (approximately 30 USD each) from a popular online e-commerce website. The questionnaire consisted of three sections: The first section displayed a brief explanation of the purpose of the survey, an ethical disclaimer, a statement of the length (4 pages) and time required to answer (12 minutes), offered an example on how to properly mark the answers, and asked the participants to accept or decline participation in the study. This part also asked for some demographic information (age, gender, and nationality). The second section asked the participants to answer the question “How often do you read Japanese manga?”

by choosing between one of three possible answers: I am an occasional manga reader (i.e., I never read manga, I hardly ever read manga, or I read manga once or twice a year); I am a moderate manga reader (i.e., I read manga a couple of times a month or I read manga once or twice a week); I am an avid manga reader (i.e., I read manga several times in a week, I read manga once a day, or I read manga several times in a day). The third section asked the participants to rate the 24 Likert scale items indicating their agreement from 1 (strongly disagree) to 7 (strongly agree) with each one by circling the number that best described “the extent to which the following statements describe the way you feel about the manga you like and/or that you usually read.” Participants completed one of two versions of the questionnaire, each of which presented the items in a different order. The sample consisted of 279 participants, 190 males (68.10%) and 89 females (31.90%), ranging in age from 18 to 22 ($M = 18.69$, $SD = 0.90$).

Results

Hypothesis 1 predicted that attachment theory’s common behavioral markers (i.e., proximity maintenance, safe haven, secure base, and separation distress) map onto manga readership. A principal components analysis (PCA) was run on the 24 items. The suitability of PCA was assessed prior to analysis. Inspection of the correlation matrix showed that all variables had at least one correlation coefficient

greater than 0.3. The overall Kaiser-Meyer-Olkin (KMO) measure was 0.93 with individual KMO measures all greater than 0.8, with classifications of ‘meritorious’ to ‘marvelous’ according to Kaiser (1974). Bartlett’s Test of Sphericity was statistically significant ($p < .001$). The communalities were all above 0.3, further confirming that each item shared some common variance with other items. Overall, this assessment indicated that the data was likely factorizable.

PCA revealed four components that had eigenvalues greater than one and which explained 40.2%, 8.9%, 5.7%, and 4.7% of the total variance, respectively. Visual inspection of the scree plot indicated that four components should be retained (Figure 1). In addition, a four-component solution met the interpretability criterion. As such, four components were retained, explaining 59.5% of the total variance. A Varimax orthogonal rotation was employed to aid interpretability. The interpretation of the data was consistent with the attachment behavioral markers the survey was designed to measure, with strong loadings of proximity maintenance items on Component 1, secure base items on Component 2, safe haven items on Component 3, and separation distress items on Component 4. Internal consistency for each of the components was examined using Cronbach’s alpha, which were acceptable without substantial increases in alpha achieved by eliminating more items. Component loadings and Cronbach’s alpha of the rotated solution are presented in Table 1.

Overall, these analyses indicated that four distinct components were underlying participants' responses to the "Questionnaire about Japanese Manga Reading Habits," that these components reflected the attachment behavioral markers, and that the components were internally consistent (Figure 2).

Hypothesis 2 predicted that avid manga readers display stronger attachment behavioral markers towards manga than moderate and occasional readers. A one-way ANOVA was conducted to determine if the behavioral markers that indicate attachment were different for groups with different manga reading frequency.

Participants were classified into three groups: occasional readers ($n = 35$), moderate readers ($n = 159$), and avid readers ($n = 85$).

For the behavioral marker proximity maintenance, homogeneity of variances was violated, as assessed by Levene's Test of Homogeneity of Variance ($p = .022$), and thus a one-way Welch ANOVA was conducted to determine if this behavioral marker was different for groups with different manga reading frequencies. The proximity maintenance score was statistically significantly different between groups of manga reading frequencies, Welch's $F(2, 91.483) = 100.628, p < .001$. Proximity maintenance score increased from the occasional group ($M = -1.35, SD = 0.82$), to the moderate group ($M = -0.09, SD = 0.85$), and avid group ($M = 0.72, SD = 0.62$), in that order. Games-Howell post hoc analysis revealed that the mean increase from

the occasional group to the moderate group (1.26, 95% CI [-1.64, -0.89]) was statistically significant ($p = .001$), as well as the increases from the occasional group to the avid group (2.08, 95% CI [-2.45, -1.70], $p = .001$), and the moderate group to the avid group (0.81, 95% CI [-1.04, -0.59], $p = .001$) (Figure 3).

A one-way ANOVA was conducted to determine if each of the remaining three behavioral markers were different for groups with different manga reading frequencies. There was homogeneity of variances as assessed by Levene's test of homogeneity of variances in the secure base ($p = .900$), safe haven ($p = .209$), and separation distress ($p = .142$) behavioral markers. The behavioral marker safe haven was statistically significantly different for different frequencies of manga reading groups, $F(2, 276) = 7.567, p < .001$. The safe haven score increased from the occasional group ($M = -0.52, SD = 1.04$), to the moderate group ($M = -0.02, SD = 0.90$), and the avid group ($M = 0.24, SD = 1.08$), in that order. Tukey post hoc analysis revealed that the mean increase from the occasional group to the moderate group (0.50, 95% CI [-0.93, -0.07]) was statistically significant ($p = .017$), as well as the increases from the occasional group to the avid group (0.76, 95% CI [-1.22, -0.30], $p = .001$) (Figure 4). The behavioral marker separation distress was statistically significantly different for different frequencies of manga reading groups, $F(2, 276) = 6.583, p < .05$. The separation distress score increased from the

occasional group ($M = -0.36$, $SD = 1.00$), to the moderate group ($M = -0.08$, $SD = 1.03$), and avid group ($M = 0.29$, $SD = 0.88$), in that order. Tukey post hoc analysis revealed that the mean increase from the occasional group to the avid group (0.65 , $95\% \text{ CI } [-1.11, -0.19]$) was statistically significant ($p = .003$), as well as the increases from the moderate group to the avid group (0.37 , $95\% \text{ CI } [-0.68, -0.06]$, $p = .015$) (Figure 5). There were no statistically significant differences in the secure base behavioral marker score between groups with different frequencies of manga reading, $F(2, 276) = 0.124$, $p = .884$ (Figure 6).

Discussion

Hypothesis 1 predicted that attachment theory's common behavioral markers map onto manga readership. In order to test this hypothesis, a set of behavioral items thought to potentially indicate manga attachment were identified. The finalized 24-item survey extrapolated attachment theory's behavioral markers to manga attachment. The results of the PCA revealed a multidimensional construct consisting of four empirically distinguishable behavioral markers that mirror attachment behavior underlie attachment to manga. The four components included strong loadings of items that mirror attachment theory's markers (i.e., proximity maintenance, secure base, safe haven, and separation distress). The four components structure supported expectations and was consistent with research that found that a

complex mechanism involving emotions, cognitions, and behaviors mediates audiences' relationships with media,⁵² and that attachment bonds to media are analogous to interpersonal attachment bonds.^{53 54} These findings reinforce the hypothesis that manga attachment maps onto attachment behavior, and ultimately suggests that the attachment behavioral system plays a part in regulating attachment to media such as manga. This in itself is significant because it offers researchers an entry point for understanding the psychological mechanisms involved in media consumption. By presenting this four-component structure, the present study succeeds in conceptualizing manga attachment in a way that reflects the behaviors of both participants and interpersonal attachment.

Hypothesis 2 predicted that avid manga readers display stronger attachment behaviors towards manga than do moderate and occasional readers. The results of the one-way ANOVA for each behavioral marker partly corroborated this hypothesis. There are statistically significant differences between avid, moderate, and occasional manga readers in three of the four behavioral components (i.e., proximity maintenance, safe haven, and separation distress). For these markers, occasional manga readers reported the lowest means of the sample, while avid manga readers reported the highest means. In each of the three markers, occasional readers' and avid readers' responses were statistically significantly different. These results suggest

that the more frequently a participant reads manga, the stronger these three attachment behaviors are, thus implying that avid manga readers constantly seek to maintain proximity with manga, find in manga a safe haven for when feeling distressed, and experience separation distress at the real or perceived possibility of the manga not being available. The results also suggest that occasional manga readers are not likely to experience proximity maintenance, safe haven, and separation distress (Figure 7). This result supports expectations as it is consistent with previous work that found that the intensity of attachment behavior mirrors the degree of romantic love,⁵⁵ attachment to pets,^{56 57} places,^{58 59} objects,⁶⁰ celebrities,⁶¹ and religious figures.⁶²

On the other hand, there were no statistically significant differences between groups of manga reading frequency in the secure base behavioral marker. This could mean that participants in the three groups do not use manga as a secure base, or else that participants in the three groups use manga as a secure base. A third and more parsimonious interpretation could be that in the three groups there are both participants who use and those who do not use manga as a secure base. To summarize, comparisons in the four manga attachment behavioral markers succeed in identifying the behaviors that clearly differentiate avid readers from occasional readers (i.e., proximity maintenance, safe haven, and separation distress).

Overall, the results offered here provide encouraging support for an attachment-theoretical perspective on attachment to manga. Such an approach is valuable because it offers researchers a tool for explaining why and how individuals establish strong emotional bonds with manga, while also offering greater understanding of the significance of manga to avid readers. It also offers theoretical insight on how a psychological mechanism like the attachment system enables individuals to use manga as a source of wellbeing. For these reasons, the attachment theory approach to manga readership expands and contributes to the increasing literature and understanding on the role of media in people's everyday lives.

Limitations

The results presented here must be tempered by some caveats. First, researchers might find the use of attachment theory, which in its original conception addresses the development of two-sided, interpersonal bonds, unsuitable for describing an individual's emotional bonds with media such as manga. Seemingly, the main problem is the one-sided direction of the bond readers establish with manga, given there is no reciprocity. Therefore, it might be argued that manga reading, which is a one-sided rather than a reciprocated activity, cannot be conceptualized using attachment theory. To answer this concern, increasing literature on attachment theory suggests the activation of the attachment system in

the relationship individuals establish with attachment figures that range from responsive to unresponsive, such as pets, celebrities, religious figures, places of dwelling, special objects, and so on. Moreover, according to attachment theory, an attachment figure does not need to be responsive for the attachment system to activate, as exemplified by relationships with absent, unresponsive, and abusive caregivers in childhood and/or romantic partners in adulthood. This implies that strong emotional bonds, independent of their quality and direction, can result from the interaction with unresponsive attachment figures, a premise that resonates with avid manga readers developing unilateral emotional bonds with manga.

Second, it could be argued that using attachment theory would better fit the analysis of emotional bonds to a fictional character (e.g., readers' favorite manga character) or the analysis of bonds with one specific work of manga (e.g., readers' favorite manga), instead of using it for conceptualizing attachment to the act of reading manga in general as it is presented in this study. However, previous tests discouraged using attachment theory on only one character or one work of manga. During the brainstorming sessions, participants were asked to think about only one of their favorite works of manga and to answer if they experienced attachment behaviors to it. Participants reported that it was difficult to answer based only on one work of manga, given that they might display attachment behaviors to many different

works. For example, a participant stated that their favorite manga is very violent, so they do not read it when feeling sad. On the other hand, they do read other works of manga when feeling sad in order to cheer up. A parallel can be established with other media to further understand this situation. For example, individuals who watch television shows regularly might have a couple of all-time favorite shows, but at the same time they might be emotionally attached to the act of watching television shows in general. Similarly, sports fans might be supporters of their favorite team or athlete, or they might be more emotionally connected to the sport in question. That is to say, this does not negate the possibility of manga readers developing specific attachments to a character, a manga artist, a work of manga, and so on, an idea that could be explored further in the future. The study presented here asked about the act of reading “the manga that you like or usually read,” in order not to limit the respondents. Responses yielded scores high enough to examine the presence of strong attachments efficiently.

Conversely, it might be argued that instead of using attachment theory, other theories closer to media consumption would be more suitable for conceptualizing manga attachment. One possible theoretical lens could be the Uses and Gratifications theory approach, according to which people can use media for different objectives depending on the gratifications they seek to achieve. Research in the field identifies

many taxologies concerning uses and gratifications depending on media users' personal and social motivations. For example, media can be used as a substitute when interpersonal communication fails.⁶³ However, the downside of employing the uses and gratifications approach is that it mainly focuses on typologies with little explanation as to what might be the psychological mechanisms underlying said uses and gratifications. Attachment theory, on the other hand, offers a theoretical framework for conceptualizing behavioral markers while explaining the process of forming bonds and their psychological purpose.

Another limitation is that this study does not explore the reasons why a biological mechanism such as the attachment system activates when individuals avidly consume manga. One explanation for this might be that media triggers the same strong emotional responses found in interpersonal relationships. Another possible explanation is that evolutionary biological mechanisms like the attachment system are not exclusively activated by interpersonal relationships. In this case, it is also possible that a wide range of mediated social experiences set off the attachment behavioral system.

It is also important to note that items in scales used in attachment studies are often similar to those used in the study of concepts such as identification, affinity, similarity, parasocial relationships, or liking.⁶⁴ This is not to say that these

instruments lack validity, but instead that items like the one devised here might measure not only attachment to manga but also similar phenomena as well. Another interpretation is that concepts such as identification, affinity, parasocial relationships, and liking are so close to each other that the same psychological mechanisms could underlie all of them. In this case, the attachment theory approach to media attachment is useful for the possibility it offers in explaining a greater range of socio-cultural phenomena related to avid consumption of media.

Another limitation is that this paper is not set to explore the effect of interpersonal attachment styles on the establishment of emotional bonds with media. Attachment styles as described by Ainsworth et al. (i.e., securely attached, anxiously attached, and avoidant) are the result of the availability and the quality of the response of attachment figures in infancy (e.g., avoidant or anxiously attached styles result from unresponsive caregivers).⁶⁵ Traditionally, research relating attachment theory to media consumption has focused on hypotheses that see strong attachments to media as the result of lacking social skills for developing interpersonal relationships (e.g., individuals with lacking social skills have stronger attachments to media as a way of replacing social interaction). These studies have yielded partial or little evidence on how avoidant and anxiously attached styles predict strong media attachments. This is not to say that there is no relationship between avid

consumption of media in the face of adversity, like watching more television shows when feeling stressed, yet there is no clear conclusion on the predictive effect of attachment styles on media consumption.

Future Directions

Future research could expand the attachment theory approach used here to other forms of media. On the basis of cultural significance and manga's presence in the Japanese cultural landscape, manga readership can be equated to mainstream media such as sports, film, and television. Due to manga's multimedia features, readers are likely to be attached to other related media such as animation, video games, books, movies, sports, music and so on. Using a multidisciplinary design that includes fan studies, social psychology, and attachment theory, research would benefit from analyzing the role of individuals' media attachments matrix on personal and social development. A starting point would be to answer how this media attachment matrix contributes to attaining the biological goal of protection, and how it complements the matrix of interpersonal attachments. In order to do so, the next step in research using the attachment approach to manga attachment should be to validate the manga attachment scale.

Conclusion

Research has found parallels between interpersonal attachment and the bonds established with media. The attachment behavioral system, which enables infants to form attachment bonds with caregivers continues to activate throughout individuals' life span and enables bonds not only with other individuals but with places, objects, mental representations of people, and media. This investigation offered a theoretical framework for further understanding the influence of popular culture media such as manga on individuals' behaviors. It also presented theoretical and empirical similarities between interpersonal attachment and attachment to manga, suggesting that the same psychological processes that regulate social bonding are activated when consuming media such as manga. These similarities are significant because they suggest that the function of media goes beyond entertainment and escapism as it also contributes to attaining specific biological goals like protection. Such connection further requires hypotheses that explore novel ways to become operational by including biological, sociological, and psychological perspectives on media consumption. This is a matter that calls for additional cross-cultural, cross-media, multidisciplinary research that challenges conceptions that see entertainment media as merely entertainment by broadening the understanding of

how media can be an intrinsic part of individuals' wellbeing and why it matters so much to people.

Notes

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Table 1*Principal Component Analysis Results*

Items	Component			
	1 Proximity Maintenance	2 Secure Base	3 Safe Haven	4 Separation Distress
1. One of my favorite hobbies is reading manga.	.807	.145	.307	.219
2. I always read the manga that I like as soon as it comes out.	.719	.109	.238	.209
6. I usually collect some of the manga that I like (magazines, compilation volumes, etc.).	.714	.191	.132	.058
3. I usually read the manga that I like more than once.	.704	.010	.159	.105
4. I usually spend my free time reading manga.	.701	.100	.379	.263
5. The manga that I like is very important to me.	.681	.284	.337	.273
15. When I read the manga that I like, I feel encouraged to participate in special activities (for example, if the manga is about music, sports, arts, etc., I feel encouraged to learn how to play a musical instrument, start practicing a sport, take art lessons or enter a circle, study group, etc.).	.088	.723	.121	.120
18. I feel happier when I share my experience of reading the manga that I like with other people.	.020	.684	.200	.180
16. I think it is possible that reading some of the manga that I like might have helped me in becoming a better person.	.075	.673	.166	.250
19. When the ending of the manga that I like is announced, I read it more frequently.	.170	.651	.029	-.034
20. When the manga that I like resumes publication after it stopped for some time (for example, when it starts again after vacation breaks, or when a new season/story starts, etc.) I read it more frequently.	.185	.634	.145	.277
17. I think that I want to be like some of the characters that appear in the manga that I like.	.075	.595	.196	.205
14. When I read the manga that I like, I feel encouraged to travel to new places, meet new people or try new things in general.	.523	.571	.164	.029
11. When I have personal problems (for example, problems with friends, family, romantic partners, financial difficulties, social-pressures, etc.) I like to read some of the manga that I like in order to calm down or distract myself.	.175	.193	.846	.050
8. When I am sad or feeling down, I like to read manga that I like for cheering up.	.293	.185	.730	.180
10. When I am feeling stressed (for example, after a stressful day at work or school, or when there is a lot of pressure at work or school, etc.), I like to read some of the manga that I like in order to calm down.	.250	.094	.710	.083
7. When I am ill, I have a cold or I lack good health, I like to read the manga that I like in order to feel better.	.309	.205	.650	.115
9. When I am feeling happy, I like to read some of the manga that I like.	.414	.321	.539	.252
23. I think it is possible that some of the manga that I like is as important to me as some people in my life (some relatives, some friends, some acquaintances, etc.).	.179	.369	.381	.196
22. When the manga that I like ends, I will feel lonely (if the manga that I like already ended I felt lonely).	.240	.181	.039	.811
21. When the manga that I like ends, I will be sad (if the manga that I like already ended I felt sad).	.129	.224	.140	.801

24. I feel that even if a manga that I like ends, it will always be important for me.	.319	.389	.206	.498
12. I usually discuss what happens in the manga that I like with other people (friends, family, romantic partners, classmates, etc.).	.236	.243	.393	.472
13. I think that talking about the manga that I like to important people in my life (friends, family, romantic partners, classmates, etc.) has strengthened our relationship.	.411	.222	.265	.429
Cronbach's alpha (All items = .932)	.893	.826	.852	.799

Figures

Figure 1

Scree Plot of the Four Components of Manga Attachment

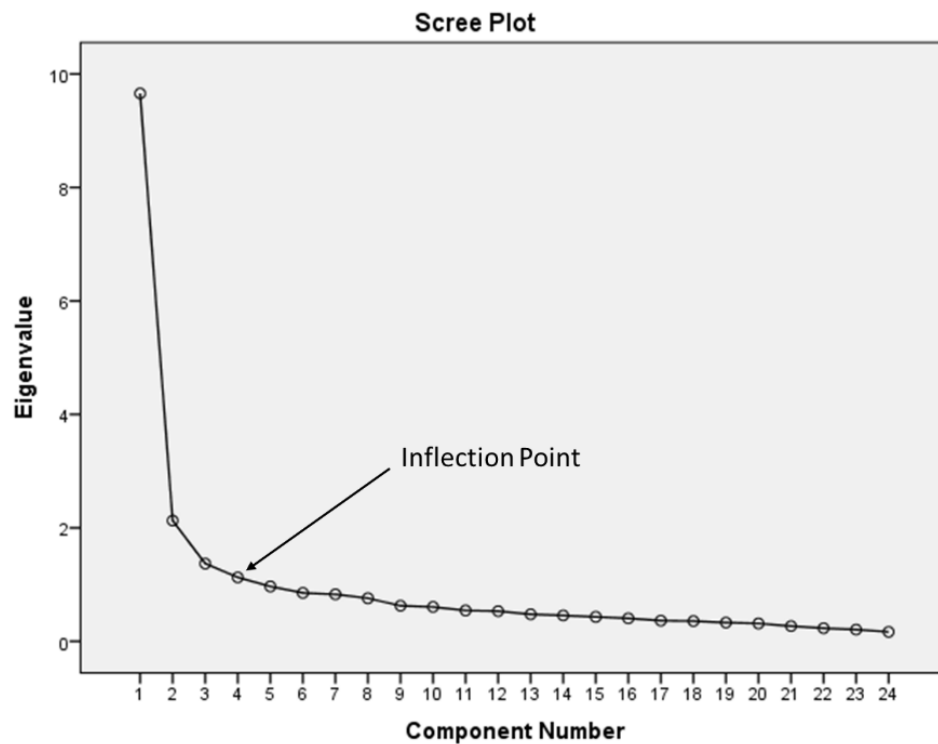


Figure 2

Components of Manga Attachment and their Explanation

Manga Attachment			
Component 1	Component 2	Component 3	Component 4
Proximity Maintenance	Secure Base	Safe Haven	Separation Distress
Reading, re-reading, collecting, and actively engaging with manga.	Being motivated to engage in activities readers do not often engage with when reading manga.	Reading manga when feeling vulnerable.	Feeling distressed at the possibility or actual event that the manga readers like ends or ceases to be published.

Figure 3

ANOVA Bar Chart for the Proximity Maintenance Component

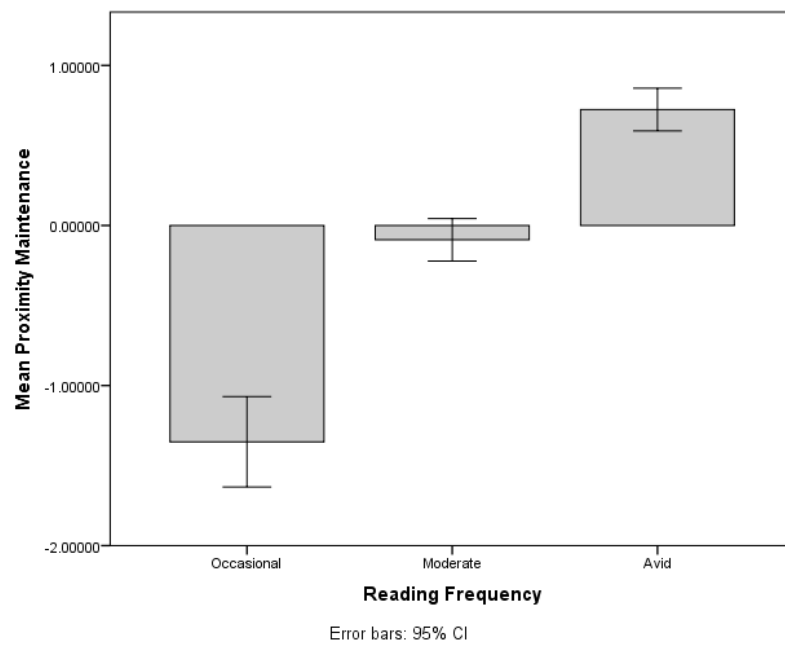


Figure 4

ANOVA Bar Chart for the Safe Haven Component

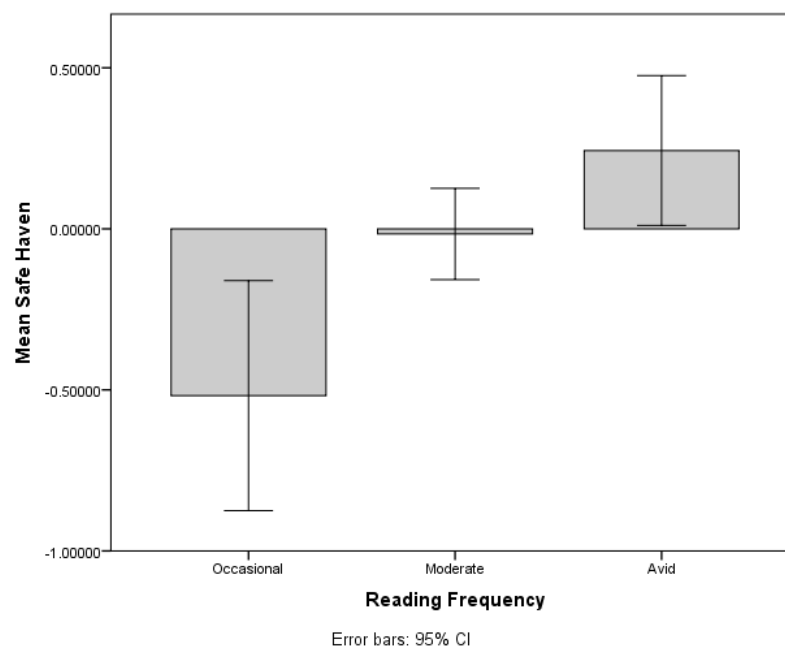


Figure 5

ANOVA Bar Chart for the Separation Distress Component

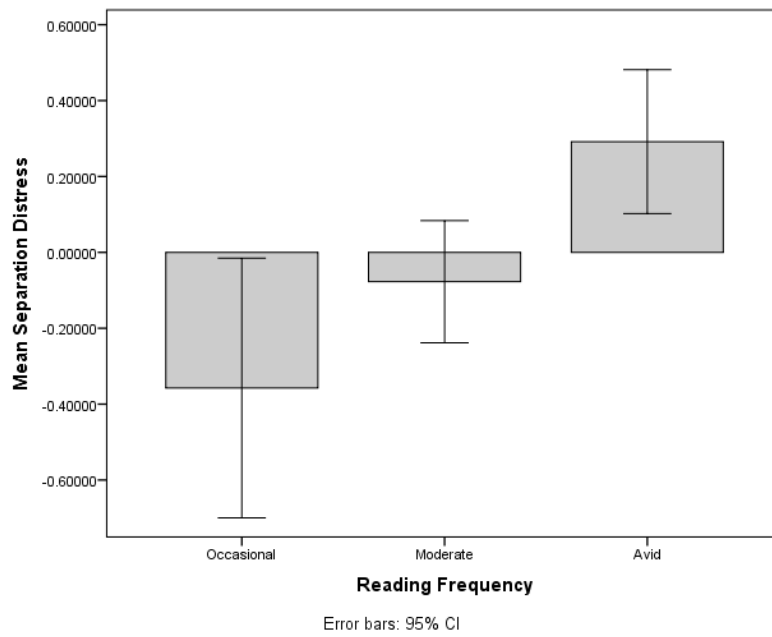


Figure 6

ANOVA Bar Chart for the Secure Base Component

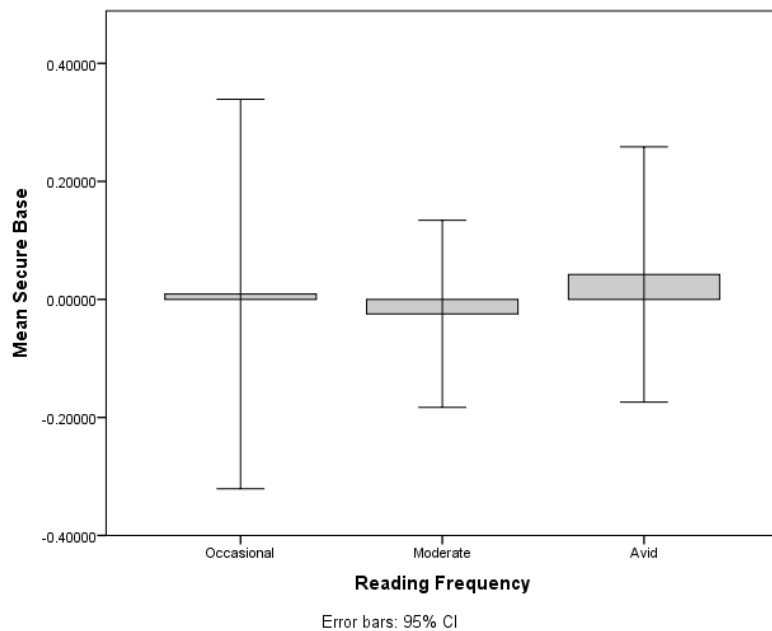
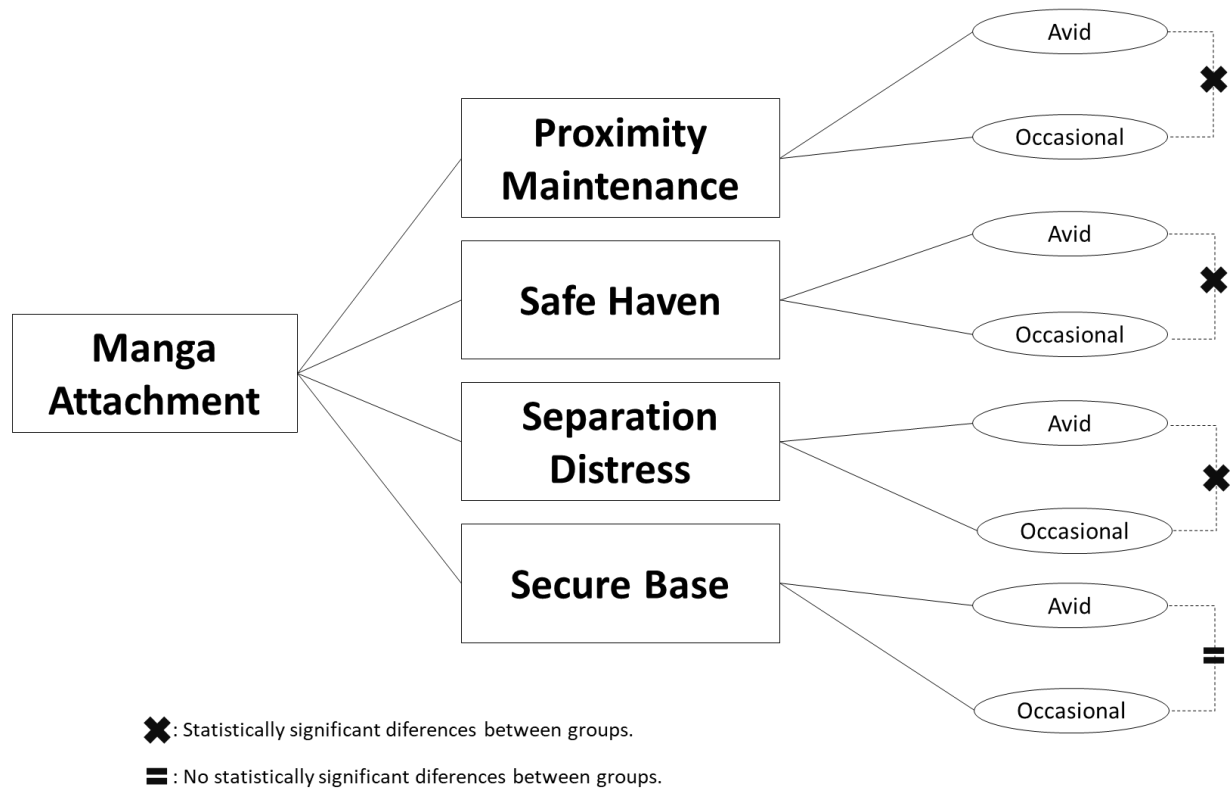


Figure 7

Differences Between Avid and Occasional Manga Readers in the Four Manga Attachment Components



Appendix A: Original 24 Items Survey (English)

<p>1. One of my favorite hobbies is reading manga.</p> <p>2. I always read the manga that I like as soon as it comes out.</p> <p>3. I usually read the manga that I like more than once.</p> <p>4. I usually spend my free time reading manga.</p> <p>5. The manga that I like is very important to me.</p> <p>6. I usually collect some of the manga that I like (magazines, compilation volumes, etc.).</p>	Proximity Maintenance
<p>7. When I am ill, I have a cold or I lack good health, I like to read the manga that I like in order to feel better.</p> <p>8. When I am sad or feeling down, I like to read manga that I like for cheering up.</p> <p>9. When I am feeling happy, I like to read some of the manga that I like.</p> <p>10. When I am feeling stressed (for example, after a stressful day at work or school, or when there is a lot of pressure at work or school, etc.), I like to read some of the manga that I like in order to calm down.</p> <p>11. When I have personal problems (for example, problems with friends, family, romantic partners, financial difficulties, social-pressures, etc.) I like to read some of the manga that I like in order to calm down or distract myself.</p>	Safe haven
<p>12. I usually discuss what happens in the manga that I like with other people (friends, family, romantic partners, classmates, etc.).</p> <p>13. I think that talking about the manga that I like to important people in my life (friends, family, romantic partners, classmates, etc.) has strengthened our relationship.</p> <p>14. When I read the manga that I like, I feel encouraged to travel to new places, meet new people or try new things in general.</p> <p>15. When I read the manga that I like, I feel encouraged to participate in special activities (for example, if the manga is about music, sports, arts, etc., I feel encouraged to learn how to play a musical instrument, start practicing a sport, take art lessons or enter a circle, study group, etc.).</p> <p>16. I think it is possible that reading some of the manga that I like might have helped me in becoming a better person.</p> <p>17. I think that I want to be like some of the characters that appear in the manga that I like.</p> <p>18. I feel happier when I share my experience of reading the manga that I like with other people.</p>	Secure base
<p>19. When the ending of the manga that I like is announced, I read it more frequently.</p> <p>20. When the manga that I like resumes publication after it stopped for some time (for example, when it starts again after vacation breaks, or when a new season/story starts, etc.) I read it more frequently.</p> <p>21. When the manga that I like ends, I will be sad (if the manga that I like already ended I felt sad).</p> <p>22. When the manga that I like ends, I will feel lonely (if the manga that I like already ended I felt lonely).</p> <p>23. I think it is possible that some of the manga that I like is as important to me as some people in my life (some relatives, some friends, some acquaintances, etc.).</p> <p>24. I feel that even if a manga that I like ends, it will always be important for me.</p>	Separation distress

Appendix B: Original 24 Items Survey (Japanese)

1. マンガを読む事が大切な趣味の一つである
2. 好きなマンガが出ると直ぐに読む。
3. 好きなマンガは繰り返し読む。
4. 自由時間をマンガを読む事に費やす。
5. マンガは私にとってとても大切なものである。
6. 好きなマンガを何冊か持っている。(雑誌、単行本など)
7. 病気だったり、風邪の時や具合の悪い時、気分を良くするために好きなマンガを読む。
8. 気分の優れない時や落ち込んだ時、気持ちを高めるために好きなマンガを読む
9. 幸せな気分のとき、好きなマンガを読むがちである。
10. ストレスを抱えている時(仕事や学校などのストレス)気持ちを落ち着かせるために好きなマンガを読む。
11. 個人的な問題を抱えた時(友達、家族、恋人とのトラブルあるいは金銭問題・社会的プレッシャーなど)好きなマンガを読んだりして気分を変えたり、落ち着かせたりする。
12. 好きなマンガの内容について他の人(友達、家族、恋人、クラスメートなど)とよく会話をする。
13. 好きなマンガについて大切な人(友達、恋人、クラスメートなど)に話す事は、その人との関係を強くすると思う。
14. 好きなマンガを読むと、新天地に旅したい、新しい人と出逢いたい、あるいは新たな事にチャレンジしたい気持ちになったりする。
15. 好きなマンガを読むと、特別な活動(例えば、そのマンガに関係する音楽の楽器演奏、スポーツを実際にやる、アートのレッスンを受講するなど)に参加したくなる意欲が湧いてくることがある
16. 好きなマンガを読むことは、より良い人に成れるかもしれないと思う事がある。
17. 自分自身、好きなマンガの登場人物になりたいと思うことがある。
18. 好きなマンガを読む経験を他の人と共有することに幸せを感じることもある
19. 好きなマンガがもう直ぐ終わると知らされたら、それを普段にも増して読む傾向にある。
20. 好きなマンガが暫く中断され、それが再開される(例えば、シリーズが中断し新しいシーズンとして再スタートする)と一層読む傾向にある。
21. 好きなマンガが終わると悲しいと覚えることがある。(あるいは、好きなマンガが終わってしまったので悲しく覚える。)
22. 好きなマンガが終わると淋しさを感じる覚えることがある。(あるいは、好きなマンガが終わってしまったので淋しく覚える。)
23. 人生において、好きなマンガは他の誰(親戚、友達、知人など)より大切な存在であるかもしれない。
24. たとえ好きなマンガが終了しても、将来にわたって、常に重要な存在であり続けるかもしれない。