

Treating Skin Disease: Self-Management Behaviors of Latino Farmworkers

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ABSTRACT. Latino migrant and seasonal farmworkers experience high rates of skin disease that result from their working and living conditions. Knowledge of the ways farmworkers treat skin disease symptoms will provide a foundation for developing culturally appropriate health education, improving the delivery of health services, and improving occupational health policy for agricultural workers. The purpose of this paper is to describe skin disease self-management practices among Latino migrant and seasonal farmworkers in North Carolina. This analysis uses a qualitative design based on in-depth interviews with 30 Latino farmworkers (six females, 24 males). Computer assisted, systematic procedures are used to analyze the verbatim transcripts of these interviews. Participants shared a consistent set of health self-management actions in treating skin disease. These actions were within the domains of self-care and medical care. A model of skin disease self-management among Latino farmworkers includes the self-care actions of hygiene, use of home remedies and use of over-the-counter remedies, with farmworkers often combining different domains of self-care. While farmworkers acknowledge the benefits of medical care, they are also mindful of barriers to its use, including cost, transportation and language. The large percentage of farmworkers who experience skin problems indicates that health outreach workers who serve this population need to provide education on preventing and treating skin problems, and they need to recommend to farmworkers appropriate over-the-counter medicines for the treatment of these skin problems. Appropriate medical care for treating skin problems that are dangerous and reduce farmworkers' quality-of-life needs to be made available to this population. doi:10.1300/J096v11n02_06 [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2006 by The Haworth Press, Inc. All rights reserved.]

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Latino migrant and seasonal farmworkers that result from their working and living experience extraordinary rates of skin disease conditions.¹ Little research has examined the

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epidemiology of skin disease among farmers or farmworkers in the United States.²⁻⁷ Although precise prevalence rates cannot be determined with available epidemiological data, substantial evidence indicates that the majority of farmworkers experience significant inflammatory and infectious skin diseases, including acne, irritant and contact dermatitis, lichenified hand dermatitis, tinea pedis and onychomycosis.^{2,4,8,9} Causes of occupational skin disease among agricultural workers are diverse and include exposure to wind and sun, pesticides, fertilizer, petroleum products and plants at work, and to infectious agents due to substandard housing.^{1,10,11} Greater knowledge of the ways farmworkers treat skin disease symptoms will provide a foundation for developing culturally appropriate patient care and health education, for improving the delivery of health services to this population, and for improving occupational health and housing policy for agricultural workers.

Treatment of skin problems by farmworkers can be understood conceptually within the health self-management framework.¹²⁻¹⁴ Within the health self-management framework, individuals are understood to have agency in caring for any illnesses or injuries that they experience. Health self-management includes four domains: self-care, informal support, formal services, and medical care. The selection of behaviors in each self-management domain result from the individual's personal characteristics (e.g., age, ethnicity, beliefs), health status (e.g., number of conditions, degree of disability), personal resources (e.g., education) and financial resources (e.g., income, insurance). This paper uses data from in-depth interviews with Latino migrant and seasonal farmworkers in North Carolina to describe the self-management of skin disease in this population.

METHODS

This paper uses a qualitative research design to analyze Latino farmworker skin disease self-management. Qualitative methods are extremely valuable for delineating individuals' meanings, beliefs, and behaviors.¹⁵ Qualitative analyses have been used by investigators in documenting beliefs and behaviors of farmers

and farmworkers related to agricultural health issues including general risk perceptions, injury, pesticide exposure, cancer, and green tobacco sickness.¹⁶⁻²⁵

In-depth interviews were completed with 30 Latino farmworkers. Seven or eight interviews were conducted each month from May through August 2004, the months when substantial numbers of Latino migrant and seasonal farmworkers are present in North Carolina. Interviews were spaced temporally to take into account the effects of the changing agricultural season on perceptions of occupational skin disease. Participants were recruited from several areas in western, central and eastern North Carolina. Health outreach workers working for migrant farmworker clinics, county health departments or service organizations in the different areas of the state helped to locate potential participants. Individual farmworkers did not need to have a current skin problem to participate in the study. Efforts were made to recruit farmworkers who were representative of the population, including women as well as men, and individuals working in a variety of crops. Participant recruitment and data collection procedures were approved by the Wake Forest University School of Medicine Institutional Review Board.

Interviews were conducted by two bilingual staff in the homes of the farmworkers. All interviews were conducted in Spanish and tape recorded. Interviews included three components. Respondents were first asked general open-ended questions about their experiences and beliefs about occupational skin problems. Respondents were then presented with short vignettes describing situations workers might encounter while working and photos of skin problems that might result from these situations. Finally, respondents were presented with a series of 25 photos of skin problems and asked to name them and to discuss their causes and natures. The skin problems in the photos were selected as those expected to be common among agricultural workers based on comments from clinicians who provide care to this population in North Carolina. Interview length ranged from 45 to 90 minutes.

Verbatim interview transcripts were translated to English. Interviewers reviewed all translated transcripts for accuracy. Transcripts

were then entered into ATLAS.ti version 5.0 for analysis.²⁶ ATLAS.ti is a computer program which assists in the management and analysis of textual data. The systematic analysis of the transcripts involved several steps. The investigators read all of the transcripts. A coding dictionary was developed based on this review. This dictionary included “tags” divided into three domains, Signs and Symptoms, Causes, and Treatments, with specific tags for each of the major concepts and themes in each domain. The coding dictionary was tested on several transcripts, and modified to reflect problems and insights. Two investigators coded each transcript, with one investigator completing the initial codes and a second investigator reviewing the initial codes. All differences were resolved through discussion. For this analysis, transcript segments that were assigned the tags related to Treatments were pulled and printed. Each of the sets of segments was reviewed and interpreted by the investigators for this analysis. Examples of quotations are reported to illustrate and support the interpretation. Quotations are labeled with respondent ID numbers, which start with F for females and M for males, and include a second number indicating the transcript paragraph in which the quote begins; for example, “M08:16” indicates that a quote is taken from the 16th transcript paragraph of the eighth interview, which was conducted with a male farmworker, while “F29:35” indicates that a quote is taken from the 35th transcript paragraph of the 29th interview, which was conducted with a female farmworker.

RESULTS

Participant Characteristics

In-depth interview participants were representative of the Latino migrant and seasonal population of North Carolina.^{27,28} They included six women and 24 men who ranged in age from 18 to 59 years (Table 1). While all were from Mexico, they came from 18 different states. All spoke Spanish; in addition, three spoke an indigenous language (two Tarasco, one Mixteco). The participants worked in five different North Carolina counties. During the 2004 agricultural season they had worked in eight different commodities, with most work-

TABLE 1. Characteristics of In-Depth Interview Participants, N = 30.

Participant Characteristic	N	%
Gender		
Female	6	20.0
Male	24	80.0
Age (in years)		
18 to 29	11	36.7
30 to 39	12	40.0
40 and older	7	23.3
Counties		
Greene	7	23.3
Johnston	9	30.0
Nash	6	20.0
Surry	6	20.0
Wake	2	6.7
Crops*		
Tobacco	25	83.3
Sweet potatoes	6	20.0
Cucumbers	5	16.7
Peppers	2	6.7
Melons	2	6.7
Grapes	2	6.7
Other vegetables	3	10.0

*Percentages add to more than 100% because each participant could work in more than one crop.

ing in tobacco, as well as sweet potatoes, cucumbers and other vegetable and fruit crops.

Skin Disease Self-Management

Latino farmworkers discussed a consistent set of health self-management actions in treating skin disease. These actions were overwhelmingly within the domains of self-care and medical care. A model of skin disease self-management among Latino farmworkers included the self-care actions of hygiene, use of home remedies and use of over-the-counter remedies, and the use of medical care. Farmworkers often combined different domains in their self-care. For example, the behavior, “bathing,” is often combined with the use of the home remedy, “lemon juice,” or the over-the-counter remedy, “alcohol,” in treating a specific skin problem.

Hygiene: Washing and bathing were recognized as having an immediate affect on several forms of rashes. Particularly by bathing in cool water, the skin was refreshed and soothed so that the effects of a rash—itching or burning—if not the rash itself, were resolved. “. . . He showers and with the freshness of the soap and water the itching goes away” (F02:234). “The heat [rashes] last approximately . . . the thing is that if you are in the heat and you have bumps (granos), you just take a cold bath and they go away (se te a pagan)” (M08:97). The importance of bathing before applying a medicine was also generally accepted. “When I bathed, I scrubbed it with a washcloth. Then I applied it [alcohol]. . . . That got rid of the itching, more or less. I mean, first I took a bath, and then I applied alcohol” (M25:77). A few of the farmworkers also discussed the importance of thoroughly washing areas affected by fungus.

“Yes, there must be [a treatment for fungus]. A person has to change daily and take a bath and shave. And you also have to change your underwear. . . . Of course, when you take a bath, you have to scrub your whole foot, your toes, everything in order to get rid of the filth because if you don’t get rid of the filth, that will come back” (M26:383).

Taking time from work was also recognized as helping to treat a skin problem by removing the worker from exposure. However, taking time off work created its own problems by reducing income.

“Where I did see that type of problem [rash] was in the tobacco packing plant. They did get bumps (ronchas), red ones. They would just send us home to rest for three hours, then we went back to work” (M09:270).

“When the rash was just starting, he couldn’t work because it burned and itched. So he said that he needed to get better. And we told him, ‘Take care of yourself because it can get bad and you could have other consequences.’ And he did because there are young men who don’t have any family and are alone. And they say, ‘If I work a day less, it doesn’t matter.’ And there are people who have their family in Mexico and so then they have to work because they have to send them money. So then, that’s why they have to work” (M01:209).

Some farmworkers indicated a belief that skin problems could be treated by exposing

them through scratching, breaking or cutting, and then applying a medicine. Scratching the skin or cutting finger or toe nails “opened” the skin in an affected area so that a medicine can get at the root of a problem or soak into the skin. Medicine burning the skin was a sign that it was working. “When we are chafed (rozadas), we scratch it so a little bit of blood will come out and so that it will burn more. After that, we mix up the corn starch and apply it, and that makes it dry up” (M13:168). Breaking blisters and pimples to open them and make them heal faster was a common practice.

“And they say, ‘Look at that big blister (vejigota) you have. Burst it!’ And you do that, for example, with a needle. And it goes away. And sometimes, it’s better because it heals (cicatrizada) immediately. And later the blister swells up until it dries, the pus dries. And then later, your skin comes off (se te cae el pellejo). And if you burst it, then the rotten stuff comes out” (M07:1098).

Farmworkers with fungus on their nails cut the nails back very far to try to get rid of the fungus. “I just cut my nail and put a lot of alcohol on it and all that. And with that, it went away” (M09:1016).

Home Remedies: Farmworkers discussed numerous home remedies that they used to treat skin symptoms. Many were common household products; others were herbs (Table 2). The lists of common household products and herbs contained in the interviews were probably not exhaustive of all home remedies farmworkers use. The common household products included substances that would burn as well as those that would soothe irritated skin.

“Vinegar made from fruits. . . . Vinegar is the best medicine. I don’t know if you know that. That’s the best thing for itch. That’s the best. When you have an insect bite and you start scratching, the best thing is to put some vinegar on it” (F15:383).

“I have just let them [bumps] go away by themselves. The only thing I ever applied was bleach. And, sometimes, the bleach seemed to get rid of the burning. I would apply the bleach and feel burning, but I could do it” (F29:45).

“Sometimes like a cream, cool cream because—suppose that it is itching or that it causes us stinging—we look for a cool cream to put on it,

TABLE 2. Home Remedies Used by Latino Farmworkers to Treat Skin Diseases, North Carolina, 2004.

Home Remedy	Procedure	Symptom
Common Household Products		
Bleach	Topical	Rash, abrasions
Cooking oil	Topical	Chafed skin
Corn starch	Topical	Itch
Egg whites	Topical	Burns, rash ("skin feels refreshed")
Garlic	Topical	Rash
Hair	Tied around wart	Warts
Ice	Topical	Itch
Lemon juice	Topical	Itch, fungal infection, acne
Nail polish	Applied to nails	Fungal infection
Salt water	Topical, Soak	Itch, ingrown toenails
Vinegar	Topical	Itch, rash
Herbs		
Arnica	Topical	Sores
Bloodleaf (del arlomo); water made by boiling three leaves	Topical	Insect bite
Corn Silk and Parsley (Cilantro)	Oral (tea)	Hervor de Sangre (hot red skin)
Hollyhock; lotion made of cooked leaves	Topical	Itching, redness, rash
Rattle Snake Skin	Oral (powder)	Rash, acne, baldness

or we scratch it a little bit so that we can put a little bit of alcohol on it" (M13:48).

Only a few herbs for treating skin problems were mentioned by the farmworkers.

"Parsley and corn spikes because I thought it was an illness that is called hot blood (hervor de sangre). . . . And over there [in Mexico], I know it as hot blood. And my sister told me to drink a tea made with parsley and corn spikes because it is like cilantro. . . . And well, I got fed up with drinking it because it tastes really bad and it didn't make that go away. On the contrary, it was like I woke up even worse the next morning after I drank it" (F15:395).

"It is a little plant called Mullein (gordolobo). That is the name of that. Yes, you cut it and the liquid is placed on the sores. Supposedly, that is to dry up whatever type of wound and all that" (F18:185).

While the farmworkers discussed the different home remedies used to treat skin problems, they noted that these home remedies were used less in the U.S. than they were in Mexico. First, workers explained that it was simply difficult to find the home remedies in the U.S. with which they were familiar. For example, they did not know the herbs that grow in the U.S. and there were not people in the U.S. who could tell them which herbs to use. They also noted that it was easier to go to a medical doctor in the U.S., and that Americans use pills to treat everything.

Over-the-Counter Medicine: Farmworkers used a large number of Mexican as well as U.S. brands of over-the-counter medicines for preventing and treating skin disease (Table 3). They found over-the-counter remedies that worked for them (e.g., alcohol, talcum powder) and used this specific remedy to treat a variety of skin irritations including bumps, rashes and blisters, pimples, spots, and fungal infections. Participants noted the ease with which they can obtain "prescription" medicine over-the-counter in Mexico, and how difficult it is to obtain these medicines in the U.S.

"Yes, there are creams. That is the only thing that you buy when you go to the pharmacy and ask the pharmacist, 'What would you recommend for the itching?' And they give you a cream or some pills. They are the same because over there [Mexico], almost always, everyone who has a pharmacy or the person who works in the pharmacy knows something about medicine for sicknesses. He knows and will tell you, 'Take this, or put this on'" (M16:897).

The primary way that farmworkers learned about over-the-counter medicines was from friends and family. Individuals shared knowledge about medicines that worked well for specific skin problems. They also shared medicines with others in need.

"You chat with other people about it and if there are people who have heard about this or gone through this, they teach us about it so that we know about it. There have been people who are sick with a simple illness and who have asked us if there was anything that we knew about which would be good for that. And if we know that there is something for that, we tell them. And if they can't find it, we give it to them if we have it. On many occasions, this has happened to us. And we share" (M06:665).

TABLE 3. Over-the-Counter Medicines Used by Latino Farmworkers to Treat Skin Disease, North Carolina, 2004.

Over-the-Counter Medicines	Procedure	Symptom
American		
Alcohol	Topical	Itch, rash, chafed skin
Aveeno Powder®	Bath	Hives
Benadryl® Cream	Topical	Poison ivy
Caladryl®	Topical	Poison ivy, rash
Claritin®, Claritin D®	Oral	Itch, hives
Desitin®	Topical	Chafed skin
Eucerin®	Topical	Dry, cracked skin
Hydrocortisone	Topical	Rashes
Iodine	Topical	Sores
Laxative	Oral	Purges food poisoning (that caused skin problems)
Lotrimin®	Topical	Fungal infection
Nivea®	Topical	Acne, cracked skin, sunburn
Ponds®	Topical	Mild irritations
Talcum powder	Topical	Chafed skin, rash, fungal infection
Tinactin®	Topical	Fungal infection
Vaseline®	Topical	Rash, bumps, sunburn
Vicks VapoRub®	Topical	Cold sore (fuegos)
Mexican		
Concha Nacar®	Topical	Acne
Desenex® (brought from Mexico)	Topical	Chafed skin, fungal infection
Hongosan Solucion®	Topical	Fungal infection
Hongo Trim®	Topical	Fungal infection
Odolex®	Topical	Fungal infection
Oralo	Topical	Fungal infection
Suavitex®	Topical	Rash
Tetracilina (tetracycline)	Topical	Fungal infection (joints, sciotes)
Ting® (cream and powder)	Topical	Fungal infection
Vitacilina®	Topical	Acne, burns, rash

Sharing medicine could have unintended consequences; one participant described having an allergic reaction after taking penicillin that a friend gave to him.

Farmworkers held that lotions and creams refreshed the skin when applied to itchy rashes. They also softened the skin or prevented it from

drying out. “I used cream, and with the cream, I felt my skin was refreshed. When you don’t use anything, you feel like your skin is very rough” (F29:199). Softer skin has the added benefit of making sweat and water run off. “It’s like it softens you so that your clothing doesn’t scratch you. . . . When you apply it [lotion] to your body, it stays there and when it rains, the water runs and the sweat also” (M26:145).

Alcohol was a widely used over-the-counter medicine for treating skin problems such as itching, chafing and rash, as well as bumps and blisters after they break open. It “dried up” or “burned” a skin irritation. When the alcohol stopped burning, any itching had also stopped. Scratching the skin before applying alcohol allowed the alcohol to penetrate deeper. A bottle of rubbing alcohol was often kept on hand so it was available when itch or rash started.

“We apply the alcohol so that it will burn the infection because everything that you touch is dirty. You take the alcohol and apply it. It’s unbearable. It even makes you want to cry. A whole lot of burning! The thing is that we are men, but it makes even us want to cry. It burns it. Let’s say that everything is red here and you apply it. It burns like hell, and it burns those little bumps. It burns all those bumps. Then when it’s cleared up and everything is gone, you apply the creams. The next day, you go back to work. If it comes back, you do the same thing again” (M26:27).

Medical Care: Farmworkers stated that they will seek medical care if a skin problem is severe or does not go away with over-the-counter treatments or home remedies, especially if it affects their ability to work or sleep. “What happened is that when I started working in the tobacco, I got several bumps here on my waist and a horrible pain that wouldn’t let me sleep. There were strong pains. So I went to see the doctor that I have here in the hospital” (M9:852).

However, when possible, they indicated they would wait to return to Mexico to seek medical care.

“But here, it’s too expensive to go get medical help because if you go to a consultation with the doctors, they charge you a lot of money. That’s why people prefer to buy creams to treat themselves. . . . And sometimes he [doctor] doesn’t even give you what you need because, sometimes, they give you a prescription that

you have to go buy at the pharmacy. And if they don't have that cream at the pharmacy, you return home with nothing. But you have already paid the doctor. . . . Yes, if it's not necessary, you don't go because if they charge three to four thousand dollars, that's too much money. And if you get sick suddenly and you still feel like you can put up with it, it's better to go to Mexico because the medicine is cheaper there" (M10:342).

Other barriers to medical care include finding transportation and getting time off work to go to a clinic, doctor's office or emergency room.

"The other time I was there in Georgia and I got sick. And I told the contractor to take me to the doctor. And the contractor told me that the boss didn't have insurance and that if you didn't have insurance, they wouldn't see you. That was how he answered me. So then, he went around and found some hydrogen peroxide, some creams, and alcohol from his house" (M16:925).

"You have to take care of yourself. The boss is not someone who is going to take you to the clinic, unless you are off. For example, it's happened to my friends when they got sick here, when they felt really bad, they had to miss a few hours of work or even one day so they can get there on their bicycle because the boss doesn't take anyone" (M28:25).

However, several workers noted that their employers did make sure that they were taken for medical care when it was needed.

Another barrier to the use of medical care was the belief that there would be nobody in the clinic who spoke Spanish. "A lot of it could be the barrier of knowing English. They aren't going to understand them. That is a possibility for why you might not go to the doctor since there isn't a way to explain to the doctor what you have, what happened to you, or for them to prescribe medicine to get rid of it" (M23:879).

When workers have obtained medical care for skin problems, they did not believe that it was worth the expense. They felt that doctors did not conduct thorough examinations and often prescribed a medicine that could be purchased without a prescription.

"But when we go to the doctor, they give us a cream or something like that. But that's just to get your money because they charge you a lot

for a consultation. They tell you that you will be cured in a month. And you go and put it on and it doesn't get rid of it at all . . . That is where you don't get cured because the only thing the doctors know how to do is tell you to put this on it, but they don't really know, because, in reality, they don't examine the sickness well" (M16:244).

DISCUSSION

Skin disease is widely experienced among Latino farmworkers.^{1,2,4,8,9} The visibility and impact of skin disease in the lives of farmworkers has led to widely shared self-care behaviors that include hygiene, use of home remedies, and the use of over-the-counter medicine. Medical care is also used, but farmworkers believe that structural factors limit their access.

Self-care behaviors from different domains are used in combination; individuals bathe before applying home remedies or over-the-counter medicines, others scratch the skin before applying remedies. Farmworkers indicate two mechanisms for the use of self-care. First, self-care behaviors soothe diseased skin and protect healthy skin. These include bathing and the use of creams. Second, self-care behaviors attack the causes of skin disease in an effort to cure the problems. Home remedies (e.g., lemon, vinegar, bleach, garlic) and over-the-counter medicines (e.g., alcohol) "burn" the skin and destroy the problem. Sometimes the skin has been scratched or cut open to allow the remedy to penetrate more deeply. After the use of these remedies, the symptom (e.g., itching) is no longer present, showing the cause is being affected by the burning. Knowledge of the home remedies used by Latino farmworkers is limited. A recent report by Poss et al.²⁹ has discussed use of herbal remedies among farmworkers in Texas. Several of the remedies, such as garlic, lemon or lime, and Mullein, are reported by both studies.

Use of over-the-counter and prescription medicines from Latino immigrants' countries of origin is a growing concern, as is the illicit importation of these medicines for sale in the US.³⁰⁻³² Use of imported medicines by farmworkers has been documented in other studies.^{33,34} Further analysis of home remedy and

over-the-counter medicine use by Latino farmworker populations is needed.

Farmworkers acknowledge the efficacy of medical care, as well as costs of using medical care (money, lost time from work) and the barriers to obtaining medical care in the U.S. (transportation and language). These barriers are familiar to those who provide health care to farmworkers.³⁵ The results of this analysis will help clinic outreach workers in providing culturally appropriate treatment recommendations and health education when they encounter workers experiencing skin problems. This information will also enable health care providers to offer better care to farmworkers with skin problems who do present at clinics.

This analysis has limitations similar to most qualitative studies. The small sample and limited geographic area from which it was selected require caution be used in generalizing study results. However, the diversity of the sample (e.g., male and female respondents from 18 Mexican states working in a variety of crops) and the systematic analysis procedures increase confidence in the reliability and generalizability of results. The use of qualitative methods is also a strength as patterns of belief cannot be elicited with quantitative research techniques.

This analysis describes the self-care and medical care procedures Latino farmworkers incorporate into their self-management of skin disease. Many components of self-care used by farmworkers, including bathing, use of skin moisturizers, and the use of topical over-the-counter medicines for minor skin problems, are valuable. However, some components of self-care, including the use of home remedies and over-the-counter remedies that irritate the skin, and scratching the skin before applying these remedies, can cause further skin damage. The large percentage of farmworkers who experience skin problems indicates that health outreach workers who serve this population need to provide education on preventing and treating skin problems, recommend to farmworkers appropriate over-the-counter medicines for their treatment, and urge them to seek medical care when indicated. Finally, appropriate medical care must be made available to farmworkers to treat skin problems that are dangerous and that reduce their quality-of-life.

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