Therapeutic Photography: Photograph Preferences in Stress Reduction

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Abstract. This study explores photograph preferences in Therapeutic Photography among lecturers in Universiti Teknologi MARA (UiTM) Malaysia. The context of the study involved a selection of photographs that contributes to stress therapeutic. The discussion examines the visual significance and understanding of images and the value of photographs. The study discusses the value of a photograph as visual communication in therapy, visual studies in photo-imagery practice, and also the robust value of visual sustainability toward photographs in therapy. As a result, the study found that family pictures positively impact participants as a platform to conduct Therapeutic Photography.

Keywords: Therapeutic Photography, Photograph Preferences

1 Introduction

Visual is an intelligent cognitive tool. It is also a powerful source of invention [1]. Also contain the data that able to recall person memory [2]. In addition, current digital technology has brought visual production to the degree of understanding. Technology in camera setting such as Intelligent Learning (IL) gain many interest among public in process of photo taking [3]. As part of Artificial Intelligence (AI) technology, all data images are available for retraction [4]. By emphasising this technology, visual have easy access of creative information which the human brain can recognise and process every data in the memory and experience [5]. In terms of reviving data, identifying the right tools for the respondents is very important.

In addition, photography is an easy technique of communication and share the understanding of meaning [6]. The instant photographic images can reflectively attain memory, gives meaning, and possess the ability for discussion [7]. Therefore, the photograph is the foundation in explaining visual imagery. It divides into two separate influence; able to share directly or indirectly [8]. The photograph dual-code theory remains in storage in the long and short term memory and able to recall the long term memory [9]. This explains that language in

visual perception has advanced using image, purpose, development, and marketing, which can be applied in advertising, artwork, fashion, or journalism. With a clear objective, messages will be easy to explain in the study of general communication and are valuable in applying learning and interaction. The results not only focused on visual communication, but also several branches of visual studies such as visual literacy, persuasion, rhetoric, meaning, and visual imagery. These studies determined the value of images, drawings, videos, sculptures, photography, and even animation.

2 Objective

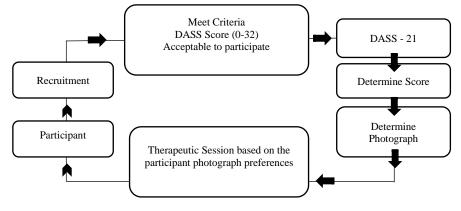
- 1. To scale the level of stress among participants.
- 2. To determine the kind of images that is preferred by participants.

3 Problem Statement

A study found several main factors contributing to stress, namely career development, research, and teaching, with a fair, positive relationship between occupational stress and each factor [10]. The findings revealed that lecturers in universities were facing a high level of stress while doing their work. The overall results showed that workload is the most significant source of stress among lecturers [11]. However, with work pressure and high expectations from students, academicians also face financial constraints, countless job responsibilities, and 'education as business' orientation as adopted by private universities. Thus, stress may cause dangerous health complications, such as hypertension, heart attack, migraine, depression, and eating disorders, while some may consider migrating and leaving their job [12].

4 Methodology

The participants are lecturers in Universiti Teknologi MARA (UiTM). The following chart details the two (2) phases of the method.



Phase 1: Participant Recruitment

Data was gained from an online survey of the Depression, Anxiety and Stress Scale (DASS-21). The scale purposely sought the level of stress among participants. The result helped the researcher identify the scale that suits the final data collection on photograph preferences. At this stage, the respondents also answered a questionnaire to provide personal preferences and data.

Phase 2: Organisation of data and classification of data

Quantitative categorisations were done using SPSS. Quantitative methods were employed in this section to measure photograph preferences and functioned as supporting data for further analysis. This study gathered the results and divided the data into a group of interest, experience, background and emotional, mental state.

Final Conclusion: Results to be the basis for a guidelines framework

A document detailing participants' preferences, organised by interest, becomes a guideline to apply in therapeutic sessions.

5 Result

Variable (n=84)	n	%	Mean (±SD)
Gender			
Male	26	31.0	
Female	57	67.9	
I prefer not to say	1	1.2	
Marital status			
Single	21	25.0	
Married	62	73.8	
Divorced/Widow/Widower	1	1.2	
Designation			
Lecturer	30	35.7	
Senior lecturer	54	64.3	
Years of service			8.15 ± 5.0
Perceived psychological well-being			
Average	14	16.7	
Good	22	26.2	
Excellent	48	57.1	

Table 1: Descriptive Statistics Demographic Data

The study recorded 84 respondents in the online questionnaire with a mean year of service of eight years (SD 5.0). The majority were female, married, and senior lecturers with excellent psychological well-being.

Table 2: Descriptive analysis of outcome measures DASS before Therapeutic Photography is administered

Outcome variables (n=84)	n	%
DASS (Stress)		
Normal	36	42.9
Mild	19	22.6
Moderate	8	9.5
Severe	10	11.9
Extremely Severe	11	13.1
DASS (Anxiety)		
Normal	7	8.3
Mild	15	17.9
Moderate	28	33.3
Severe	19	22.6
Extremely severe	15	17.9
DASS (Depression)		
Normal	15	17.9
Mild	16	190
Moderate	22	26.2
Severe	14	16.7
Extremely Severe	17	20.2

The descriptive analysis found the highest percentage of Stress DASS 21 Scale is Normal at 42.9%, Anxiety DASS 21 Scale is Moderate at 33.3%, and Depression DASS21 Scale is Moderate at 26.2% which is 6% more compared to Extremely Severe.

 Table 3: What quality of a photograph would you find interesting?

Variable (n=84)	n	%
Colour		
N/Y	30/54	35.7/64.3
Technique		
N/Y	46/38	54.8/45.2
Artistic		
N/Y	39/45	46.4/53.6
Composition		
N/Y	53/31	63.1/35.9
Process		
N/Y	65/19	77.4/22.6
Filter		
N/Y	54/30	64.3/35.7
Symbolic		
N/Y	46/38	54.8/45.2
Meaning		
N/Y	36/48	42.9/57.1
Landscape/Environment		
N/Y	37/47	44.0/56.0
Subject matter		
N/Y	39/45	46.4/53.6

Table 3 shows the results of the highest interesting quality in photographs, which is describing the meaning with 57.1%, while the second preference is a landscape photograph at 56%. The table also shares the highest unpopular choices which are image process at 65% and image filter at 53%.

Variable (n=84)	n	%
Relationship		
High	66	78.6
Moderate	16	19.0
Low	2	2.4
Enjoyment		
High	53	63.1
Moderate	22	26.2
Low	9	10.7
Harmony		
High	52	61.9
Moderate	25	29.8
Low	6	7.1
None	1	1.2
Confidence- Self-Portraits		
High	15	17.9
Moderate	43	51.2
Low	22	26.2
None	4	4.8

Table 4: What kinds of photos do you think would most likely trigger your thoughts, feelings and memories?

Table 4 shows that the majority of the respondents chose high for relationship at 79%, followed by an almost equal percentage of enjoyment at 63%, and harmony images at 62%. Self-portrait resulted in the lowest as 18% of the respondents chose high.

Table 5: Rate your level of interest in the following types of photos/images:

Variable (n=84)	n	%
Family		
Extremely Interesting	30	35.7
Very Interesting	34	40.5
Moderately Interesting	12	14.3
Slightly Interesting	9	9.5
Not Interesting	-	-
Travel		
Extremely Interesting	47	56.0
Very Interesting	30	35.7
Moderately Interesting	4	4.8
Slightly Interesting	1	1.2
Not Interesting	2	2.4
5		

Nature		
Extremely Interesting	54	64.3
Very Interesting	25	29.8
Moderately Interesting	1	1.2
Slightly Interesting	3	3.6
Not Interesting	1	1.2
Animal		
Extremely Interesting	15	17.9
Very Interesting	27	32.1
Moderately Interesting	27	23.8
Slightly Interesting	13	8.3
Not Interesting	2	2.4
Architecture		
Extremely Interesting	28	33.3
Very Interesting	27	32.1
Moderately Interesting	20	23.8
Slightly Interesting	7	8.3
Not Interesting	2	2.4
Self-Portrait		
Extremely Interesting	7	8.3
Very Interesting	28	33.3
Moderately Interesting	25	29.8
Slightly Interesting	19	22.6
Not Interesting	5	6.0
Event/Sport		
Extremely Interesting	4	4.8
Very Interesting	21	25.0
Moderately Interesting	25	29.8
Slightly Interesting	25	29.8
Not Interesting	9	10.7
Photo Manipulation		
Extremely Interesting	15	17.9
Very Interesting	12	14.3
Moderately Interesting	29	34.5
Slightly Interesting	14	16.7
Not Interesting	14	16.7

Based on Table 5, Nature, Family and Travel have a high percentage of fascinating subjects to build interest among the respondents. Nature pictures was the exciting choice at 64.3%, followed by Travel at 56% and Family at 36%.

Table 6: What kind of images wou	ld you find more satisfying	to discuss?	
Variable (n=84)	n	%	
Personal Collection			
Very Interested	35	41.7	
Somewhat Interested	33	39.3	
Neutral	12	14.3	
Not Very Interested	2	2.4	
Not Interested at all	2	2.4	
Viewing Pictures by others			

Table 6: What kind of images would you find more satisfying to discuss?

Very Interested	16	19.0
Somewhat Interested	45	53.6
Neutral	16	19.0
Not Very Interested	4	4.8
Not Interested at all	3	3.6
Family pictures/album		
Very Interested	47	56.0
Somewhat Interested	23	27.4
Neutral	10	11.9
Not Very Interested	4	4.8
Not Interested at all	-	-
Self-picture		
Very Interested	10	11.9
Somewhat Interested	26	31.0
Neutral	27	32.1
Not Very Interested	17	20.2
Not Interested at all	4	4.8
Random Visual Images		
Very Interested	13	15.5
Somewhat Interested	27	32.1
Neutral	25	41.7
Not Very Interested	7	8.3
Not Interested at all	2	2.4

From the results in Table 6, 56% of respondents preferred Family Album as the most satisfying image to discuss, followed by 42% of respondents who selected Personal Collection.

6 Discussion

In order to achieve the study objectives, a flow chart was generated based on the data from the results. The study achieved the first objective from the assessment prevalence using the DASS 21 scale. The respondents shared a high average scale at 43% which was 36 participants. From that particular scale of the participants on stress, the mild scale for 19 participants was at 23%, moderate at 10%, severe at 12%, and extremely severe at 13%. For the second objective, most of the respondents chose a family picture as having a significant impact on them while viewing a photograph, with a total of 72.6% (as shown in Table 7). This was followed by family memories having an influence on 20.2% of respondents.

Table 7: Describe ONE (1) image/photograph in your collection that has a significant impact on you?

Variable (n=84)	n	%
Family	61	72.6
Memories	17	20.2
Career	1	1.2
Religion	2	2.4
Pet	2	2.4
Friendship	1	1.2

Furthermore, the study also identified the highest selection in photograph preferences which developed the suggestion by flow chart 1; on how to conduct the therapy session. The suggestion chart rules the DASS 21 Scale as the critical process to reach the participant's stress level. Later, the participant suggests sharing a photograph following the primary choice; quality in a photograph, photographs that influence emotion, participant's interest in the photograph, and photographs that are suitable for the participant to discuss. The chart below shares the outline as a foundation for participants and practitioners reference.

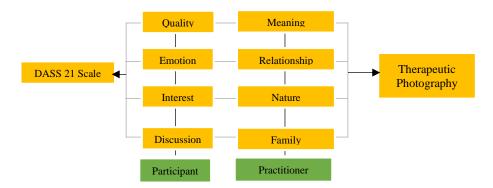


Figure 1: Outline suggestion of the photograph preference in Therapeutic Photography.

6 Conclusion

The chart suggests that practitioners identify the photograph preferences to reach the participant in a Therapeutic Photograph session. The data in Table 7 shows the general choice of photograph preferences with the equivalent high psychological well-being is Family Pictures. [13], concluded that using photographs as part of therapeutic therapy may help participants hold onto some material rather than imagine it. The study discusses the effectiveness of digitalisation on photographic visuals as a form to persuade the involvement of the participant or viewer. The analogy of visuals benefits the optical surface and illustrates the deeper meaning behind the image. Focusing on the level of meaning, Weber, by referencing Barthes (1981,1983), explained the value of denotative and connotative visual messages towards meaning [14]. Denotative commonly provides a direct message, explicitly proven to persuade the audience to understand the image. The reaction of the image faculty towards auto recognition machine learning is parallel to image analysis on who and where the image is applied, which serves as a guide to the memories. The system will program to remind using its ability to recall the memory.

References

- A. Bolwerk, J. Mack-Andrick, F. R. Lang, A. Dörfler, and C. Maihöfner, "How art changes your brain: Differential effects of visual art production and cognitive art evaluation on functional brain connectivity," *PLoS One*, vol. 9, no. 7, pp. 1–8, 2014.
- [2] L. M. S. and M. R. Z. James P. Roach, "Memory recall and spike-frequency adaptation," *Physiol. Behav.*, vol. 176, pp. 139–148, 2017.
- [3] D. Vaquero and M. Turk, "Composition context photography," in *Proceedings 2015 IEEE Winter Conference on Applications of Computer Vision, WACV 2015*, 2015.
- [4] P. Li, J. Ma, and S. Gao, "Learning to summarize web image and text mutually," in Proceedings of the 2nd ACM International Conference on Multimedia Retrieval, ICMR 2012, 2012.
- [5] M. A. Borkin *et al.*, "Beyond Memorability: Visualization Recognition and Recall," *IEEE Trans. Vis. Comput. Graph.*, vol. 22, no. 1, pp. 519–528, 2016.
- [6] F. Keshavarzi, "Evaluation techniques of photography in visual communications in Iran," World Acad. Sci. Eng. Technol., vol. 42, no. 6, pp. 537–540, 2010.
- [7] E. P. Salvador, "APERTURE AND EXPOSURE: THE PHOTOGRAPHY OF LITERATURE," PRINCETON UNIVERSITY, 2015.
- [8] P. Dewan, "Words Versus Pictures: Leveraging the Research on Visual Communication," *Partnersh. Can. J. Libr. Inf. Pract. Res.*, vol. 10, no. 1, pp. 1–10, 2015.
- [9] P. M. Anwandter, "Frames of Mind: Photography, Memory and Identity," *Coll. Undergrad. Res. Electron. J.*, no. April, 2006.
- [10] Noor Hassim Ismail and Arma Noor, "Occupational Stress and Its Associated Factors Among Academician in a Research University, Malaysia," *Malaysian J. Public Heal. Med.*, vol. 16, no. 1, pp. 81–91, 2016.
- [11] Z. Hassan and N. F. Jazli, "Factor Related To Occupational Stress Among Lecturers : a Case Study in Public University," no. December, pp. 160–167, 2015.
- [12] S. Zakaria, N. Omar, and A. Asmawi, "Work Responsibilities Stress among Academicians in Private Universities in Malaysia," J. Educ. Vocat. Res., vol. 6, no. 2, pp. 42–47, 2015.
- [13] "An Exploration of the Use of photographs in Systemic Family Therapy practice Wheeler, M 2015," 2015.
- [14] J. G. Knowles, Handbook of the arts in qualitative research: Perspectives, methodologies, examples, and issues, vol. 2, no. 2, 2012.
- [13] M.Wheeler (2015)An Exploration of the Use of photographs in Systemic Family Therapy practice.