Psoriasis Knowledge: A Comparative Study Between Written Handouts and Audiovisual Presentation

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Abstract

Objective: Patients with psoriasis know many core facts about their disease, but they do not know a number of facts of psoriasis disease that may be valuable in improving their disease activity. The aim of our study is to compare the efficacy of written handout education with that of audiovisual computerized presentations in educating patients about psoriasis vulgaris.

Methods: Thirty-six psoriasis patients were enrolled. All patients had completed baseline questionnaires to evaluate baseline knowledge of psoriasis. Subjects were then randomized to receive either written handout or to watch audiovisual presentation. After that, patients were asked to complete the same questionnaire immediately after intervention, and also one month later. Statistical analysis was performed by using descriptive analysis to present the number of questions answered correctly and paired T-test to assess the score change from baseline within groups.

Results: Of 36 patients enrolled, their baseline mean knowledge scores are 63.8 and 63.5 out of hundred in audiovisual and handout group respectively ($p = 0.872$). Knowledge score change immediately post-intervention in audiovisual presentation group was significantly higher than handout group ($p < 0.05$) and also significant higher in one month follow-up ($p < 0.05$).

Conclusion: An educational intervention was helpful in improving patients' knowledge. Audiovisual presentation method had more significant benefit than written handout method in terms of short- and long- term knowledge gains among patients with psoriasis.

Keywords: Psoriasis, patients' knowledge, educational intervention

การศึกษาเปรียบเทียบวิธีการให้ความรู้ระหว่างการใช้แผ่นโปสเตอร์แนวทางความรู้และการฉายวิดีโอความรู้เกี่ยวกับโรคสะเก็ดเงิน

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บทคัดย่อ

วัตถุประสงค์: ความรู้ความเข้าใจของผู้ป่วยโรคสะเก็ดเงินมีความสำคัญ การขาดความรู้ความเข้าใจที่ถูกต้องเกี่ยวกับตัวโรคอาจเป็นปัญหาในการดูแลรักษาโรคสะเก็ดเงินได้ การศึกษานี้ต้องการเปรียบเทียบประสิทธิภาพของวิธีการให้ความรู้ระหว่างการใช้แผ่นโปสเตอร์แนวทางความรู้กับการฉายวิดีโอความรู้เกี่ยวกับโรคสะเก็ดเงิน

วิธีดำเนินการวิจัย: ศึกษาในกลุ่มผู้ป่วยซึ่งได้รับการวินิจฉัยโรคสะเก็ดเงินโดยแพทย์ผิวหนัง จำนวน 36 ราย ซึ่งจะได้รับการประเมินความรู้พื้นฐานเกี่ยวกับโรคสะเก็ดเงินจากการตอบแบบสอบถาม จากนั้นจึงทำการสุ่มผู้ป่วยออกเป็น 2 กลุ่ม ได้แก่ กลุ่มที่ได้รับความรู้จากแผ่นโปสเตอร์ และกลุ่มที่ได้รับความรู้จากวิดีโอ และจะได้รับการประเมินความรู้เกี่ยวกับโรคสะเก็ดเงินด้วยแบบสอบถามชุดเดิม หลังเข้าร่วมกิจกรรมและอีกครั้งที่ 1 เดือน และนำผลที่ได้มาวิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา และ paired t-test

ผลการวิจัย: กลุ่มตัวอย่างจำนวน 36 รายมีคะแนนเฉลี่ยความรู้พื้นฐานเกี่ยวกับโรคสะเก็ดเงินในผู้ป่วยที่ได้รับความรู้จากวิดีโอและจากแผ่นโปสเตอร์ คิดเป็นร้อยละ 63.8 และ 63.5 ตามลำดับ ($p = 0.872$) ในกลุ่มที่ได้รับความรู้จากวิดีโอนั้นพบว่ามีการเปลี่ยนแปลงของความรู้หลังเข้าร่วมกิจกรรมสูงกว่ากลุ่มที่ได้รับความรู้จากแผ่นโปสเตอร์อย่างมีนัยสำคัญทางสถิติ ทั้งหลังร่วมกิจกรรมทันที ($p < 0.05$) และหลังเข้าร่วมกิจกรรม 1 เดือน ($p < 0.05$)

สรุป: การให้ความรู้โดยการใช้สื่อการสอนสามารถช่วยทำให้ผู้ป่วยมีความรู้เกี่ยวกับโรคเพิ่มขึ้น โดยเฉพาะอย่างยิ่งการใช้สื่อการสอนด้วยวิดีโอพบว่าให้ผลลัพธ์ที่ดีกว่าการใช้แผ่นโปสเตอร์ทั้งระยะสั้นและระยะยาวในผู้ป่วยโรคสะเก็ดเงิน

Introduction

Psoriasis is a well-known chronic inflammatory skin disease. It usually affects both patients' physical and psychological functions. Disease is known for its chronicity and the fact that it could not be definitely cured. Psoriasis always makes patients frustrated and disappointed about disease because of the need for continuous treatment[1]. However, it has been postulated that insufficient knowledge among psoriasis patients can represent a barrier to therapy acceptance and adherence. Effective education is crucial in the management of psoriasis[2]. Nevertheless, while patients continue to be misinformed about psoriasis, it is not because they are not interested. Recalcitrant in treating psoriasis physically and psychologically effects patients. It is also so called economically and socially disabling skin disease. Although there are many different therapies for psoriasis available nowadays, poor education and non-adherence to treatment is a frequent problem that impacts on both physicians and patients[1].

Previous study revealed that educational programs had been successfully applied in rheumatology, oncology and as regards dermatology in atopic dermatitis, resulting in benefit in psychological and disease severity outcome. Traditional methods of patients' education include physician-patient conversations and printed handouts. Not only conversation in busy clinic is often hard to do but also printed handouts are usually left unread. Audiovisual presentation is significantly more effective than traditional method for patients' education[3,4]. To date, many studies in other areas of medicine showed that audiovisual presentation is more effective than written handout method. There was one study about educating patients with acne vulgaris that showed significantly higher benefit when using audiovisual presentation compared with written handout[5]. To our knowledge, there was no such study conducted in psoriasis patients. Our study was aimed to evaluate the effectiveness of the audiovisual presentation compared to traditional black-white written handout on psoriasis knowledge as well as to compare the efficacy of written handout education with that of audiovisual computerized presentation by scoring on post-intervention and one month follow-up questionnaires.

Methods

Our study involved 36 adolescent patients with psoriasis. Number of patients and methods of this study was approved by Vajira hospital Instituitional Review Board.These patients presented to outpatient dermatology clinic, Vajira hospital. Diagnosis of psoriasis was made on the basis of clinical grounds by dermatologist. Participants were asked to receive a

Table 1:

Psoriasis knowledge questionnaire*

1. Once you have psoriasis, the illness will become increasingly worse.	FALSE
2. If all signs of psoriasis are gone, you are completely cured.	FALSE
3. The more psoriasis you have, the greater the chances for developing psoriasis arthritis.	FALSE
4. Psoriasis is an infectious disease	FALSE
5. Environmental pollution can/may cause psoriasis	FALSE
6. Diet is important to the development of psoriasis	FALSE
7. Scratching the skin can/may worsen psoriasis	TRUE
8. Treatment is the same for all psoriasis patients	FALSE
9. Research shows that herbal medicines have a positive effect on psoriasis lesions.	FALSE
10. Phototherapy can/may increase the risk of skin cancer	TRUE

*adapted from psoriasis knowledge questionnaire items by Wahl et al[6].

questionnaire which adapted from that of Wahl et al[6] on enrollment to access baseline knowledge about psoriasis (Table 1)[6]. After that, the patients were then randomized one by one to receive a written information handout or watch an audiovisual computerized presentation. Both educational materials were focusing on frequently misconceptions about psoriasis in particularly on the cause of psoriasis, genetic basis, factors that may exacerbate and treatment of psoriasis. The written handout was black and white text only, while the computerized presentation composed of text and audiovisual tools with the same content. All enrolled subjects then immediately completed identical questionnaires to access the effectiveness of intervention. At one month, the same questionnaire was again administered via telephone interview. However, we did not pay attention to the change of Psoriasis Area Severity Index (PASI) score of our studied patients because we did not conduct the intervention at one month follow-up.

Statistical analysis

To access knowledge, the pre-intervention, post-intervention and one month follow-up questionnaires contained identical set of questions. All data were collected from each patient. The descriptive analysis was measured on a scale ranged from 0 to 10, representing the number of questions answered correctly. We used paired T- test to access the score change from baseline within groups and the difference between groups was analyzed by using Mann-Whitney U test. p-value < 0.05 was considered as statistically significant in all analysis.

Results

Of thirty-six patients enrolled to our study, the demographic data of participants are summarized in Table 2. Equally in both sex and no statistical different in mean age of participants between two groups are shown. Moreover, there were no statistical significant difference between two groups in degree of education

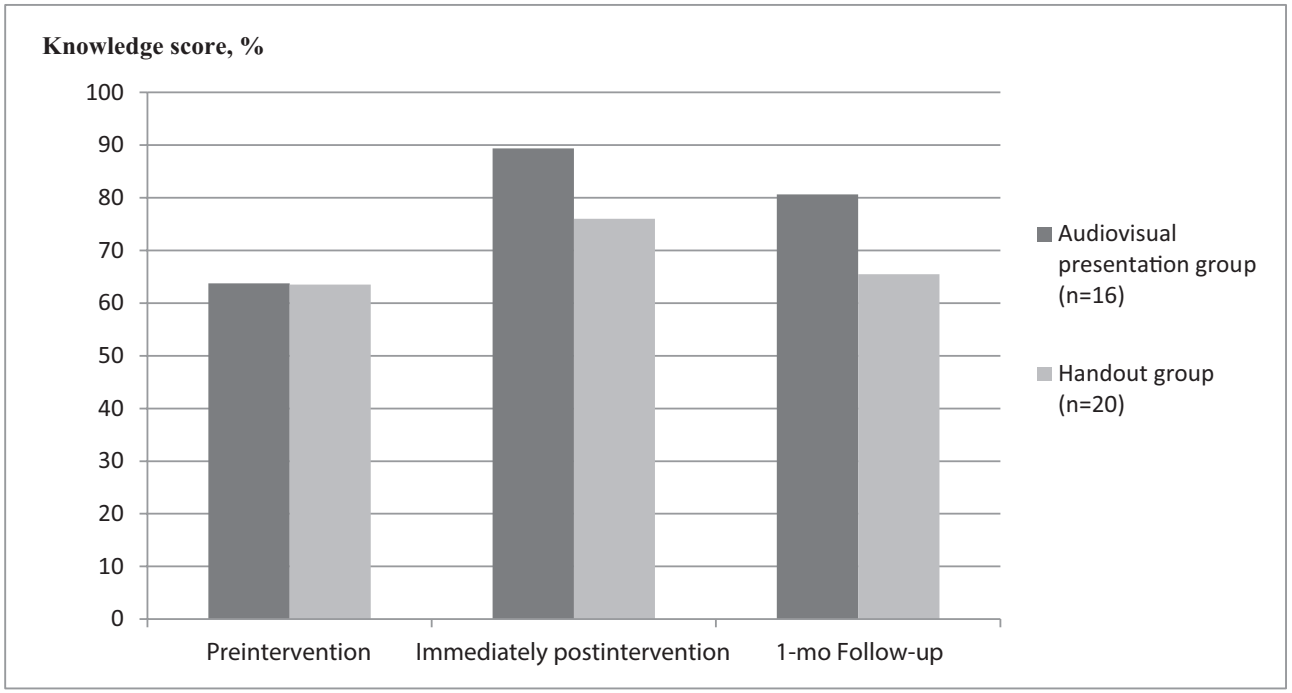

Figure 1: Knowledge score during the study period. The within-group improvement was significant for both groups immediately post intervention (p = 0.001 in audiovisual group and p = 0.021 in handout group). At 1-month follow-up p = 0.001 in audiovisual group and p = 0.618 in handout group.

Table 2:

Demographic characteristics at baselinea

Characteristic	Audiovisual Presentation Group (n=16)	Handout Group (n=20)	p-value
Age,mean (SD),y	49.81 (14.56)	47.40 (15.97)	0.949
Sex			0.502
Male	7	11	
Female	9	9	
Education			0.654
Elemantary school	3	4	
Middle school	2	2	
Senior high school	5	3	
Vocational certificate	3	3	
Bachelor degree	3	8	
Occupation			0.983
Employee	10	12	
Government officer	2	1	
Office worker	2	2	
Grocer	2	3	
College student	0	1	
Farmer	0	1	
Disease duration, mean (SD), year	9.88 (5.91)	8.50 (5.41)	0.472
Knowledge score, mean (SD), %	63.8 (17.1)	63.5 (24.8)	0.872

a Data are given as number (percentage) of each group unless otherwise indicated.

and their occupation. The mean disease durations are 9.88 years and 8.50 years in audiovisual presentation group and handout group respectively. The mean (SD) baseline knowledge score out of hundred are 63.8 (17.1) in audiovisual presentation group and 63.5 (24.8) in written handout group which are not considered as statistical significant. Figure 1 shows the results of the post intervention change in percentage of knowledge score. They were determined by comparing the results of the same pre-intervention and post-intervention questionnaire. The within group improvement was significant for both groups immediately post intervention (p-value = 0.001 in audiovisual group and p-value = 0.021 in handout group). The result for one month follow-up post intervention change in knowledge score with the same questionnaire is also significant for audiovisual group (p-value = 0.001) but not in the written handout group (p-value = 0.618). Figure 2 shows the knowledge score change from baseline when compared between two groups after intervention. Immediately post intervention between groups show that patients who received audiovisual presentation education had statistically significant improvement in knowledge score more than those who received education from written handouts. Moreover, at one month follow-up period shows the result that audiovisual presentation education had significant higher knowledge score change from baseline when compared with written handout education.

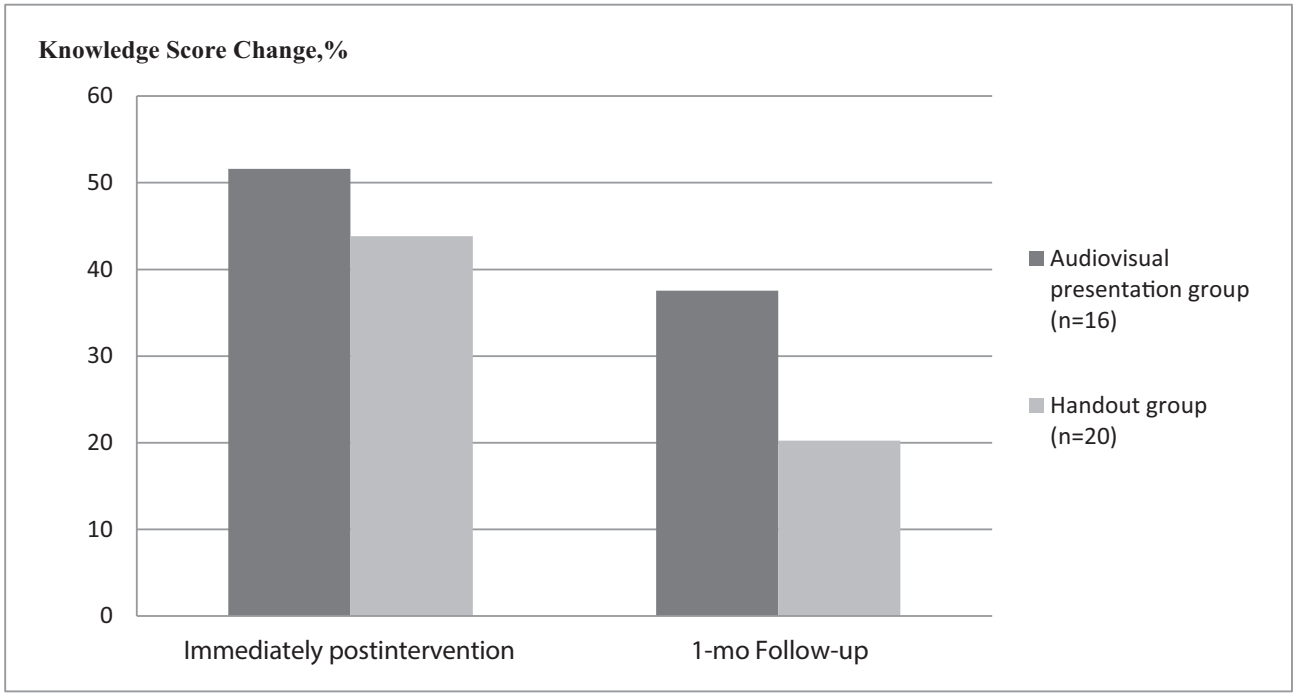

Figure 2: Knowledge score change from baseline. p = 0.022 between groups immediately post intervention, and p = 0.02 between groups at 1-month post intervention

Discussion

Renzi, et al reported that insufficient knowledge among patients with psoriasis can represent a barrier in improving treatment for patients. They also proposed that educational intervention could help increasing their level of knowledge about psoriasis as well as improving their satisfaction and health outcome[2]. Few studies have investigated the efficacy of educational intervention in patients with psoriasis. However, Lora et al postulated that a single educational intervention may be helpful in improving psoriasis knowledge and give psychological relief to patients. Although single session of educational intervention is sufficient for improving their knowledge, seeking for the method of intervention is also important because it gives the different outcome to the patients[7].

To our knowledge, there was no such a study about comparison of educating Thai patients with psoriasis between written handouts and audiovisual computerized presentation. However, there is a study about educating acne vulgaris patients proposed by Koch et al. They reviewed that both written handouts and audiovisual computerized presentation had a significant benefit in terms of short and long term knowledge. Nevertheless, at one month follow-up, results showed that patients who received the computerized presentation still showed significant gain in knowledge from baseline (p-value < 0.05) while those in the handout group did not[5]. These results were similar to our study. We also postulated that both audiovisual presentation group and written handout group lead to greater improvement in knowledge score. This has been confirming that educating patients about their conditions as well as the treatment is important. Moreover, our findings were also similar to those of Lanigan and Layton[8], Lubrano et al[9] and Tham and Tay[10] who reported no association between demographic data and knowledge level in patients with psoriasis. Moreover, our study reported that audiovisual computerized method was better than written handout method in terms of short and long term post-intervention assessment. We assumed that the explanation could be that information conveyed via a colorful audiovisual media would be more likely to hold the attention of the audiences while the written handouts are usually left

unread in daily practice without attention. However, the advantage of written handout is that it is more portable and patients will have the opportunity to reread it after they were discharged from the clinic[5]. Therefore, we recommend that an audiovisual aid would serve to augment rather than replace written handout pamphlets. Although our study is too small, further studies are necessary to conduct the result.

Conclusion

In conclusion, we did report a change in knowledge in psoriasis after educational interventions. Also, we had compared the method between traditional written handouts and audiovisual computerized with the same content questionnaires. Our study reviewed that both methods confer significant benefit in terms of short and long term knowledge. Similar to the study from Koch et al, in terms of one month follow-up period, audiovisual presentation method showed significant gain in knowledge from baseline (p-value < 0.05) while those in handout group did not[5]. We hope that the findings of our study may serve as a purpose of increasing more attention paid to educational media and alerting health care providers and patients about potential gap in knowledge of disease. Further research should study the effects of other different educational interventions on knowledge and to evaluate the relationship between patients' knowledge, self-management skills and quality of life

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What is already known on this topic?

The link between the impact of educational intervention and the improvement of psoriasis is well established. Many studies proposed about the relevance of type of intervention and patient's knowledge and satisfaction. However, there were no report about the comparative study between the traditional written handout method and the audiovisual computerized presentation method.

What this study adds?

The findings from our study suggested that although giving patients education with traditional written handout method is familiar and convenient, audiovisual computerized presentation is an alternative way that has superior result in terms of short and long term knowledge. Medical workers should consider to give the audiovisual aid to patients in order to improve their knowledge of disease.

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